

Critical Infrastructure Load and NYISO Demand Response Programs

Francesco Biancardi

Market Design Specialist, New Resource Integration

ICAPWG/MIWG/PRLWG

December 14, 2021

Purpose

Purpose

- **The purpose of this presentation is to discuss the NYISO's response to NERC and FERC guidance related to Demand Reductions provided by critical infrastructure load.**

Background

Background

- On October 6, 2021, NERC submitted a Standard Authorization Request to address Extreme Cold Weather Grid Operations, Preparedness, and Coordination.¹
- The NYISO is evaluating the recommended Standards, and specifically how they relate to the NYISO's role as a Balancing Authority and Transmission Operator.

¹Link to NERC SAR: https://www.nerc.com/pa/Stand/Project202107ExtremeColdWeatherDL/2021-07%20Extreme%20Cold%20Weather%20Grid%20Operations%2c%20Preparedness%2c%20and%20Coordination%20Cold%20Weather%20SAR_112221.pdf

Background (cont'd)

- **Standard Recommendation No. 8: “Balancing Authorities’ operating plans (for contingency reserves and to mitigate capacity and energy emergencies) are to prohibit use of critical natural gas infrastructure loads for demand response.”**
 - Recommended Implementation: Before Winter 2022/2023
- **This presentation proposes a tariff modification to address Standard Recommendation No. 8 as it relates to the NYISO demand response programs.**

Survey

Demand Response Market Participant Survey

- **In October 2021 the NYISO surveyed demand response providers to identify potential critical infrastructure load participation in the demand response programs.**
 - In January 2021 there was approximately 1,071 kW of curtailment capability offered by SCRs that include critical infrastructure load. There was 175 kW of such curtailment capability offered in July 2021
- **While the total kW of demand response load is small as compared to total system MW, it is possible that curtailment of a small amount of critical infrastructure load could have a material impact to generator availability.**
 - For example, curtailment of a few kW of natural gas compressor station load could cause an outage of many MW of generation.

Proposal

Prohibition of Critical Infrastructure Load Participation in Demand Response Programs

- The NYISO proposes to prohibit Market Participants from enrolling critical infrastructure load in the demand response programs.
- **Critical infrastructure load is load that is necessary to maintain the delivery of natural gas, fuel oil, and other fuels used to supply generation (including Local Generators), and load otherwise likely to impact the supply of natural gas, fuel oil, and other fuel to Generators serving New York Control Area (NYCA) load.**
- **Examples of critical infrastructure facilities include, but are not limited to:**
 - Natural gas compressors
 - Liquefied natural gas (LNG) storage facilities
 - Fuel oil suppliers
 - Refineries
 - Control centers

Critical Load Definition

- **NYISO does not intend to limit application of new rules only to natural gas system facilities**
- **NYISO relies on a number of dual fuel and oil only units for reliability during peak times**
- **Fuel oil is a back-up fuel for most dual fuel resources, and new rules will help maintain operations at sites that are needed to deliver fuel to Generators when natural gas supplies are constrained**
 - New York's fuel oil supply chain would face the same risks that NERC seeks to mitigate in the context of the natural gas system

Load Curtailment and Local Generators

- The NYISO proposes to exclude only critical infrastructure load that facilitates its Demand Reductions via curtailment of those loads
- Demand Side Resources using a Local Generator to effectuate load curtailment may still participate in demand response programs.
- Demand Side Resources with critical infrastructure load may participate in Demand Response programs via curtailment only if non-critical infrastructure load is being curtailed (*e.g.*, HVAC load not necessary for operation of the critical infrastructure).
 - The specific loads being curtailed in response to NYISO-issued directives must be stated in the LRP.
- Each Market Participant must document how each facility effectuates load curtailment in the resource's load reduction plan (LRP). *See* ICAP Manual Sec. 4.12.6.

Attestation

- **The NYISO proposes that a Market Participant submit an attestation stating that the load it enrolls complies with the NYISO's rules applicable to critical infrastructure load.**
- **The NYISO will develop tariff revisions reflecting this proposal and present those tariff revisions at a future ICAPWG/MIWG/PRLWG.**

Next Steps

Next Steps

- **January/ February ICAPWG**
 - Present tariff language to stakeholders.
- **February/ March BIC & MC**
 - Vote on proposed tariff language.

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation