

**New York State
Reliability
Council**

*2022 Reliability
Rules
Subcommittee
Report*

February 23, 2023



NYSRC 2022 Reliability Rules Subcommittee Report

Introduction

The Reliability Rules Subcommittee (“RRS”) manages the review, development, and modification of the NYSRC Reliability Rules to maintain or enhance the reliability of the NYS Bulk Power System. Reliability is monitored in accordance with the NYSRC and NYISO/NYSRC Agreements, NYSRC Policy 1, *Procedure for Reviewing, Modifying, and Disseminating NYSRC Reliability Rules*, and other processes and procedures established by the NYSRC Executive Committee. RRS is an open subcommittee whose meetings are open to all interested parties who wish to attend. Meetings are publicly posted on the NYSRC website.

The responsibilities of RRS include:

1. Recommend to the NYSRC Executive Committee processes and procedures, including Policy 1 revisions, for reviewing, developing, and modifying the NYSRC Rules.
2. Consider requests by the Executive Committee for development of new Reliability Rules or modifications of existing Reliability Rules, and recommend to the Executive Committee whether such requests should be accepted or denied.
3. For those Reliability Rule change requests approved by the Executive Committee, recommend to the NYSRC Executive Committee Reliability Rule additions or modifications. The process of developing new reliability rules and modifying existing rules, when the change is intended to enhance reliability, should consider the economic and environmental implications of the proposed rule change.
4. When requested by the Executive Committee, review and comment on requests for exceptions to the Reliability Rules¹.
5. Recommend to the NYSRC Executive Committee revisions to the NYSRC Reliability Rules Manual when appropriate.
6. Conduct self-assessments of the NYSRC Rules to ensure consistency with NERC and NPCC standards and criteria.
7. Participate in NPCC, NERC, or other related open processes for developing and approving new reliability standards or modifications of existing standards. Review and comment on proposed standards, when appropriate. Address issues associated with the potential impact of proposed NPCC, NERC, or other standards on New York Control Area reliability.
8. Maintain a data base for the tracking of new and revised NERC and NPCC standards and criteria.

¹ Includes removal of and modification to existing Exceptions

9. Review Reliability Rule disputes and recommend potential solutions to the NYSRC Executive Committee.

10. Prepare and submit status reports requested by the NYSRC Executive Committee. Also prepare, on request, reports for the NYSRC Executive Committee to disseminate to FERC and the PSC.

11. Review system operations trending information collected by the Reliability Compliance Monitoring Subcommittee (RCMS) when requested by the Executive Committee or RCMS.

12. Develop interpretations of the Reliability Rules when requested by the Executive Committee.

2022 Highlights

NYSRC Reliability Rules and Compliance Manual

The initial NYSRC rules, adopted in 1999, were based on former New York Power Pool criteria. Since then, these rules have been revised numerous times to reflect the need for: new and modified NYSRC rules; NERC and NPCC standards; and criteria changes.

The NYSRC has always worked towards improving its Reliability Rules by introducing new Rules, revising existing Rules and retiring existing Rules when appropriate. Potential Reliability Rule (PRR) changes are considered by RRS to ensure that the NYSRC Reliability Rules and related requirements are consistent with, or more specific, or more stringent than the corresponding NERC and NPCC reliability standards and criteria.

2022 New & Revised NYSRC Reliability Rules

One Reliability Rule was approved in 2022:

Reliability Rule #149

RR #149 4-8-22

Reliability Rule Revision - RR 149 Clarify the Interpretation of the LOLE Reliability Risk Metric in the NYSRC Resource Adequacy Criterion and the Application of Multiple Reliability Risk Metrics in IRM and Resource Adequacy Assessments

This rule change has two components: (1) To express the NYSRC's LOLE criterion's quantification of resource adequacy in terms of "loss of load event-days per year" instead of "days per year," in order to avoid a possible misinterpretation that the NYSRC's LOLE criterion allows a loss of load duration of 2.4 hours per year, and (2) to require IRM and resource adequacy assessments to include multiple reliability risk metrics in order to more fully describe loss of load events.

The proposed LOLE criterion change is consistent with recommendations in the IEEE Resource Adequacy WG's paper, Clarifying the Interpretation and Use of the LOLE Resource Adequacy Metric, presented at NERC's Probabilistic Analysis Forum on October

5, 2021. This change would not affect in any way present ICS and NYISO procedures and models for IRM and resource adequacy assessments -- it brings the resource adequacy criterion in line with present study applications and criterion interpretations.

Normal Process Review

Posted on April 12, 2022

Comments were due on May 26, 2022

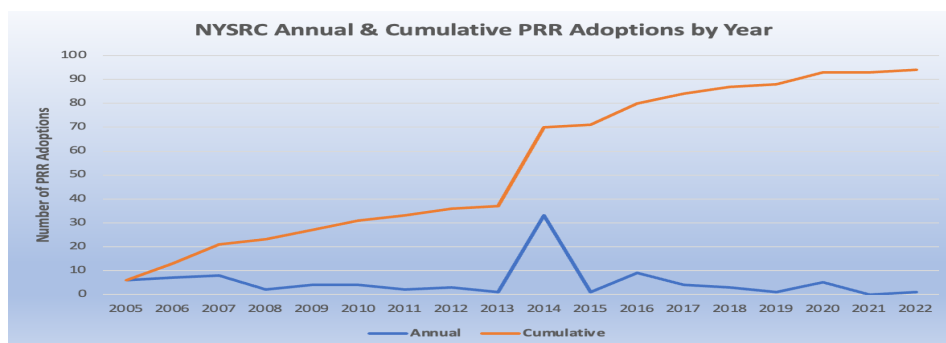
No comments were received

Approved by the NYSRC Executive Committee on June 10, 2022

RRS continued to monitor issues potentially affecting NYCA long-term reliability including:

- National and regional reports and conferences
 - Provided comments on FERC NOPR “Transmission System Planning Performance for Extreme Weather”
- Lessons Learned
 - ERCOT June 4, 2022 Odessa II IBR Disturbances
 - Monitored FERC, NERC, ERCOT, ISO-NE Inverter Based Resource (IBR) regulatory activity
- Status report on RRS's 2022 NYSRC Goals & Actions - Appendix 1
 - Inverter Based Resources
 - Developed IBR White Paper & IBR Work Scope - EC Approval 7/8/22
 - Hosted IBR Workshop on adoption of IEEE Standard 2800-2022 9/8/22
 - Established IBR Working Group to support development of new IBR Reliability Rule(s) - Initial meeting 11/8/22
 - Developed initial draft PRR 151 - Establishing Minimum Interconnection Standards for Large Facility Inverter Based Resources
 - Extreme System Conditions
 - Developed Extreme System Conditions White Paper and Work Scope - EC Approval (7/8/22)
 - Established Extreme Weather (EW) Working Group to support development of new EW Reliability Rule(s) - Initial meeting 12/22/22
- Development of 2023 NYSRC Goals & Actions - Appendix 2

The annual and cumulative adoption of Potential Reliability Rules by NYSRC through 2022 is shown below.



Conclusions

The Reliability Rules Subcommittee reached the following conclusions with regard to its 2021 activities:

1. NYISO Staff continued to provide timely and valued assistance to RRS during 2022.
2. RRS considers that the NYCA Bulk Power System will experience significant operating and transmission planning challenges in the next decade with the ongoing retirement of NYCA fossil and nuclear resources and with a corresponding increase in renewable resources and with extreme weather conditions.
3. RRS continues to monitor current and predicted reliability trends in the NYCA BPS with the goal of developing new, revised or retirement of individual Reliability Rules.
4. One PRR was adopted by the Executive Committee in 2022. The average PRR adoption rate since NYSRC inception is 5.2 PRRs per year and the cumulative total of adopted PRRs is 94.
5. RRS provides an active technical forum for discussion of NYS reliability matters. All parties including New York State DPS staff, Transmission Owners, Developers, the public and NYISO staff have a platform to develop new or revised Reliability Rules, and continue to do so in a collegial and cooperative manner.

Dedication

Mr. Alan Adamson retired from NYSRC in 2022 after 23 years of outstanding service to the Reliability Council. His experience and energy will be sorely missed but the administrative foundation that he established for the Reliability Rules Subcommittee and other committees will continue to be of invaluable service.

NYSRC 2022 GOALS – PROGRESS REPORT

Approved by the New York State Reliability Council Executive Committee on November 10, 2021

Goals	Actions	Responsibility	Progress Target
A. Identify actions to preserve adequate NYCA reliability for high levels of renewable resource capacity as mandated by the CLCPA.	<ol style="list-style-type: none"> 1. Prepare a Phase 3 High Intermittent Renewable Resource analysis based on CLCPA 2030 Goals to evaluate the IRM and other reliability impacts of a future NYCA system. 2. Consider developing new rules and modifying existing rules including resource adequacy and transmission planning design, recognizing the transition to a greater reliance on DER & utility connected intermittent renewable resources and energy storage systems. 	<ol style="list-style-type: none"> 1. ICS 2. RRS/RAWG 	<ol style="list-style-type: none"> 1A. Present scope to the EC by Jan. 2022. (100%) 1B. Present Phase 3 report by June 2022. (100%) 2A. Present scope to EC by March 2022 (100%) 2B. Present white paper to EC by July 2022. (100%) 2C. If appropriate, present PRRs to EC by Dec. 2022. (In progress)
B. Identify actions to preserve NYCA reliability for extreme weather events and other extreme system conditions.	<ol style="list-style-type: none"> 1. Evaluate the potential need for new resource adequacy and transmission planning design rules for planning the system to meet extreme weather & other extreme system conditions 	<ol style="list-style-type: none"> 1. RRS 	<ol style="list-style-type: none"> 1A. Present scope to the EC by Jan. 2022. (100%) 1B. Present white paper to EC by July 2022. (100%) 1C. If appropriate, present PRRs to EC by Dec. 2022. (100%)
C. Continued enhancement of probabilistic models for conducting resource adequacy studies.	<ol style="list-style-type: none"> 1. Enhance modeling efforts including DER, ELR and other modeling improvements. 2. Revise the ICS scope to consider emerging issues in IRM studies. 3. Implement LOLH and EUE metrics in NYSRC & NYISO IRM and resource adequacy planning processes. 	<ol style="list-style-type: none"> 1. ICS 2. EC/ICS 3. ICS/RAWG 	<ol style="list-style-type: none"> 1. 2022 IRM study will include the impacts of increasing DER penetrat. and ELR modeling improvements. (100%) 2. ICS scope to be completed by Jan. 2022. (100%) 3A. LOLH and EUE metrics will be included in the 2022 IRM report and other future studies. (100%) 3B. Work with NYISO to incorporate reliability metrics as part of NYISO's resource adequacy planning processes. (100%) 3C. Participate in NPCC, NERC, FERC & EPRI forums, review technical papers associated with resource adequacy metrics, and report findings to EC on an ongoing basis. (100%)

<p>D. Continued enhancement of communication and outreach to state policymakers on reliability issues and challenges.</p>	<ol style="list-style-type: none"> 1. Prepare a white paper to be used as a guide for communicating current reliability issues to policymakers. 2. Initiate outreach to policymakers whenever appropriate. 	<ol style="list-style-type: none"> 1. EC 2. EC 	<ol style="list-style-type: none"> 1. Prepare white paper by Jan. 2022. (100%) 2. Ongoing participation in meetings, provision of information and present. to policymakers. (100%)
<p>E. Adopt best practices for inclusion in NYSRC Reliability Rules, procedures and other initiatives.</p>	<ol style="list-style-type: none"> 1. Review best power system reliability practices at the international, national & regional levels to ensure that NYSRC is aware of current initiatives for possible inclusion in NYSRC Reliability Rules, procedures and other initiatives. 2. Monitor ISOs & TOs for lessons learned from procedures, rules, requirements & disturbances. 	<ol style="list-style-type: none"> 1. All NYSRC committees 2. All NYSRC committees 	<ol style="list-style-type: none"> 1. Review data, criteria & analytical methods presented at international, NPCC, NERC, FERC & EPRI forums on Probabilistic Analysis and Extreme Weather. (100%) 2. Monitor ISOs & TOs throughout US. (100%)

NYSRC 2023 GOALS – FINAL

Goals	Actions	Who	Scope	Target
A. Identify actions to preserve adequate NYCA reliability for high levels of renewable resource capacity as mandated by the CLCPA.	<ol style="list-style-type: none"> 1. Implementation of 7/8/22 EC approved White Paper “Transition to Intermittent Resources & Energy Storage Systems per CLCPA Renewable Resource Capacity Mandates” 2. Investigate Transition from calendar to capability year in IRM determination process. 	RRS	<p>A1: P1. Adoption of IEEE 2800 for IBR Interconnections</p> <p>A1: P2. Incorporation of IBR modeling in all NYISO performance studies</p> <p>A1: P3. Incorporation of DER modeling in all NYISO performance studies</p> <p>A2. Present scope of changes required to the EC</p>	<p>Q2/2023</p> <p>Q4/2023</p> <p>Q2/2024</p> <p>2/2023</p>
B. Identify actions to preserve NYCA reliability for extreme weather events and other extreme system conditions.	<ol style="list-style-type: none"> 1. Implementation of 7/8/22 EC approved White paper “Development of NYSRC Rules for Mitigating Extreme System Conditions” 	RRS	<p>B1: P1-P4. Resource Adequacy: WG to prepare detailed procedures for implementing work plan*</p> <p>B1: P1-P2. Transmission Security: RRS to prepare work plan and form a WG, which will prepare detailed procedures for implementing work plan*.</p> <p>B1: P1-P3. Loss of Gas Supply: A WG to be formed which will recommend whether a loss of gas supply criterion is needed.</p> <p>*The above 2023 deliverables are consistent with the Table 4, White Paper Implementation Plan (attached)</p>	<p>12/2023</p> <p>12/2023</p> <p>12/2023</p>
C. Enhance probabilistic models for conducting resource adequacy studies.	<ol style="list-style-type: none"> 1. Support implementation of NYISO Resource Adequacy Strategic Plan for 2023. 2. Ensure the Policy 5 revision associated with the 2024 IRM Study is updated. 	ICS	<p>C1. RA 2023 goals implemented.</p> <p>C2. Policy 5 Updated</p>	<p>TBD</p> <p>6/2023</p>
D. Continued enhancement of communication and outreach to state policymakers on reliability issues and challenges.	<ol style="list-style-type: none"> 1. Initiate outreach & respond to policymakers whenever appropriate. 	EC	<p>D1. Ongoing participation in meetings, provision of information and presentations to policymakers.</p>	<p>2023</p>

<p>E. Adopt best practices for inclusion in NYSRC Reliability Rules, procedures and other initiatives.</p>	<p>1. Review best power system reliability practices at the international, national & regional levels to ensure that NYSRC is aware of current initiatives for possible inclusion in NYSRC Reliability Rules, procedures and other initiatives. 2. Monitor ISOs & TOs for lessons learned from procedures, rules, requirements & disturbances.</p>	<p>NYSRC</p>	<p>E1. Review data, criteria & analytical methods presented at international, NPCC, NERC, FERC & EPRI forums on Probabilistic Analysis and Extreme Weather.</p> <p>F2. Monitor ISOs & TOs throughout US</p>	<p>2023</p> <p>2023</p>
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