



New York ISO
Independent System Operator

M271: Coordinated Grid Planning Process Support Project Update

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Agenda

- **Coordinated Grid Planning Process Overview**
- **Preliminary Findings**
- **Next Steps**

Business Need for the Project M271

Alignment of CGPP with the NYISO's Comprehensive System Planning Process to coordinate for the New York Control Area and to facilitate achievement of the CLCPA goals.

Such alignment includes, but not limited to: :

- **consideration of resource availability to support the CGPP;**
- **expansion of NYISO's tariff and manuals, if applicable; and**
- **utilization of NYISO databases**

M271: CGPP Support Project

- **2023 project milestone: Issue Discovery**
 - Identify resources and process changes required to assist the state agencies and Utilities to complete CGPP
- **2024 project milestone: Define Study**
 - Adjust project scope according to the Utilities' upcoming filing in mid-2023
 - Propose tariff and manual revisions to address the changes if required

2023 Anticipated Project Timeline

- Kickoff: Oct 24 ESPWG (completed)
- Preliminary findings: November 21 ESPWG (today)
- Final presentation: December 19 ESPWG

Coordinated Grid Planning Process Overview

Coordinated Grid Planning Process Overview

The Accelerated Renewable Energy Growth and Community Benefit Act created the State Power Grid Study and Investment Program to identify investments in distribution and local and bulk transmission necessary to meet the requirements under the CLCPA*

The New York State Public Service Commission (“PSC”) issued a series of implementing orders, which included the establishment of a Coordinated Grid Planning Process (“CGPP”) aimed at:

- Improving planning processes to better coordinate the studies performed by the Utilities with the NYISO’s bulk power system planning and generation interconnection processes;
- Improving the integration of local transmission and distribution (“LT&D”) and bulk system studies with NYSERDA’s renewable generation and storage procurements; and
- Improving forecasting of renewable generation development for specific locations on the LT&D and bulk transmission grid.

* Case 20-E-0197, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act

“Utilities”

As referenced in the PSC Order, the “Utilities” include the Long Island Power Authority (“LIPA”) and the following the Joint Utilities (“JU”):

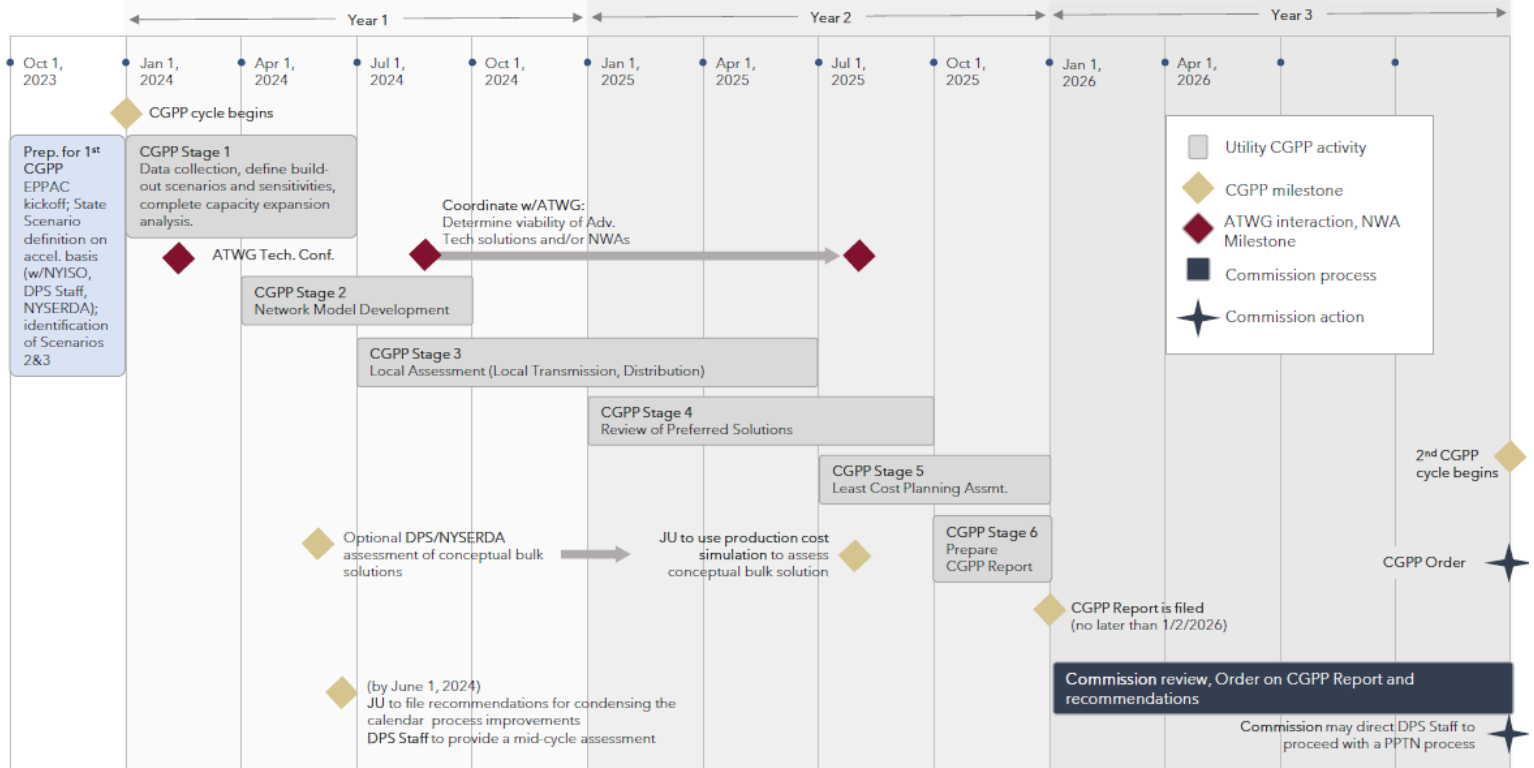
- Central Hudson Gas & Electric Corporation (“Central Hudson”)
- Consolidated Edison Company of New York, Inc. (“CECONY”)
- Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid”)
- New York State Electric & Gas Corporation (“NYSEG”)
- Orange & Rockland Utilities, Inc. (“O&R”)
- Rochester Gas and Electric Corporation (“RG&E”)

Notes

- NYISO continues the discussion with DPS, NYSERDA, and the Utilities in detailing the scope and process required to provide support for the CGPP. The preliminary findings in these materials are based on the August 17, 2023 PSC order approving the CGPP process with modifications.
- The resource estimates are derived based on past project experience and assumes the full-time employee equivalents (“FTE”) that are immediately available to contribute. The actual resource requirements are likely beyond the initial estimates.
- PSC directed the Utilities to collaborate with DPS, NYSERDA, and NYISO to reduce each CGPP cycle from three years to two years in order to achieve efficiency and to better align with the NYISO’s two-year cycle. Adjustment of the NYISO resourcing needs will be required in the future.
- The CGPP timeline in the next stage is obtained from the DPS website dedicated to the Energy Policy Planning Advisory Council (“EPPAC”), available at: [coordinated-grid-planning-process-calendar.pdf \(ny.gov\)](https://www.dps.ny.gov/energy-policy-planning-advisory-council/eppac-coordinated-grid-planning-process-calendar.pdf)



CGPP Timeline (per Aug. 17, 2023 Order)



Energy Policy Planning Advisory Council

The EPPAC is responsible for representing stakeholder interests and providing input and feedback on assumptions and technical approach used in the CGPP. The tasks include:

- Provide guidance to the Utilities in the selection of up to three distinct generation build-out scenarios;
- Inform the need for analysis of sensitivities that may be run on each of the three principal scenarios that may influence the generation build-out required to achieve CLCPA targets;
- Provide feedback on the input modeling assumptions used to design the electric system to achieve the state's objectives;
- Review the CGPP report as it is being completed to ensure that any stakeholder perspectives are captured appropriately; and
- Provide input into any lessons learned from prior CGPP cycles for incorporation in future CGPP revisions.

Energy Policy Planning Advisory Council: Anticipated NYISO Participation

- **Preliminarily Identified Tasks for the NYISO:**
 - Enhance collaboration of local transmission and distribution planning process and NYISO's planning processes throughout all stages
 - Participate in EPPAC meetings and provide technical feedback as a member based on NYISO processes
 - Provide feedback to other NYISO processes based on CGPP progress to facilitate alignment
 - Recommend enhancements to the CGPP, including study methodology, lessons learned, and process improvement
- **Estimated labor: collectively 1 FTE among NYISO efforts, critical in Stage 1, 5, and 6**
- **Estimated tariff change: not expected**
- **Expected manual change: not expected**

Stage 1: Data Collection and Determination of Scenarios

The Utilities, in consultation with the EPPAC, will establish up to three clean energy generation build-out scenarios as the basis for the evaluations conducted in the later stages

- The scope in this stage includes collecting data, establishing key modeling assumptions, defining scenarios, and completing the initial capacity expansion planning analysis that will guide the subsequent study process and assessment of preferred solutions
- This stage also contains an optional mechanism for DPS staff to determine, in consultation with the NYISO and the EPPAC, whether an assessment of conceptual bulk solutions may be warranted. If it is determined that a conceptual bulk solution is necessary, NYSERDA will engage a consultant to identify potential bulk solutions and estimate their possible system benefits and costs for consideration in the context of the other investments developed through the CGPP
- Estimated duration for the first CGPP cycle: current - June 30, 2024; second cycle begins in 2027

Stage 1

Anticipated NYISO Participation

- **Preliminarily Identified Tasks:**
 - Provide feedback on the selection of appropriate study scenarios as a member of the EPPAC
 - Develop the capacity expansion model for the “State Scenario” based on the assumptions received from DPS staff and the EPPAC
 - Conduct capacity expansion modeling assessment for the State Scenario
 - Following the determination of the remaining two scenarios by the EPPAC, develop and assess the capacity expansion models for these as well
 - Conduct sensitivities of capacity expansion modeling assessment
- **NYISO Planning process: Economic Planning Process (i.e., through the Requested Economic Planning Studies)**
- **Estimated tariff change: none**
- **Expected manual change: not expected at this stage, could consider in later cycles after Utilities file the updated plan**
- **Estimated labor: 2 - 3 additional FTE during this stage (6-9 months) for the first cycle, and then beginning of 2027 for the second cycle**

Stage 2: Network Model Development

The Utilities will develop 39 detailed system models for use in subsequent stages to assess their local systems over the 20-year study horizon. For the first cycle of the CGPP, the Utilities will hire a consultant to complete this stage. The Utilities will look to the NYISO in future cycles to develop the cases, if NYISO's resources allow.

The list of cases for the first round includes the following system conditions:

Steady State (for each build-out scenario with associated auxiliary files):

- Summer 2030 baseline coincident peak demand, Winter 2030 baseline coincident peak demand, 2030 off-peak (shoulder) load, and 2030 light load
- Summer 2035 baseline coincident peak demand, Winter 2035 baseline coincident peak, 2035 off-peak (shoulder) load and 2035 light load
- Summer year $n+20$ baseline coincident peak demand, Winter year $n+20$ (i.e., last year in a 20-year planning horizon) baseline coincident peak, Year $n+20$ off-peak (shoulder) load, Year $n+20$ light load

Short Circuit: System representation (studied-year, as needed with one case for each scenario)

Stage 2

Anticipated NYISO Participation

- **Estimated Duration for the first CGPP cycle: Apr. 1, 2024 - Sep. 30, 2024**
- **Preliminarily Identified Tasks for the NYISO : In total, 36 steady state cases and three short circuit cases would need to be developed**
 - JU would hire a consultant to complete this stage in the first cycle of CGPP, and
 - NYISO would develop the cases after initial round if resources allow
- **NYISO Planning process: System Modeling and Demand Forecasting and Analysis (i.e., through Requested Economic Planning Studies)**
- **Estimated labor: additional 3 - 4 FTE for Stage 2 starting in 2027 (6 months)**
- **Estimated tariff change: none**
- **Estimated manual change: none is required but may be considered for better alignment with existing NYISO processes**

Stage 3: Local Assessment

Each of the Utilities would evaluate conditions within its service territory to determine whether LT&D system upgrades are necessary to accommodate the integration of distributed energy resources (“DERs”) and utility-scale generation resources included in the build-out scenarios. Under this step, the Utilities will also include headroom assessments and consider the sufficiency of advanced technologies and non-wires alternatives to address the identified CLCPA needs.

- Estimated duration for the first cycle: Jul. 1, 2024 – Jun. 30, 2025
- Preliminarily Identified Tasks for the NYISO: None identified
- Subsequent rounds of the CGPP also have not identified tasks for the NYISO based on the current discussion

Stage 4: Review of Preferred Solutions

The Utilities will assess the aggregate impact of the LT&D upgrades identified in Stage 3 by including them as a portfolio of solutions in the database. The Utilities then will conduct a “Synergy Assessment” to qualitatively review the entire portfolio of solutions to identify potential interactions or conflicts and to make adjustment in the event of negative interactions. The power flow and short circuit cases for each scenario are then updated with the projects identified in the synergy assessment and statewide system impact review (i.e., power flow and short circuit analysis) to confirm that the inclusion of these projects does not result in any material adverse impacts on neighboring systems or the bulk transmission system.

- Estimated duration for the first cycle: Jan. 1, 2025 - Sep. 30, 2025
- Preliminarily Identified Tasks for the NYISO: None identified
- Subsequent rounds of the CGPP also have no identified tasks for the NYISO

Stage 5: Least Cost Planning Assessment

The Utilities will identify a portfolio of LT&D and bulk projects that would facilitate the achievement of the CLCPA goals at the least cost. If a potential bulk solution was developed through NYSERDA from Stage 1, one or more of the potential bulk solutions shall be included in the comparative analysis performed in this stage and evaluated in the final CGPP Report.

- Estimated duration for the first CGPP cycle : July 1, 2025 - Dec. 31, 2025
- Preliminarily Identified Tasks for the NYISO: next slide

Stage 5

Anticipated NYISO Participation

- **Preliminarily Identified Tasks:**
 - Provide production simulation analysis of the State Scenario along with the capacity expansion planning analysis to the Utilities to help quantify the economic tradeoffs and deliverability benefits
 - Conduct capacity expansion for post-project system conditions of the three scenarios and assess the results
 - Assist the Utilities to identify the capacity expansion benefits due to the recommended system expansion
- **NYISO Planning process: Economic Planning Process (i.e., through Requested Economic Planning Studies)**
- **Estimated tariff change: none**
- **Expected manual change: not expected at this stage but could consider in later cycles**
- **Estimated labor: on average 2 - 3 FTE during this stage during the second half of 2025 for the first cycle**

Stage 6: Least Cost Plan Report

The Utilities will file the final report considering the inputs by the EPPAC. The report would identify the solutions that were found to be beneficial in Stage 5 and rank the portfolios of solutions using capacity headroom (\$/MW) and energy headroom (\$/MWh)

With the information of both LT&D and potential bulk solutions, the PSC will be in a position to determine whether to initiate the NYISO's Public Policy Process and to refer bulk needs to the NYISO for the solicitation and evaluation of transmission proposals under its process

The PSC noted that this information from Stage 6 may also be appropriate for NYPA to examine whether to accelerate the deployment of one or more potential bulk transmission solutions to meet the CLCPA energy targets and, if so, whether to petition the PSC to identify it through NYPA's priority transmission project process

Stage 6

Anticipated NYISO Participation

- **Estimated duration for the first CGPP cycle: Oct. 1, 2025 - Dec. 31, 2025**
- **NYISO's participation:**
 - Review the report and provide feedback as an EPPAC member, as well as provide feedback on lessons learned
 - Approximately 1 – 2 FTE during this stage (3 months), collectively among all NYISO efforts

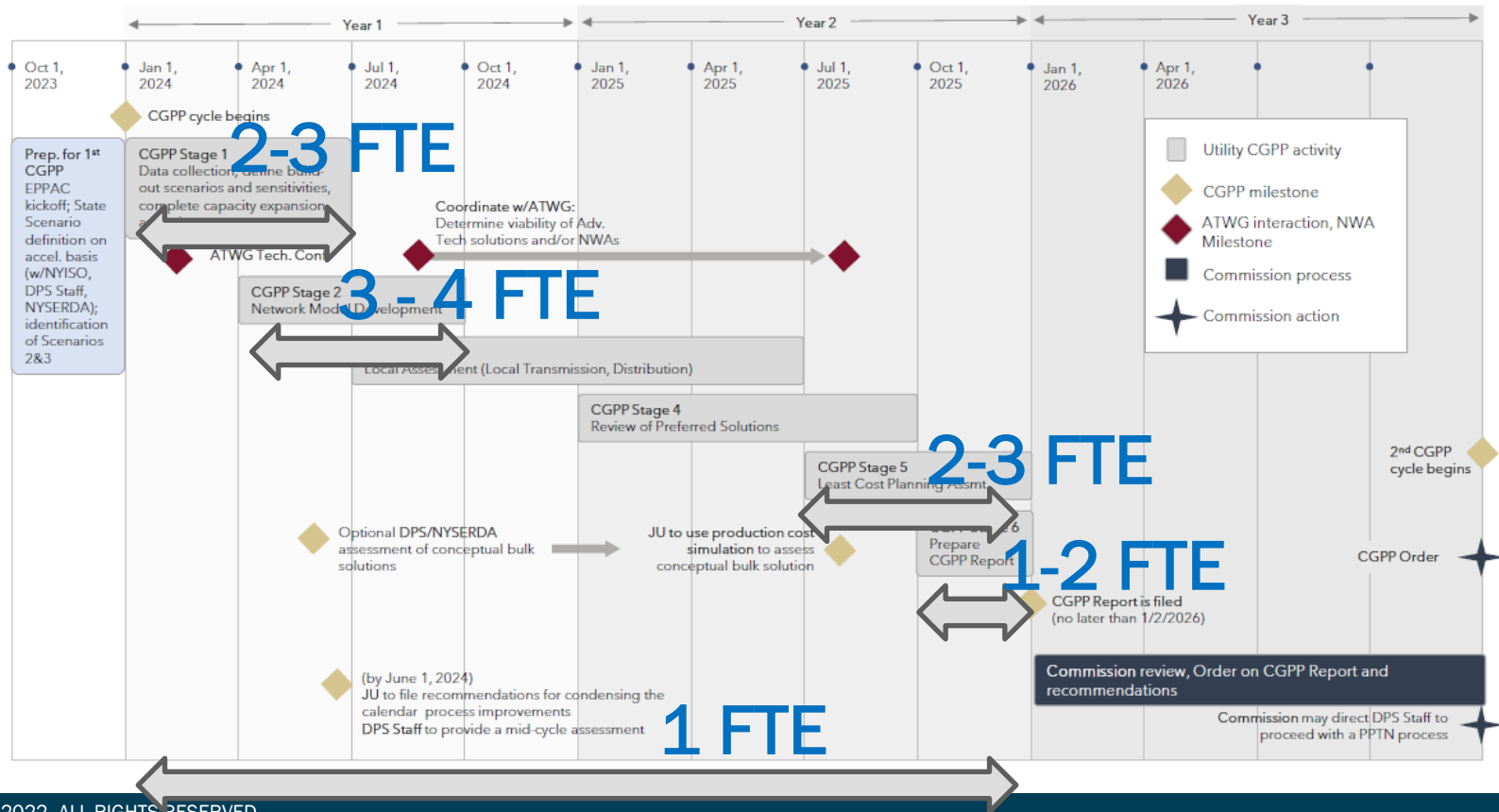
Discussion: Alternative Bulk Solution

“CGPP should produce information about potential PPTNs at the same time that it delivers proposals to the Commission for local transmission solutions. A process designed in this way would allow the Commission to consider the full scope of system needs and to determine, on an informed basis, whether to declare a public policy need and trigger a NYISO solicitation.” (page 30, Aug. 17, 2023 PSC Order)

- The NYISO is in discussions with DPS, NYSERDA, and Utilities to understand how the CGPP will produce information about potential PPTNs and how the scope will be developed in the overall process.
- The additional resources that the NYISO may require and timeline is not included in today’s materials

Preliminary Findings (Subject to Revision)

CGPP Timeline (per Aug. 17, 2023 Order)



York ISO

Next Steps

- Comments and suggestions to the M271 project can be sent to ylin@nyiso.com by November 30, 2023
- Final presentation for M271 project in 2023 will be on December 19, 2023

Questions, Comments, & Feedback?

Email additional feedback to:
YLin@nyiso.com

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