New York ISO
Independent System Operator

Updates on NYISO's Comprehensive System Planning Process

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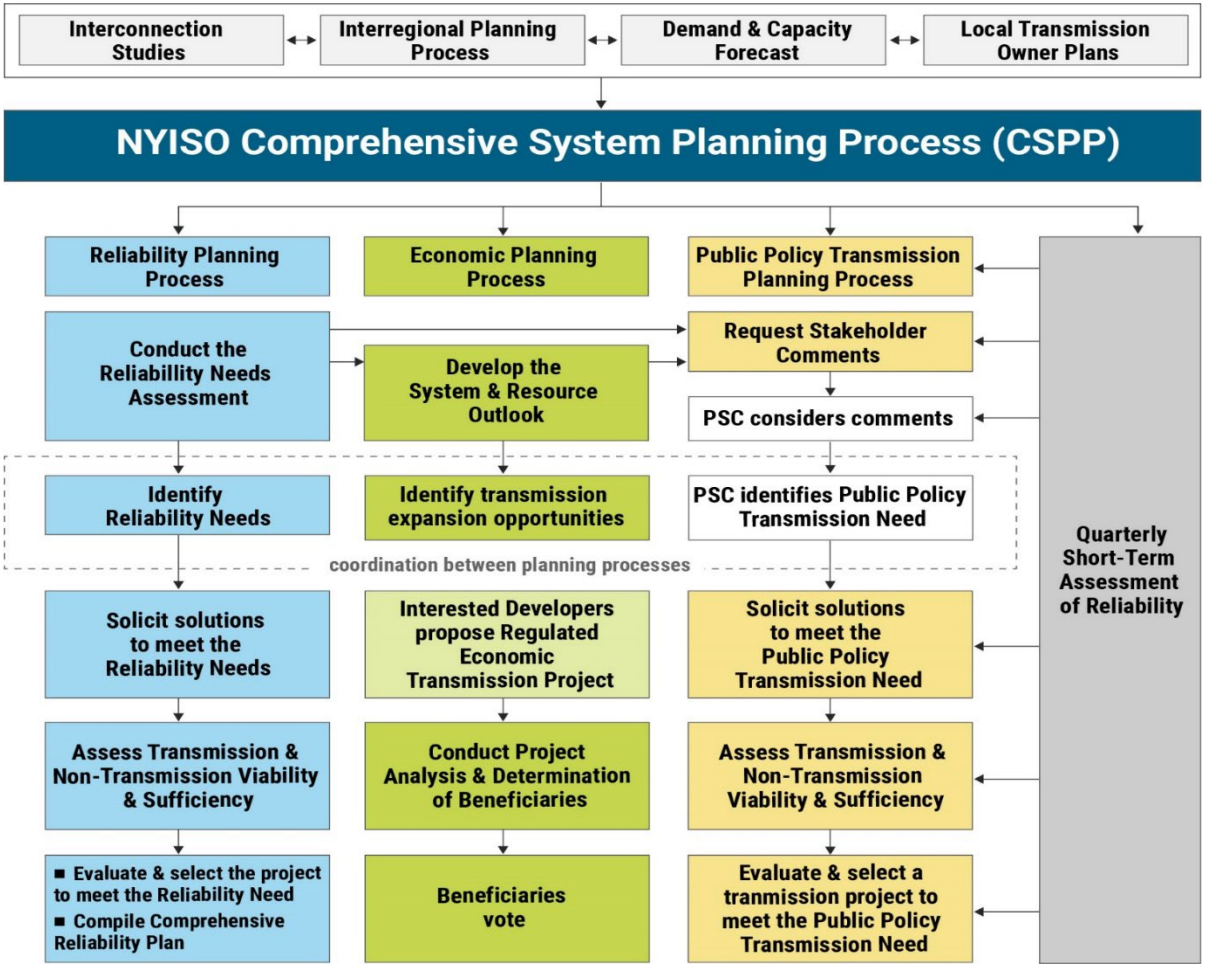
Interregional Planning Stakeholder Advisory Committee (IPSAC) Meeting

May 16, 2022



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Reliability Planning Process (RPP)

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Reliability Planning Process

- **Two-year process starting in even years**
- **Reliability Needs Assessment (RNA)**
  - Evaluates the adequacy and security of the Bulk Power Transmission Facilities (BPTF) over a seven-year Study Period (years four through ten of the next ten years), and identifies Reliability Needs
  - Reliability Needs are defined as violations of Reliability Criteria (*i.e.,* NERC, NPCC and NYSRC)
  - Identifies risks to the plan, and includes scenarios simulated for informing the risks
- **Comprehensive Reliability Plan (CRP)**
  - Develops a plan to satisfy the Reliability Needs identified in RNA, if any
  - Identifies risks to the plan, and could include additional scenarios simulated for informing the risks

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2021-2030 Comprehensive Reliability Plan

- **Final Report, Appendices, and Press Release available: [Report link] [Appendices link] [Press Release link]**
- **The CRP identified key risk factors to system reliability:**
  - Resource adequacy margins are tightening across the New York grid through time and the system would experience even smaller margins if additional power plants become unavailable or if demand is greater than forecasted.
  - New York City transmission security margins would be very tight starting in 2025 and would be deficient beginning in 2028 if forced outages are experienced at the historical rate.
  - If planned transmission projects were delayed for any reason, the grid's ability to reliably serve customer demand would be jeopardized.
  - Extreme events such as heatwaves or storms could result in deficiencies to serve demand statewide, especially in New York City considering the plans included in the CRP.

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2022 Reliability Needs Assessment

- 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, market participant data and inclusion rules application
- Reliability evaluations on the 2022 RNA Base Case: transmission security and resource adequacy
- Potential Study Scenarios have been discussed with stakeholders [link]
- Anticipated completion in Q4 2022

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Generator Status Update

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Generator Status Update

Generator Status Updates from March 15, 2021 through April 1, 2022

Generating Unit	*Zone*	*Current Generator Status*	*Date of Generator Status Change, if applicable*	*Initial Testing Date, if applicable*	*Generator Deactivation Assessment/Short-Term Assessment of Reliability Start Date, if applicable*	*Generator Deactivation Assessment/Short-Term Assessment of Reliability Completion Date, if applicable*	*PSC Retirement/Mothball Notice Date, if applicable*	*Proposed Retirement/ Mothball Date, if applicable*	*Rescinded Notice Date, if applicable*	*Notes*
CASSADAGA_WT_PWR	A	In Service	04/01/2021							
Ravenswood GT 2-1	J	Retired	04/01/2021		04/01/2018		03/21/2018			
Ravenswood GT 2-2	J	Retired	04/01/2021		04/01/2018		03/21/2018			
Ravenswood GT 2-3	J	Retired	04/01/2021		04/01/2018		03/21/2018			
Ravenswood GT 2-4	J	Retired	04/01/2021		04/01/2018		03/21/2018			
Ravenswood GT 3-1	J	Retired	04/01/2021		04/01/2018		03/21/2018			
Ravenswood GT 3-2	J	Retired	04/01/2021		04/01/2018		03/21/2018			
Ravenswood GT 3-4	J	Retired	04/01/2021		04/01/2018		03/21/2018			
RED___ROCHESTER	B	In Service	04/05/2021							
INDIAN POINT__3	H	Retired	04/30/2021		11/13/2017	12/13/2017	10/30/2019	04/30/2021		
Albany LFGE	F	ICAP Ineligible Forced Outage	07/01/2020		07/15/2020	10/13/2020			06/30/2021	On June 30, 2021 the NYISO received notice of the withdrawal of the intent to deactivate (Retire) Albany LFGE provided to the NYISO in July of 2019. However, this plant remains in IIFO.
ROARING___BROOK_WT_PWI	E	In Service	08/30/2021	08/30/2021						
ORANGEVILLE__ESR	A	In Service	10/19/2021	10/19/2021						
Ravenswood GT 11	J	ICAP Ineligible Forced Outage	12/01/2021		01/15/2022		03/31/2022	05/01/2023		As of April 1, the NYISO does not have a complete Generator Deactivation Notice for this Unit.
SITHE__STERLING	E	In Service			01/15/2022			05/02/2022		
SITHE__BATAVIA	B	In Service			01/15/2022			05/02/2022		
ALLEGHENY__COGEN	B	In Service			01/15/2022			05/02/2022		
BRANSCOMB__SOLAR	F	In Service	12/18/2021	12/18/2021						

Status of generators is reviewed and updated on a monthly basis:
https://www.nyiso.com/ny-power-system-information-outlook?folderPath=public/planning/NY-Power-System-Information-and-Outlook/Generator-Status-Updates

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Ravenswood GT 1	J	ICAP Ineligible Forced Outage	01/01/2022		01/15/2022		03/31/2022	05/01/2023		As of April 1, the NYISO does not have a complete Generator Deactivation Notice for this Unit.
Nassau Energy Corporation	K	In Service					01/28/2022	03/31/2022		As of April 1, the NYISO does not have a complete Generator Deactivation Notice for this Unit.
Gowanus 1-1	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-2	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-3	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-4	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-5	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-6	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-7	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 1-8	J	ICAP Ineligible Forced Outage			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-1	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-2	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-3	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-4	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-5	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-6	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-7	J	In Service			04/15/2022		12/16/2021	11/01/2022		
Gowanus 4-8	J	In Service			04/15/2022		12/16/2021	11/01/2022		

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Astoria GT 2-1	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 2-2	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 2-3	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 2-4	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 3-1	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 3-2	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 3-3	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 3-4	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 4-1	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 4-2	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 4-3	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Astoria GT 4-4	J	In Service			04/15/2022		02/22/2022	05/01/2023		
Madison County LF	E	ICAP Ineligible Forced Outage	04/01/2022							
Ravenswood GT 10	J	In Service					03/31/2022	05/01/2023		As of April 1, the NYISO does not have a complete Generator Deactivation Notice for this Unit.

Status of generators is reviewed and updated on a monthly basis:
https://www.nyiso.com/ny-power-system-information-outlook?folderPath=public/planning/NY-Power-System-Information-and-Outlook/Generator-Status-Updates

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Local Transmission Owner Plans (LTP)

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Local Transmission Owner Plans (LTP)

- The NYISO's Comprehensive System Planning Process (CSPP) begins with the Local Transmission Owner Planning Process (LTPP). The LTPP allows interested parties to examine the transmission system plans of each of the New York Transmission Owners individually.
- Local Transmission Owner Planning Process (LTPP) link:
  - https://www.nyiso.com/documents/20142/3632262/Local-Transmission-Owner-Planning-Process-LTPP.pdf
- 2022 Load and Capacity Data Report (Gold Book) containing BPTF LTPs and firm non-BPTF LTPs (Section VII)
  - https://www.nyiso.com/documents/20142/2226333/2022-Gold-Book-Final-Public.pdf

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Short-Term Reliability Process (STRP)

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Short-Term Reliability Process (STRP)

- The STRP uses quarterly Short-Term Assessments of Reliability (STAR) studies to assess the reliability impacts of generator deactivations on both BPTF and non-BPTF transmission facilities, in coordination with the responsible transmission owner(s)
- The STAR is also used by the NYISO, in coordination with the responsible transmission owner(s), to assess the reliability impacts of other system changes on the BPTF
- Each STAR assesses a five-year period with a particular focus on needs that are expected to arise in the first three years of the study period
  - Needs that arise in years four or five may be addressed in the STRP or RPP
- Short-Term Reliability Process webpage:
  https://www.nyiso.com/short-term-reliability-process

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Short-Term Reliability Process (STRP)

- **2022 Quarter 1 STAR**
  - The assessment did not identify any Short-Term Reliability Needs
  - The report is available [link]
- **2022 Quarter 2 STAR**
  - Study period April 15, 2022 - April 17, 2022
  - Study Assumptions can be found at [link]
  - Anticipated completion by July 14, 2022

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Economic Planning Process (EPP)

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Economic Planning Process

- **System & Resource Outlook, "The Outlook"**
  - Performed in alternate years to the RNA
  - 20-year study of system and congestion
  - Identifies, ranks, and groups congested elements
  - Assesses the potential benefits of addressing the identified congestion
  - Provide information to developers and marketplace
- **Economic Transmission Project Evaluation (ETPE)**
  - Evaluation by the ISO of a regulated economic transmission project
    - Transmission projects seeking regulated cost recovery under NYISO Tariff
    - Eligibility threshold: Cost over $25M, benefit/cost ratio over 1.0, load payment savings over cost, 80% beneficiary vote
- **Requested Economic Planning Study (REPS)**
  - Study performed solely for informational purposes by the ISO at the request of a stakeholder or other interested party at their expense
    - Assumptions and scenarios customizable
    - Confidential except for posting of limited information about the study request

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2021-2040 System & Resource Outlook

- **Evaluating 3 Reference Cases:**
  - **Base Case**: assumptions consistent with reliability base case inclusion rules
  - **Contract Case**: includes high-probability generation and transmission projects that don't yet meet the reliability base case inclusion rules
  - **Policy Case**: additional assumptions pertaining to public polices (e.g., CLCPA)
- **Analyses performed using reference cases include: transmission congestion evaluation, renewable generation pocket identification, energy deliverability calculations, operational analysis, and more.**
- **Currently discussing assumptions and results with stakeholders, study completion and report publication expected in Q2 2022**

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Public Policy Transmission Planning Process (PPTPP)

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Public Policy Transmission Planning Process (PPTPP)

- **Two-year process performed in parallel with RNA/CRP**
- **Phase I: Identify Needs and Assess Solutions**
  - NYISO solicits transmission needs driven by Public Policy Requirements
  - PSC identifies transmission needs and defines additional evaluation criteria
  - NYISO holds Technical Conference and solicits solutions (transmission, generation, or EE/DR)
  - NYISO performs Viability and Sufficiency Assessment (VSA)
- **Phase II: Transmission Evaluation and Selection**
  - NYISO staff evaluates viable and sufficient transmission solutions and recommends the more efficient or cost-effective solution
  - Stakeholder review and advisory votes at BIC and MC
  - NYISO Board may select a transmission solution for purposes of cost allocation and recovery under the NYISO Tariff

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Long Island Offshore Wind Export Public Policy Need

- **"The CLCPA constitutes a Public Policy Requirement driving the need for:**
  - Adding at least one bulk transmission intertie cable to increase the export capability of the LIPA-Con Edison interface, that connects NYISO's Zone K to Zones I and J to ensure the full output from at least 3,000 MW of offshore wind is deliverable from Long Island to the rest of the State; and
  - Upgrading associated local transmission facilities to accompany the expansion of the proposed offshore export capability…
  - Ensure no transmission security violations, thermal, voltage or stability, would result under normal and emergency operating conditions"

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Long Island Offshore Wind Export Update

- 19 projects were proposed by four Developers
- NYISO completed Viability & Sufficiency Assessment and identified 16 Public Policy Transmission Projects that are Viable and Sufficient [report link]
- NYISO will initiate the Evaluation & Selection phase in mid-May

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Interregional Coordination

- **Through the NYISO's Transmission Interconnection Procedures, the NYISO also coordinates with neighboring regions to identify the impact, if any, of the Public Policy Transmission Projects on the neighboring regions**
  - Facilities Study has been completed for the selected Western NY and AC Transmission projects, including identification of the upgrades to address New York-New England transfer degradation caused by Segment B project
  - System Impact Studies are underway for the LI PPTN transmission projects

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Stakeholder Material

- The NYISO Comprehensive System Planning Process is regularly discussed at the Electric System Planning Working Group (ESPWG) and Transmission Planning Advisory Subcommittee (TPAS).
  - https://www.nyiso.com/espwg
  - https://www.nyiso.com/tpas
- Study documentation is available at:
  - https://www.nyiso.com/cspp

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Questions?

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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

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