New York ISO
Independent System Operator

NYISO Review of the System Reliability Impact Study for Ridge View Solar Energy Center Project Interconnection Queue #859

For

November 2, 2020 TPAS Recommendation
November 12, 2020 OC Approval

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1. Introduction

The purpose of this System Reliability Impact Study ("SRIS" or "Study") is to evaluate the impact of the proposed interconnection of the Ridge View Solar Energy Center Project ("Project") on the reliability of the New York State Transmission System. The Project is proposed by EDF Renewables Development, Inc. ("Developer").

The proposed Point of Interconnection(s) ("POI") will be on the New York State Electric and Gas Corporation ("NYSEG") Kintigh (Somerset) to Dysinger 345 kV line (formerly Somerset to RGE Station 255 345 kV line), about 3.8 miles from Somerset. The Project is located in Niagara County, New York.

The Connecting Transmission Owner(s) ("CTO") is NYSEG.

The Project is a solar photovoltaic plant and consists of one hundred twenty-two (122) Power Electronics FS3430M inverters. The Project is expected to have a maximum potential generating capacity of 350 MW in summer (at 90°F) and 350 MW in winter (at 10°F).

The Project proposes an In-Service Date of September 2024, an Initial Synchronization Date of October 2024 and a Commercial Operation Date of October 2024.

On behalf of the New York Independent System Operator, Inc. ("NYISO"), EBiz Labs, Inc. performed the Study in accordance with the Minimum Interconnection Standard set forth in Attachment X of the NYISO Open Access Transmission Tariff ("OATT"). The Study was also conducted in accordance with the Applicable Reliability Standards, including applicable NERC, NPCC, NYSRC, and Affected System(s) reliability and design standards; and in accordance with applicable NYISO, NYPA and Affected System(s) study guidelines, procedures and practices.

2. Summary of Study Findings

Modeling Assumptions

The study cases were the 2024 system representation cases from the NYISO CY19 ATBA cases.

Steady State Analysis (N-0 and N-1)

In both pre-contingency and post-contingency system conditions, the Project did not cause any thermal overloads, low voltages and high voltages in the summer peak or light load cases.

Steady State Analysis (N-1-1)

The results show that the Project did not create any thermal overloads, low voltages and high voltages that could not be eliminated, or reduced to the pre-Project level, via the NYISO Minimum Interconnection Standard.

Transfer Limit Analysis

The transfer limit analysis was performed on the summer peak case for the Ontario to New York (ON-NY) and New York to Ontario (NY-ON) interfaces. The Project increased the ON-NY interface Normal and Emergency thermal transfer limits by 143 MW and 144 MW, respectively. The Project increased the NY-ON Normal and Emergency thermal transfer limits by 28 MW and 49 MW, respectively. Therefore, the Project does not degrade the ON-NY/NY-ON transfer limits.

Stability Analysis

Stability analysis results show that the system maintained stability under all Design Criteria Contingencies and local contingencies, with no adverse impact caused by the Project. The Project has no adverse impact on the critical clearing times for those buses that were evaluated. The stability test also determined that the Project was compliant with the Post-Transition Low Voltage Ride Through ("LVRT") requirements.

NPCC A-10 Testing

The NPCC A-10 test results show that the Ridge View Solar Energy Center Project 345 kV POI bus does not become classified as a BPS station.

Short Circuit Analysis

The Project increased fault currents of some buses in the study area by more than 100 amps. However, post-Project fault current levels at the impacted buses were less than the available lowest

breaker ratings. Therefore, the Project does not cause any short circuit adverse impacts to the New York State Transmission System.

Cost Estimate

NYSEG estimated that the non-binding, good faith, cost estimate for the Attachment Facilities required to interconnect the Project is $25.082 million, +/-50%. NYSEG also estimated that the time required to construct the Attachment Facilities is 18 - 24 months.

Conclusions

The results presented in the report indicate that the proposed Project, will not adversely impact the reliability of the New York State Transmission System. The conclusion is based on the following understandings and assumptions:

- The Project will be operated in accordance with all NYISO requirements.
- The Project will be designed in accordance with all the Applicable Reliability Standards.
- The SRIS results and conclusions are based on the studied scenarios and various assumptions related with the study methodologies, system, and Project modeling information provided by the Developer; and any Project modeling change can result in different results and possible re-study.

Based on these assumptions, NYISO Staff is satisfied that the Study was performed in accordance with the approved scope and in conformance with the existing Applicable Reliability Standards. Therefore, the NYISO Staff recommends approval of this SRIS.