

2022 RNA Potential Scenarios

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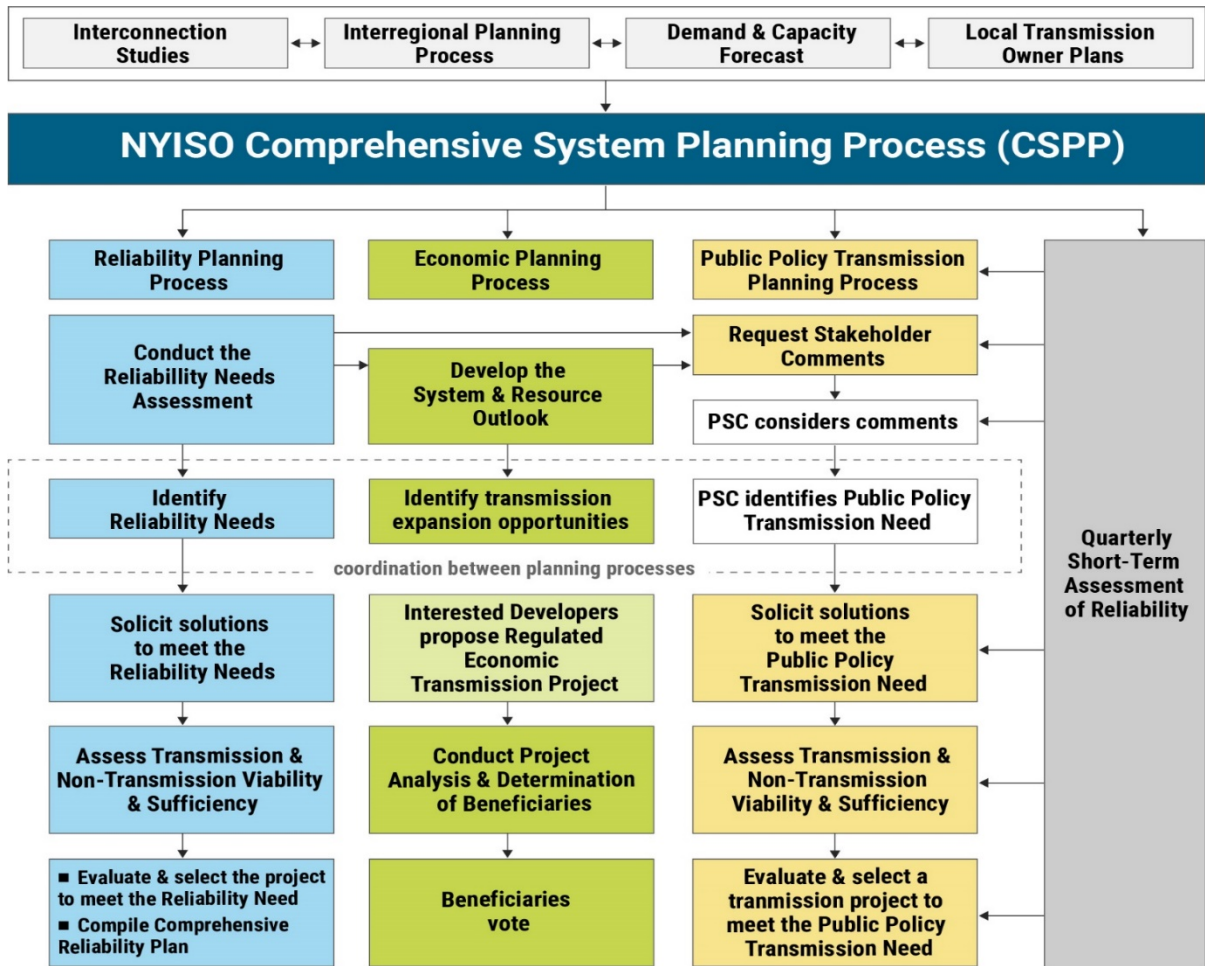
ESPWG/TPAS

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Agenda

- Reliability Planning Process
- 2022-2023 Reliability Planning Process (RPP)
Background
- 2022 RNA Preliminary Scenarios List

Reliability Planning Process



Reliability Planning Objectives

- **Identify Reliability Needs of the Bulk Power Transmission Facilities pursuant to applicable reliability criteria (NERC, NPCC, NYSRC);**
- **Identify, through the development of appropriate scenarios, factors and issues that might adversely impact the reliability of the bulk system;**
- **Provide an open and transparent process whereby solutions to identified needs are proposed, evaluated on a comparable basis, selected (as applicable), and implemented in a timely manner to ensure the reliability of the system;**
- **Provide an opportunity first for the implementation of market-based solutions while providing for the reliability of the bulk system;**
- **Coordinate the NYISO's reliability assessments with local utilities and neighboring control areas.**

Reliability Planning Studies

- **Short Term Assessments of Reliability (STARs)**
 - Conducted quarterly in direct collaboration with Transmission Owners
 - Five-year study, with a focus on addressing needs arising in the first three years
- **Reliability Needs Assessment (RNA)**
 - Conducted biennially to identify long term reliability needs in years 4-10
 - Considers all Transmission Owner LTPs and updates throughout the process
 - If reliability needs are identified, the NYISO issues a competitive solicitation for solutions, and TOs are required to propose Regulated Backstop Solutions
- **Comprehensive Reliability Plan (CRP)**
 - Biennial report that documents the plans for a reliable grid over the 10-year planning horizon
 - Includes evaluation and selection of transmission solutions to reliability needs in years 4-10

Reliability Metrics

■ Resource Adequacy

- The ability of the electric systems to supply the aggregate electrical demand and energy requirements of their customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

■ Transmission Security

- The ability of the electric system to withstand disturbances such as electric short circuits or unanticipated loss of system elements. The ability of the power system to withstand the loss of one or more elements without involuntarily disconnecting firm load.

2022-2023 RPP Background and Scenarios

2022-2023 RPP Background

- **The 2022 Reliability Planning Process (RPP) starts with the 2022 Reliability Needs Assessment (2022 RNA) followed by the 2023-2032 Comprehensive System Plan (CRP)**
 - 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)
- **The RPP is part of the Comprehensive System Planning Process and is performed pursuant to the Attachment Y of the NYISO OATT; see Section 31.2.**
 - Additional implementation details, including recently updated RNA Base Case inclusion rules, are captured in the RPP Manual
- **2022 RNA will be 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**
- **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)

2022 RNA: Scenarios Background

- **One of the objectives of the Reliability Planning Process 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
- **This presentation identifies a number of scenario candidates for the 2022 RNA, for review and comment**
- **A final list of the chosen scenarios will be presented at a future meeting, and it will be performed if time-permitting: *e.g.*, if we have Reliability Needs, may need to focus on addressing or further analyzing those**

2022 RNA: Potential Scenarios

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

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

2022 RNA: Potential Scenarios, cont.

4. “Status-quo” scenario: 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
- Projects included in the RNA base case will be presented at a future ESPWG/TPAS meeting

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