

2023-2032 CRP Proposed Key Topics

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Agenda

- **2022-2023 Reliability Planning Process (RPP) background**
- **2022 RNA scenarios performed**
- **2023-2032 CRP proposed scenarios/plan**

2022-2023 RPP Background

2022-2023 RPP Background

- **The Reliability Planning Process (RPP) is part of the Comprehensive System Planning Process under Attachment Y of the NYISO OATT and consists of the Reliability Needs Assessment (RNA) and the Comprehensive System Plan (CRP)**
- **The 2022 RPP started with the 2022 RNA, which the NYISO recently completed**
 - 2022 RNA Study Period: year 4 = 2026 through year 10 = 2032 (Note: year 1 through year 5 are assessed quarterly in the Short-Term Reliability Process (STRP))
 - 2022 RNA was based on the information from the Gold Book 2022, the 2022 FERC 715 filing (power flow cases and auxiliary files), historical data, and market participant data
 - Additional implementation details, including recently updated RNA Base Case inclusion rules, are captured in the RPP Manual
 - Reliability evaluations on the 2022 RNA Base Case: transmission security and resource adequacy
 - NERC, NPCC, NYSRC Reliability Rules application on the Bulk Power Transmission Facilities (BPTFs)
 - Final November 2022 RNA Report here: [\[link\]](#) [\[link\]](#)
 - The 2022 RNA did not identify any Reliability Needs; however, the reliability margins are narrow

2022-2023 RPP Background

- **The 2023-2032 CRP will be performed in 2023 and will build off the findings in the 2022 RNA**
 - Since the 2022 RNA did not identify Reliability Needs, the NYISO will not request solutions
 - The CRP will be reviewed by stakeholders and approved by the Board of Directors

2022 RNA Scenarios Performed

2022 RNA: Scenarios Background

- **One of the objectives of the RPP is to identify, through the development of appropriate scenarios, factors and issues that might adversely impact the reliability of the Bulk Power Transmission Facilities (BPTF)**
 - The scenarios results are for information only
 - Generally, the scenarios will be built off the preliminary (“1st pass”) RNA Base Case, unless specifically identified
- **Proposed scenarios were presented at the April 26 ESPWG/TPAS [\[link\]](#) and are detailed in the final RNA report and appendix [\[link\]](#) [\[link\]](#)**

2022 RNA: Scenarios Performed

1. High Load Forecast: Resource Adequacy

- High load forecast from the 2022 GB

2. Tipping Points: Resource Adequacy - Zonal Resource Adequacy Margins (ZRAM)

- Identification of the maximum MW level of zonal “perfect capacity” that can be removed from each zone without either causing NYCA LOLE violations, or exceeding the zonal capacity
 - “Perfect capacity” is capacity that is not derated (e.g., due to ambient temperature or unit unavailability), not subject to energy durations limitations (*i.e.*, available at maximum capacity every hour of the study year), and not tested for transmission security or interface impacts

3. Tipping Points: Transmission Security

- Identification of the impact of plausible changes in conditions or assumptions that might adversely impact the reliability of the BPTF or “tip” the system into violation of a transmission security criterion:
 - Base Cases Lower Hudson Valley, New York City, and Long Island localities : margins were calculated for heatwave & extreme heatwave: 1-in-10-year heatwave and 1-in-100-year extreme heatwave conditions
 - Status Quo: margins were calculated for expected, heatwave, and extreme heatwave conditions

Note: Tipping points offer a relative measure of how close the system is from not having adequate resources to reliably serve load

2022 RNA: Scenarios Performed, cont.

4. “Status-quo”: Transmission Security and Resource Adequacy

- Removal of proposed major transmission and generation projects assumed in the RNA Base Case based on application of the inclusion rules
- Inclusion Rules presented at the April 26 ESPWG/TPAS [[link](#)]
 - Note: The Western NY and AC Transmission projects were kept in service due to their advanced status

5. CLCPA: Resource Adequacy

- Using the Policy Case Scenario #2 for study year 2030 from the 2021 System & Resource Outlook

6. Winter cold snap gas shortage: Transmission Security and Resource Adequacy

7. Emergency Assistance NYCA limit variations: Resource Adequacy

2023-2032 CRP Proposed Key Topics

Proposed CRP Key Topics

Since the 2022 RNA did not identify Reliability Needs, the NYISO plans to continue, time permitting, performing scenarios and build on key topics under the CRP 2023 process, such as:

- **Gas shortage/constraints during winter cold snaps (RA):**
 - Continue to build on the 2022 RNA initial simulations and methods, Potomac's research and input, historical operations experiences and data, best practices research, etc.
- **Extreme weather (RA/TS):**
 - Collaborate with NYSRC on the effort to update the Reliability Rules to capture uncertainties due to extreme weather

Note: RA=Resource Adequacy; TS = Transmission Security

Proposed CRP Key Topics, cont.

- **Integration of Large Loads Scenarios**
 - Tipping points (transmission security) and resource adequacy
- **Continue to build on the “Road to 2040” RNA section**
 - Discussion building upon the policy case
 - IBR roadmap collaboration with GE
 - Preparing for a winter-peaking system
 - DEFRs
- **Near-term reliability risks**
 - Transmission security tipping points updated with the 2023 Gold Book information

2023-2032 CRP Preliminary Schedule

Preliminary Schedule

■ Q1 2023

- Develop plan to perform scenarios and develop key topics
- Gather modeling data and develop models

■ Q2-Q3 2023

- Results presentations
- Draft report reviews

■ Q4 2023

- OC and MC vote
- NYISO's Board of Directors approval

Questions?

Roles of the NYISO

- **Reliable operation of the bulk electricity grid**
 - Managing the flow of power on 11,000 circuit-miles of transmission lines from hundreds of generating units
- **Administration of open and competitive wholesale electricity markets**
 - Bringing together buyers and sellers of energy and related products and services
- **Planning for New York's energy future**
 - Assessing needs over a 10-year horizon and evaluating projects proposed to meet those needs
- **Advancing the technological infrastructure of the electric system**
 - Developing and deploying information technology and tools to make the grid smarter

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