

## **Load Interconnection - Interconnection System Impact Study Scope**

### **Queue #1735: Remington Factory Redevelopment Project**

#### **1. Purpose**

The purpose of this Interconnection System Impact Study (“SIS” or “Study”) is to evaluate the impact of the proposed interconnection of **Remington Factory Redevelopment** (“Project”), which is being developed by **Turin Management 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 **Herkimer** County, New York. The proposed Point of Interconnection (“POI”) will be at the **Ilion Municipal 115 kV substation**. The Connecting Transmission Owner (“CTO”) is **Ilion Municipal Electric Utility (“IMEU”)**.

The Project proposed is a **100 MW** load interconnection. The Project proposes an In-Service Date of **July 2028**. The Project is geographically located at the same load site in the Village of Ilion as the proposed **400 MW** project **Queue #1740 – Incremental Load Request for Remington Factory Redevelopment**. Under certain system conditions Queue #1735 will be isolated from its POI and served from the proposed POI of **Queue #1740** for a total load of **500 MW**.

#### **Project Details:**

Nature of Load: Data center

Consumption Pattern: 24x7, not intermittent or interruptible, 0.9 power factor

Proposed Load In-Service Phase(s): 100 MW by 2028

Alternate sources of power: None

The Study will assess the impact of the Project on the base case power system including **New York Power Authority (“NYPA”)** and **National Grid (“NGRID”)** 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. IMEU will provide a description and one-line diagram for the proposed 115 kV interconnection switchyard, while the Eligible Customer will provide and verify the proposed transformer connections into the Eligible Customer's facilities.

## 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 **E** (Mohawk), and Zone **F** (Capital) 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/winter 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 2a- Case 1 with **Queue #1735** 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 2b- Case 1 with **Queue #1735** and **Queue #1740** modeled as in-service at the rated load under normal system conditions (i.e., 100 MW served from Ilion Municipal 115 kV substation, and 400 MW served from EF24-40 and UCC2-41, with the normally open breaker between the loads opened). Generation will be re-dispatched in the steady state case, as needed, in accordance with the NYISO Minimum Interconnection Standard.

- **Queue #1735** load will transfer to the **Queue #1740** POI during outage conditions on the 115 kV path that feeds the Ilion Municipal 115 kV substation (i.e., 500 MW served

from EF24-40 and UCC2-41 with the normally open breaker between the loads closed and the breaker from **Queue #1740** opened).

## 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/winter peak 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 Analysis: N-0, and N-1

Stability analysis, using PSS/E v35, will be performed for **summer peak/ 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 **Central East & Total East** 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.

#### **6.4 Short Circuit**

Short circuit analysis will be performed as needed, using ASPEN, to evaluate the impact of the Project on system protection and adequacy of existing circuit breakers, other fault current interrupting devices, and related equipment.

This analysis will be performed in accordance with the NYISO Guideline for Fault Current Assessment (Attachment I of the NYISO Transmission Expansion and Interconnection Manual), and in accordance with Connecting Transmission Owner and Affected System(s) criteria, to the extent such criteria are recognized as Applicable Reliability Standards.

### **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 2**

<b>Queue Position</b>	<b>Owner/Project Name</b>	<b>Zone</b>	<b>CTO ATO(s) Affected System(s)</b>	<b>MW</b>
1735	Remington Factory Redevelopment	F	IMEU NYPA/NGRID	100
1740	Incremental Load Request for Remington Factory Redevelopment	E	NYPA NGRID/NYSEG/Transco IMEU	400
<b>Total</b>				<b>500</b>