

R-4210-2022 Phase 2 (AHQ-ARQ)

Abaissement de tension – Exemples de réseaux voisins

1. IESO – Ontario (3 %, 5 %)

<https://www.ieso.ca/Sector-Participants/System-Reliability/Voltage-Reductions>

Regular Voltage Reduction Testing

Every 18 months, the IESO conducts province-wide system voltage reduction tests. **These tests are not simulations but actual voltage reductions of three and five per cent.** The purpose of voltage reduction tests is:

- To determine how much power can be reduced through the two levels of reduction – **three and five per cent**
- To identify equipment problems so they can be addressed
- To help keep IESO and market participant staff familiar with procedures, and identify any deficiencies in the procedures that may need correction

The amount of relief provided to the grid is expressed as a percentage of Ontario demand. An example of voltage reduction results during the July 2019 test:

- The three per cent voltage reduction resulted in an average reduction of 0.96% in Ontario demand
- The five per cent voltage reduction resulted in an average reduction of 1.68% in Ontario demand

Participation in voltage reduction tests is important. Broad participation also leads to a better quality of test, which helps support a robust and reliable power grid.

2. NYSRC – New York (3 %, 5 %, 8 %)

New York State Reliability Council - Reliability Rules & Compliance Manual - For Planning and Operating the New York State Power System

<https://www.nysrc.org/wp-content/uploads/2023/07/RRC-Manual-V46-final.pdf>

Pages 63 et 64 (PDF 67 et 68):

“**R1.7.** Emergency actions initiated, including: emergency assistance from neighboring Control Areas, manual (local) voltage reductions, quick response (remote control) **voltage reductions (5 and 8%)**, voluntary load curtailment, public appeals, Special Case Resources, Emergency Demand Response Program, and load shedding. For each emergency action the report shall include: (a) the date of the emergency action; (b) the zone(s) where the emergency action was implemented; (c) an estimate of the MW capacity addition or load relief achieved, by zone; and (d) the reason(s) why the emergency action was implemented.”

Page 75 (PDF 79):

“**R10.** The NYISO shall institute a statewide **voltage reduction test** during the summer Capability Period of each year if statewide voltage reduction has not been called for during the early portion of the summer. The results of the test or actual voltage reduction shall be recorded and provided to the NYSRC every year.”

Page 146 (PDF 150)

“**Voltage Reduction** - A means of achieving load reduction by reducing customer supply voltage, **usually by 3, 5, or 8 percent**. If ordered by the NYISO to go into voltage reduction, transmission owner system dispatchers shall immediately comply with that order. Quick response voltage reduction shall normally be accomplished within ten (10) minutes of the order. See “Order” definition.”

3. ISONE – Nouvelle Angleterre (5 %)

ISO New England Operating Procedure No. 13 - Standards for Voltage Reduction and Load Shedding Capability

https://www.iso-ne.com/static-assets/documents/rules_proceeds/operating/isonne/op13/op13_rto_final.pdf

Page 5:

“2. Ideally, voltage reduction capability shall be installed so that all loads are subject to a **five (5) percent voltage reduction**. However, it is recognized that it may not be practical to subject some loads to voltage reduction (e.g., loads served from the transmission system, voltage sensitive loads, etc.). It may be desirable to subject some loads to a voltage reduction of less than five (5) percent. However, **each MP/TO with control over transmission/distribution facilities shall have the capability to reduce system load demand at the time a voltage reduction is initiated by at least one and one-half (1.5) percent through implementation of a voltage reduction.**”

18 mars 2024