

2020-2021 Reliability Planning Process: CRP Scenarios Proposal

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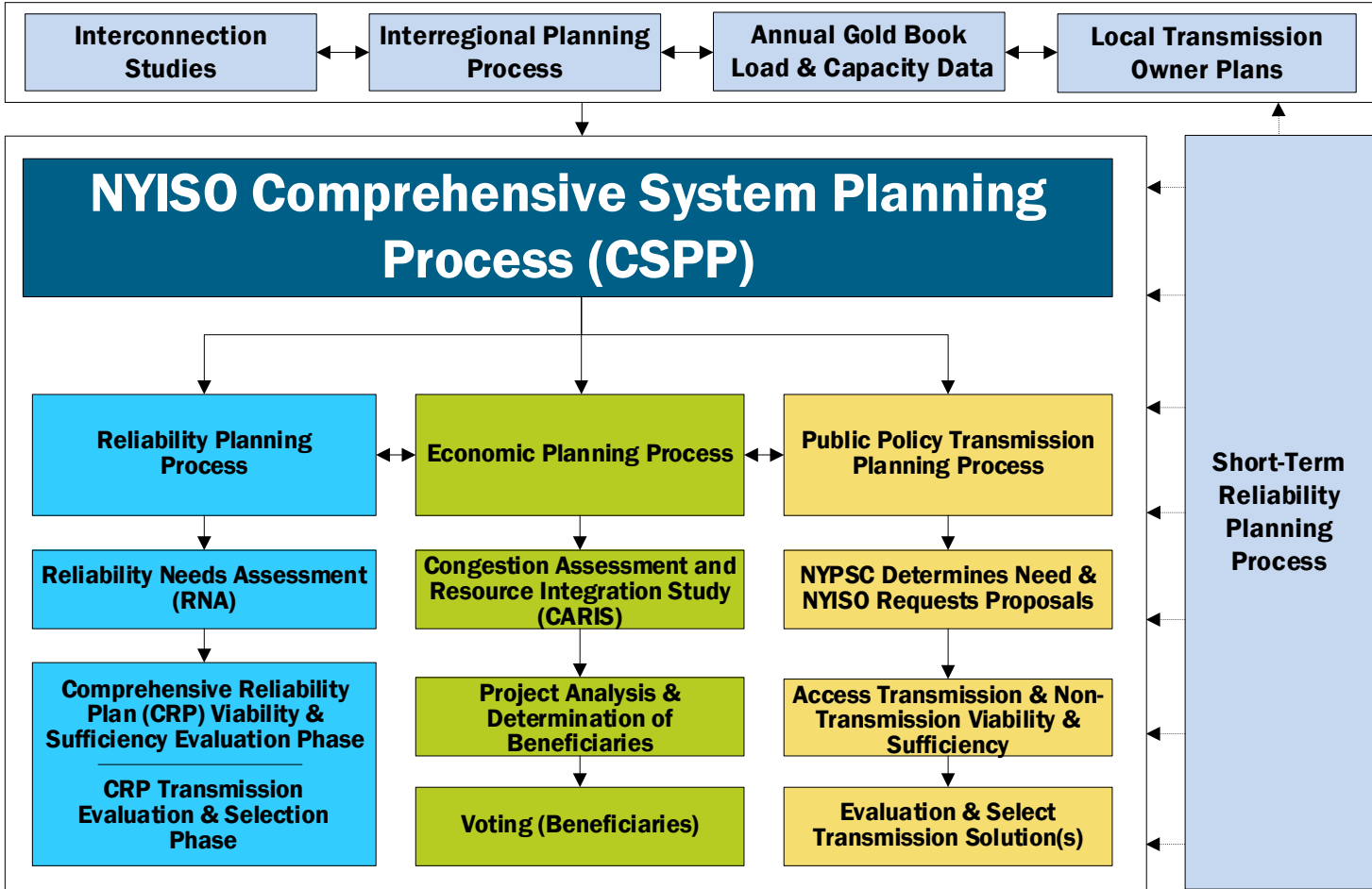
ESPWG/TPAS

May 20, 2021, Webex

Agenda

- **The 2020-2021 Reliability Planning Process (RPP)**
- **Comprehensive Reliability Planning (CRP) Scenarios Proposal**

2020-2021 RPP Background



RPP and STRP Background

- The RPP is part of the Comprehensive System Planning Process (CSPP) and is performed pursuant to the Attachment Y of the NYISO OATT; Section 31.1 and 31.2.
 - Additional implementation details, including recently updated RNA Base Case inclusion rules, are captured in the Reliability Planning Process Manual
- The 2020-2021 Reliability Planning Process (RPP) started with the 2020 Reliability Needs Assessment (2020 RNA), and will continue in 2021 with the Comprehensive Reliability Plan (CRP)
 - 2020-2021 RPP Study Period: year 4 (2024) through year 10 (2030)
- The 2024-2030 Comprehensive Reliability Plan (CRP), to be developed during 2021, will summarize the updated (post-RNA) base case results, and also selected scenarios and risks
- Effective May 1, 2020, the Short Term Reliability Process (STRP) addresses short term reliability needs through a quarterly Short Term Assessment of Reliability (STAR). The first quarterly STAR, *i.e.*, 2020 Q3 STAR, commenced on July 15, 2020
 - STAR Study Period: year 1 (2021) through year 5 (2025), with a focus on needs arising in the first three years
- 2020 Q3 STAR identified Needs starting 2023 (year 3) - addressed by the Regulated Backstop Solution
 - Q3 2020 STAR Solutions Report [[Link](#)]
- 2021 Q2 STAR started April 15, and targets July 14, 2021 for posting

2020-2021 RPP Major Milestones to Date

- **June 19, 2020 ESPWG/TPAS: presented preliminary RNA results**
 - No major update to the final RNA Base Case
- **October 2020 OC & MC: Market Monitoring Unit review and OC and MC votes**
- **November 2020: NYISO's Board of Directors approval and publishing of final RNA Report [\[link\]](#)**
- **Feb 23 ESPWG [\[link\]](#), March 26 ESPWG [\[link\]](#): updated post-RNA Base Case results**
 - Concluding all BPTF Reliability Needs were removed by the updates
- **May 20, 2021 (today) ESPWG/TPAS: proposed CRP scenarios**

Proposed CRP Scenarios

CRP: 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
 - The scenarios will be built off the RPP Base Case
- The 2020 RNA Report [[link](#)] includes results for several scenarios
- This presentation identifies a number of additional scenarios and risks to be either simulated, or discussed/summarized for the CRP

Proposed CRP Scenarios: Simulation-Based

- 70x30 Dynamic Stability
- 70x30 Evaluation of Short-Circuit Ratio and Potential Impacts
- 70x30 Wind Lull Analysis
- Impact of forced outages on transmission security
- “Tipping points” for RPP base case
- Updated Zonal Resource Adequacy Margins
- LOLH and EUE metrics

Proposed CRP Scenarios: Narrative/Qualitative

■ Climate Change/Intermittent Resources/Electrification

- Batteries/Energy Storage
 - peak amount (MW), duration (MWh), charging (MWh reserves available)
 - Life Span, Siting
 - NYISO ELR work
- Intermittent Resources
 - Extended reduced output
- Load
 - Increases with increased temperatures
 - Electrification
- Transmission
 - Public Policy projects

Proposed CRP Scenarios: Narrative/Qualitative

■ Climate Change/Intermittent Resources/Electrification

- NYISO/Other Studies – Bring together:
 - Climate Change Phase I and II
 - 70x30 Scenario (from CARIS and RNA)
 - Grid in Transition
 - EPRI Extreme Weather Study
- Power Quality
 - Impacts of high intermittent penetration
 - Loss of synchronous generation

Next Steps

Next Steps: Target Dates

- **May-July: analysis**
- **July-September: ESPWG/TPAS review**
- **September/October: OC and MC review and vote**
- **October/November: NYISO Board of Directors approval**

Questions?

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

