

Load Interconnection - Interconnection System Impact Study Scope

Queue #1738: 1 Gig Data Center East Fishkill, NY

1. Purpose

The purpose of this Interconnection System Impact Study (“SIS” or “Study”) is to evaluate the impact of the proposed interconnection of **1 Gig Data Center East Fishkill, NY** (“Project”), which is being developed by **Donovan Drive Holdings LLC** (“Eligible Customer”), 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 **Dutchess** County, New York. The proposed Point of Interconnection (“POI”) will be at the **East Fishkill to Wood Street 345 kV lines (38 and 39)**. The Connecting Transmission Owner (“CTO”) is **Consolidated Edison Inc. (“ConEd”)**.

The Project proposed is a **1,000 MW** load interconnection. The Project proposes an In-Service Date of **October 2028**.

Project Details:

Nature of Load: Hyperscale AI and cloud computing data center to serve enterprise and AI-driven data processing

Consumption Pattern: 24x7, minimal daily or seasonal variability, not intermittent or interruptible, limited ability to follow dispatch signals, 0.95 power factor

Proposed Load In-Service Phase(s): 500 MW by 2028, 500 MW added by 2030

Alternate sources of power: on-site diesel generators, UPS using lithium-ion batteries

The Study will assess the impact of the Project on the base case power system including **New York State Electric and Gas (“NYSEG”)** and **Central Hudson** as identified Affected Transmission Owners. 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 and its integration with existing facilities. **ConEd** will provide a description and one-line diagram for the proposed 345 kV interconnection switchyard.

3. Study Period

The Study will be based on **NYISO 2025 Quarter 4 Short-Term Assessment of Reliability (STAR)** base cases (“Base Cases”) that have a 2030 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 115 kV and above portions of the NYSTS in the following New York load zones: Zone **H** (Millwood) that are most likely to be affected by the Project.

5. Base Case Conditions

The impact of the proposed Project will be evaluated for **summer peak/ spring 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 **Queue #1738** 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.

Case 2a (sensitivity)- Case 2 with nearby proposed projects listed in Appendix A of this scope modeled as in-service and 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. If the analyses identify violations of Applicable Reliability Requirements, the Study will identify the Project's individual contribution to the potentially significant impacts on the NYS power system reliability.

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

Thermal and voltage steady state analyses, using PSS/E v35 and PowerGEM's TARA or a comparable load flow program, will be performed for **summer peak and spring light load conditions**, for pre-contingency (N-0) and for relevant Design Criteria Contingencies conditions (N-1 and N-1-1), and will be limited to the Study Area. Steady state analyses will be performed based on the N-1 and N-1-1 contingency descriptions provided by the CTO(s) and/or the NYISO in the electrical proximity to the POI.

Thermal limits will be assessed under both Normal Criteria and Emergency Criteria, using normal pre-contingency ratings 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 Stability Analyses: N-0 and N-1

Stability analysis, using PSS/E v35, will be performed for **summer peak and spring 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.

6.3 Transfer Assessments

The transfer assessment will determine the incremental impact of the Project on the Normal and Emergency transfer limits of the **UPNY-ConEd** and **Millwood South** interface(s) in accordance with Applicable Reliability Requirements. The transfer limits will be evaluated in the predominant west-to-east or 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.

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 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.

8. Evaluation of Potential Alternatives

If the Study results indicate that the Project, as proposed, would result in adverse reliability impacts, analyses will be performed to identify alternatives to eliminate the adverse reliability impact which may include potential Network Upgrades or changes to the Project. If such upgrades or changes to the Project are identified, re-assessments (among those identified in this scope), 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.

Appendix A

List of New Proposed Load Projects to be Modeled in Case 2a

Queue Position	Owner/Project Name	Zone	CTO ATO(s) Affected System(s)	MW
1713	Project Sycamore Orangeburg	G	Orange & Rockland Utilities Inc. ConEd	31.8
1714	Hudson Valley Data Center	G	Orange & Rockland Utilities Inc. ConEd	25
1715	1547 CSR - Orangeburg LLC	G	Orange & Rockland Utilities Inc. ConEd	30
1716	Orangeburg Expansion Phase 2	G	Orange & Rockland Utilities Inc. ConEd	30
1717	Proposed Datacenters at 450 Broadway, Buchanan, NY, 10511	H	ConEd Orange & Rockland Utilities Inc.	200