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Independent System Operator

Overview of the Coordinated Grid Planning Process

Keith Burrell

Principal Transmission Planning Advisor

TPAS/ESPWG

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Background

- Stakeholders expressed concerns related to the transparency of the NYISO's coordination with the Utilities' Coordinated Grid Planning Process ("CGPP") at the June 2024 Joint Board and Management Committee Meeting
- While not a NYISO process, this presentation is intended to help improve stakeholders' basic understanding of the CGPP and to further enhance the communication and transparency of the NYISO's coordination with the CGPP and the 2024 M271 Project
- The NYISO's characterization of the CGPP in this presentation is based on its understanding of the process as filed with and accepted by the NYPSC

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Agenda

- Coordinated Grid Planning Process Overview
- Description of Coordinated Grid Planning Process Stages
- Next Steps

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Coordinated Grid Planning Process Overview

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Coordinated Grid Planning Process Overview

In Case No. 20-E-0197,* the New York State Public Service Commission ("PSC") issued an order on September 9, 2021 that identified the minimum objectives of CGPP as follows:

- Improve planning processes to better coordinate the studies performed by the Joint Utilities with the NYISO's bulk power system planning and generation interconnection processes.
- Improve the integration of Local Transmission and Distribution ("LT&D") and bulk system studies with NYSERDA's renewable generation and storage procurements.
- Improve 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

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Key Steps in Development of CGPP

- **May 14, 2020**: NYPSC issued the initiating order in this proceeding in response to environmental policy objectives and related requirements set forth in the CLCPA and the Accelerated Renewable Energy Growth and Community Benefit Act
  September 9, 2021: NYPSC issued the order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals, including the development of CGPP and the minimum objectives
- **December 17, 2021**: Joint Utilities filed an initial framework for CGPP
- **January – December 2022**: DPS staff hosted a series of nine technical conferences at which the Joint Utilities explained the various steps and analyses included in the proposed CGPP and engaged in dialogue with stakeholders
- **December 27, 2022**: Joint Utilities filed the updated CGPP
- **August 17, 2023**: NYPSC issued an order approving the CGPP, with modifications
- **June 1, 2024:** Joint Utilities issued recommendations for reducing the CGPP process cycle time to two years

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“Utilities”

As referenced in the NYPSC Order, the “Utilities” include the Long Island Power Authority and the following the “Joint Utilities”:

- Central Hudson Gas & Electric Corporation
- Consolidated Edison Company of New York, Inc.
- Niagara Mohawk Power Corporation d/b/a National Grid New York State Electric & Gas Corporation
- Orange & Rockland Utilities, Inc.
- Rochester Gas and Electric Corporation

For purposes of this presentation, the NYISO may use Utilities and Joint Utilities interchangeably.

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Coordinated Grid Planning Process Proposal Overview

- The CGPP is designed based on a three-year timeline and is a multi-stage process of data collection, modeling, system studies, and solutions development that the Joint Utilities and LIPA would conduct over a 24-month period
- The CGPP culminates in a report that contains, among other things, recommended system investments for the NYPSC's consideration and issuance of an order at the end of year three
  - Following the NYPSC's decision on the proposed investments, the study cycle would repeat
- The CGPP includes an Energy Policy Planning Advisory Council ("EPPAC") comprised of various industry organizations
  - DPS staff was charged with administering the EPPAC and designating its members to ensure that stakeholder interests are appropriately represented in the process and that participants have the technical qualifications to contribute substantively to the planning process
- Recognizing NYISO's role in planning for the New York Control Area, the NYPSC also directed the Utilities to work with the NYISO in developing the CGPP, along with DPS staff and NYSERDA

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Energy Policy Planning Advisory Council ("EPPAC") - Responsibilities

- **EPPAC was designed to represent stakeholder interests from across New York State and provide input and feedback on assumptions and the technical approach used in the CGPP analysis**
- **EPPAC tasks include:**
  - Provide input into any lessons learned from prior CGPP cycles for incorporation in future CGPP revisions
  - Provide guidance to the Joint 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 State objectives
  - Preview CGPP final report as it is being completed to ensure that any stakeholder perspectives that must be explained are captured appropriately
- **The EPPAC webpage (here) includes resources, such as meeting recordings, supporting documents, and links to the order approving the CGPP and the relevant NYPSC proceeding (Case No. 20-E-0197)**

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EPPAC Meetings To-Date

- **September 19, 2023**
  - Primarily included a state scenario presentation (NYSERDA/DPS)
- **September 28, 2023**
  - Presentation of supply curve analysis (NYSERDA)
- **October 16, 2023**
  - Assumptions matrix review
  - Discussion of foundational concepts for future scenarios
- **October 30, 2023**
  - Presentation of scenario themes
  - Discussion of potential scenarios
- **November 13, 2023**
  - Review and discuss scenario matrices
- **November 27, 2023**
  - Review of Scenario 2 and 3 proposals
  - Identification of data needs and preferred assumption updates
  - Compile next steps to finalize scenarios
- **December 11, 2023**
  - Continued discussion of scenario proposals
  - Joint Utilities presentation on headroom analysis and methodology
- **January 8, 2024**
  - Headroom Methodology (Joint Utilities)
  - Implementation of Headroom in Capacity Expansion Model (Joint Utilities)
- **January 22, 2024**
  - Presentation on Updated Scenario 2 and 3 Assumptions (Joint Utilities)
  - Discussion and Finalization of Scenario 2 and 3 Assumptions (Joint Utilities)
- **February 5, 2024**
  - Discuss Final Scenario 2 and 3 Assumptions and Open Headroom Questions
- **March 25, 2024**
  - Presentation of Draft Scenario 1 Capacity Expansion Results (analysis performed by NYISO)
- **April 15, 2024**
  - Presentation on State Scenario Results (analysis performed by NYISO)
- **June 17, 2024**
  - Presentation of final capacity expansion results for Scenario 1 (analysis performed by NYISO)
  - Overview of Proposed Siting Methodology for Stage 2 (Joint Utilities)
  - Discuss Potential Capacity Expansion Sensitivities
- **July 15, 2024**
  - Presentation of final capacity expansion results for Scenario 2 (analysis performed by NYISO)
- **August 5, 2024**
  - Presentation of final capacity expansion results for Scenario 3 (analysis performed by NYISO)

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EPPAC Members as of July 19, 2024

- Alliance for Clean Energy New York
- Central Hudson Gas & Electric Corporation
- Consolidated Edison Company of New York, Inc.
- Energy Justice Law and Policy Center
- Grid United
- Independent Power Producers of New York, Inc.
- Long Island Power Authority
- LS Power Grid New York
- Municipal Electric Utilities Association
- National Grid Ventures
- New York Battery and Energy Storage Technology Consortium
- New York City
- New York Department of State Utility Intervention Unit
- New York Independent System Operator, Inc.
- New York Association of Public Power
- New York Offshore Wind Alliance
- New York Power Authority
- New York Solar Energy Industries Association
- New York State Department of Public Service
- New York State Electric & Gas Corporation
- New York State Energy Research and Development Authority
- New York State Office of Renewable Energy Siting
- New York Transco LLC
- NextEra Energy Transmission New York, Inc.
- Niagara Mohawk Power Corporation d/b/a National Grid
- Orange and Rockland Utilities, Inc.
- Rochester Gas & Electric Corporation
- Transource Energy, LLC
- WE ACT for Environmental Justice

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Areas of NYISO Participation in CGPP

- Participate as a member of EPPAC
- Conduct and provide capacity expansion analysis in stages 1 and 5
- Conduct and provide production cost simulation results of the State Scenario and other scenarios, as requested by Joint Utilities
- Administer Public Policy Transmission Planning Process, if NYPSC issues order finding a Public Policy Transmission Need
- Conduct interconnection-related studies through applicable NYISO transmission expansion and interconnection procedures
- While the NYISO is not performing this work for the first round of the CGPP, there is potential for the NYISO to compile network models for each of the three scenarios under the CGPP in future CGPP cycles
  - Total 36 power flow cases and three short circuit cases: 12 power flow cases for each scenario, including summer/winter/spring/light load for 2030, 2035, and year 20, and Short circuit system representation
  - Joint Utilities plan to utilize a consultant for the first round, and then the NYISO will compile the cases if sufficient technical resources are available at the time of study. An estimate for this work was provided in the 2023 M271 project presented in December 2023 (here) and will be re-assessed as part of the 2024 M271 project.

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NYISO's Participation in CGPP to Date:

- Participated in discussions with DPS staff, Joint Utilities, and NYSERDA, including routine meetings and technical conferences held by DPS to discuss stages of the CGPP proposal
- Regularly scheduled discussions with DPS staff, Joint Utilities, and NYSERDA on the development of capacity expansion model and simulation results for all CGPP scenarios
- Participated in all EPPAC meetings
- Completed the 2023 Project M271 and will conduct the 2024 Project M271
- Added headcount in 2024 for a Transmission Planning Advisor and a Long-Term Assessments Planning Engineer
- Established a Requested Economic Planning Study ("REPS") for the Joint Utilities for capacity expansion scenario modeling to support the CGPP

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Coordinated Grid Planning Process Stages

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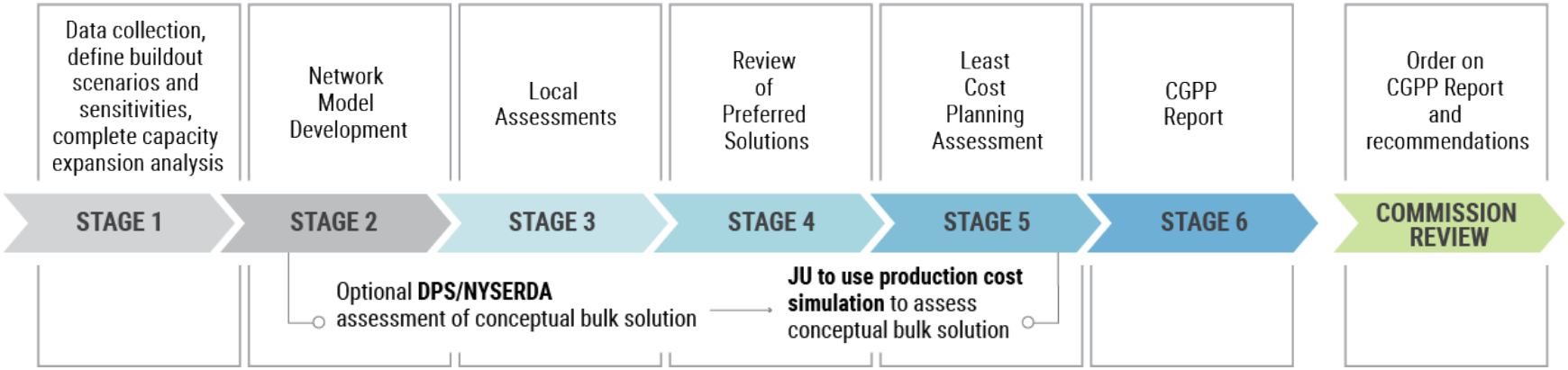
Brief Description of the Stages of CGPP



Note:

- The details of the CGPP stages can be found on the EPPAC website (here)

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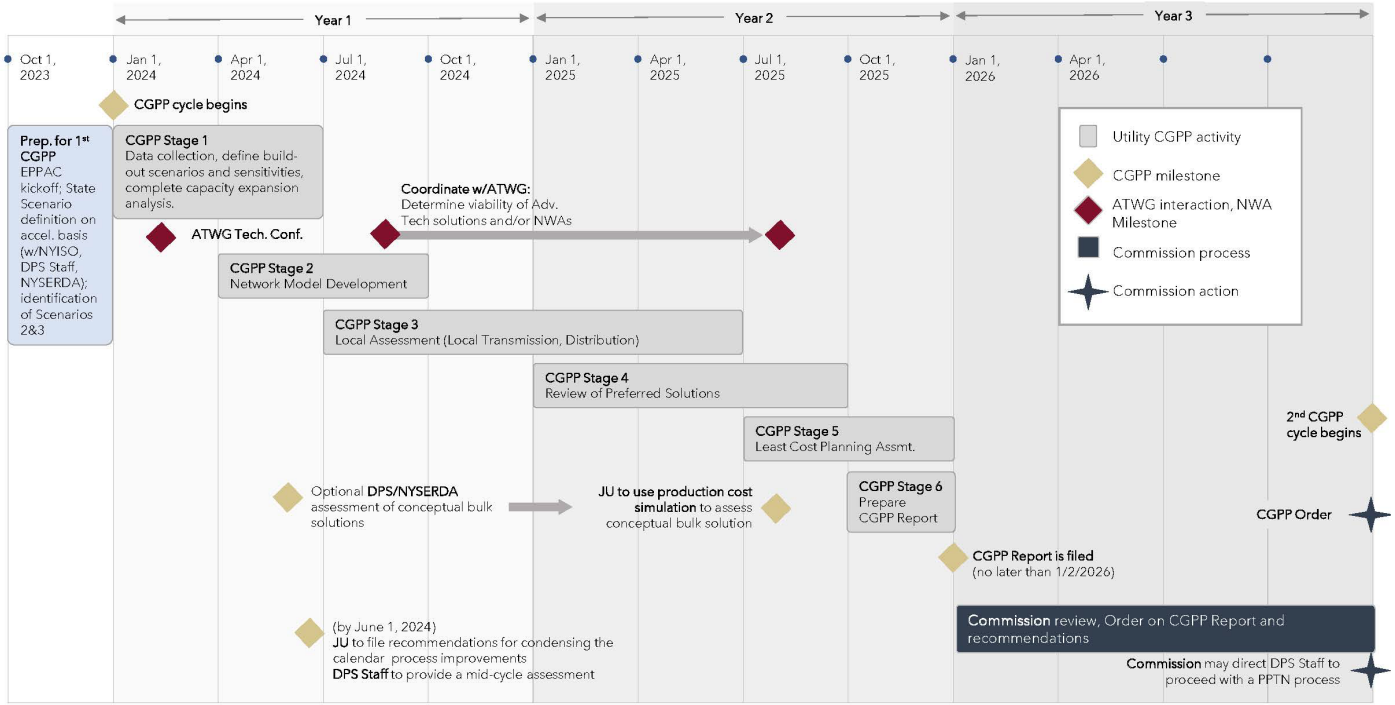
coordinated-grid-planning-process-calendar.pdf (ny.gov)

CGPP Timeline (per Aug. 17, 2023 Order)



Stage 1: Data Collection and Determination of Scenarios

The Joint Utilities, in collaboration 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

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CGPP Scenarios

- **The scenarios defined for this round of the CGPP include:**
  - State scenario: designed to follow the assumptions developed for the Climate Action Council Scoping Plan, specifically Scenario 2 of the Integration Analysis
  - Low transmission impact: designed to reduce the need for transmission buildout
  - High transmission impact: designed to increase the need for transmission buildout

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Status of Stage 1: Capacity Expansion Results

- The NYISO's 2023-2042 System and Resource Outlook provided NYISO stakeholders with the preliminary state scenario results
- In April 2024, the Joint Utilities and DPS staff finalized low and high transmission impact scenario assumptions and requested the NYISO to perform capacity expansion modeling through a Requested Economic Planning Study, which is an option contained in the tariff
- Schedule of capacity expansion results and presentation to EPPAC
  - State scenario results were presented to EPPAC on June 17, 2024
  - Low transmission impact (scenario 2) results were presented to EPPAC on July 15, 2024
  - High transmission impact (scenario 3) results are scheduled to be presented to EPPAC on August 5, 2024
- Following the presentation of the three scenario results at EPPAC the NYISO will present the results to ESPWG
  - This is anticipated to occur in later August or September 2024

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Stage 2: Network Model Development

The Joint 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 Joint Utilities will hire a consultant to complete this stage. The Joint 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)

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Stage 3: Local Assessment

- Each of the Joint Utilities will 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 Joint Utilities will also include headroom assessments and consider the sufficiency of advanced technologies and non-wires alternatives to address the identified CLCPA needs

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Stage 4: Review of Preferred Solutions

- The Joint 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 Joint Utilities then will conduct a "Synergy Assessment" to qualitatively review the entire portfolio of solutions to identify potential interactions or conflicts and to made adjustment in the event of negative interactions
- The power flow and short circuit cases for each scenario will be 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

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Stage 5: Least Cost Planning Assessment

- The Joint 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

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Stage 6: Least Cost Plan Report

The Joint 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 NYPSC can consider 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 NYPSC noted that the 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, petition the NYPSC to identify the solutions or solutions through NYPA's priority transmission project process

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Next Steps

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Next Steps

- Review of the CGPP scenario findings at an ESPWG in either the August or September 2024
- Kick-off 2024 M271 Project

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Questions, Comments, & Feedback?

Email additional feedback to:
kburrell@nyiso.com

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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

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