STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

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.

ORDER APPROVING A COORDINATED GRID PLANNING PROCESS

Issued and Effective: August 17, 2023

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At a session of the Public Service Commission held in the City of Albany on August 17, 2023

COMMISSIONERS PRESENT:

Rory M. Christian, Chair
Diane X. Burman, concurring
James S. Alesi
Tracey A. Edwards, recusing
John B. Howard
David J. Valesky
John B. Maggiore

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BY THE COMMISSION:

INTRODUCTION

The Accelerated Renewable Energy Growth and Community Benefit Act (Accelerated Renewables Act) includes, among its various mandates, a requirement to plan for and identify the distribution, local transmission, and bulk system upgrades needed to meet the climate goals codified in the Climate Leadership and Community Protection Act (CLCPA). To address these planning requirements, the Public Service Commission (Commission) directed the State's major electric utilities (the Utilities) to file proposals for changes to their planning

processes.[1] This Order approves a new long-term system planning process that will enable the Commission and the Utilities to identify transmission investments needed to meet the objectives of the CLCPA.

BACKGROUND

On May 14, 2020, the Commission issued the Initiating Order directing the Utilities to propose a "transparent planning process ... that will identify additional projects on the distribution and local transmission systems that support achievement of CLCPA goals."[2] On November 2, 2020, in a filing that included a proposed portfolio of transmission investments, the Utilities described their existing system planning processes and proposed some adaptations.[3]

On September 9, 2021, the Commission issued the Phase 2 Order, which found that the November 2020 Filing did not adequately respond to the Commission's call for the development of a coordinated CLCPA-focused planning process.[4] The Commission went on to specify that a "properly coordinated" planning process must meet certain minimum objectives, including:

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[1] Case 20-E-0197, Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (issued May 14, 2020) (Initiating Order). The Utilities include Consolidated Edison Company of New York, Inc., Orange and Rockland Utilities, Inc., New York State Electric and Gas Corporation, Rochester Gas and Electric Corporation, Central Hudson Gas & Electric Corporation, and Niagara Mohawk Power Corporation d/b/a National Grid.

[2] Initiating Order, p. 7.

[3] The filing was made by the Utilities and the Long Island Power Authority (LIPA) (the November 2020 Filing).

[4] Case 20-E-0197, Order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals (issued September 9, 2021) (Phase 2 Order).

"support[ing] all existing grid planning needs and criteria; ... identify[ing] upgrades at all levels needed to ensure the timely and cost-effective attainment of CLCPA policy goals; and ... provid[ing] accurate and actionable information" to stakeholders and policy-makers.[5] Further, the Commission required the Utilities to "ensure consistency in input data, planning assumptions, planning models, and the planning approaches used by the different planning entities so that the utility-specific plans ... accurately and comparably capture the interdependence of distribution, local transmission, and bulk transmission in the various portions of the State's power grid."[6]

In January 2022, the Commission subsequently issued the Power Grid Study Order, which emphasized the role of coordinated planning in providing a comprehensive framework for investment.[7] Acknowledging the extended timeframes for licensing and constructing transmission facilities, the Commission stated that early identification of bulk system needs would be necessary. The Commission stated its expectation that "the Utilities and the [New York Independent System Operator, Inc. (NYISO)] will align their processes with any necessary modifications, so that the *full spectrum of bulk and local transmission needs can be presented to the Commission as they evolve*."[8]

In response to the Phase 2 Order, the Utilities and LIPA filed their initial proposal for a Coordinated Grid

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[5] Phase 2 Order, p. 19.

[6] Phase 2 Order, pp. 20-21.

[7] Case 20-E-0197, et al., Order on Power Grid Study Recommendations (issued January 20, 2022) (Power Grid Study Order), pp. 28-30.

[8] Power Grid Study Order, p. 29 (emphasis added).

Planning Process (CGPP) on December 17, 2021.[9] Following the Initial Filing, DPS Staff hosted a series of nine technical conferences at which the Utilities and LIPA explained the various steps and analyses included in the proposed CGPP and engaged in dialogue with stakeholders. These conferences were held over several months in 2022. The Utilities and LIPA then revised their Initial Filing and submitted a revised CGPP proposal to the Commission on December 27, 2022. A corrected version was submitted on January 5, 2023, replacing Figure 5 with a higher-resolution image (Revised CGPP or Proposal).

THE PROPOSAL

The Proposal would establish, for the first time, a long-term transmission planning framework focused on achieving the objectives of the CLCPA. The filing sets out a multi-step process of data collection, modeling, system studies, and solutions development that the Utilities and LIPA would conduct over a 24-month period, culminating in a report and recommended system investments for the Commission's consideration. Following a Commission decision on the proposed investments, the study cycle would repeat.

The Revised CGPP includes modifications to the Initial Filing that are intended to refine and strengthen the process, ensure that system needs are evaluated on the best available data, refine modeling approaches, and provide more opportunity for stakeholder input. The following sections discuss the key elements and procedural steps described in the Revised CGPP.

[9] The Utilities' Coordinated Grid Planning Process and Revised Benefit Cost Analysis Proposals (filed December 17, 2021) (Initial Filing).

Energy Policy Planning Advisory Council (EPPAC)

Both the Initial Filing and the Revised CGPP suggest establishing a stakeholder group to inform the planning process, denominated the Energy Policy Planning Advisory Council (EPPAC). As proposed, DPS Staff would designate the members of the EPPAC to ensure that stakeholder interests are appropriately represented in the CGPP process. The Proposal indicates that the EPACC may be composed of representatives from organizations such as each of the Utilities, the NYISO, the New York State Energy Research and Development Authority (NYSERDA), Department of Public Service Staff (DPS Staff), generation and storage associations, the New York Power Authority, LIPA, the Office of Renewable Energy Siting, the Utility Intervention Unit of the New York Department of State, the City of New York, and environmental justice organizations. The Utilities and LIPA recommend that an independent party such as DPS Staff, NYSERDA, a consultant selected by those two entities, or a similar unaffiliated non-utility organization host and coordinate the committee. The Proposal also recommends that DPS Staff act to resolve issues where the EPPAC participants are not able to reach consensus. The Utilities and LIPA state that participants in the EPPAC "should have sufficient technical background ... to provide meaningful input for this type of analysis."[10] To ensure this objective is met, the Proposal would give DPS Staff responsibility for managing the composition of the EPPAC.

According to the Proposal, the EPPAC would have a role establishing assumptions for the planning study underpinning the CGPP. Specifically, the Proposal states that the EPPAC's primary function would be to advise the system planners on the development of up to three generation build-out scenarios

[10] Revised CGPP, p. 10.

projecting potential renewable generation resource development in the State. In addition, the Utilities and LIPA propose that the EPPAC should provide:

- Lessons learned from prior CGPP cycles;
- Guidance on the need for analysis of bulk transmission sensitivities that may be run on each of the three principal scenarios; and
- Review of the CGPP final report to ensure stakeholder perspectives are captured appropriately.

CGPP Cycle and Timeline

Under the Proposal, the first cycle of the CGPP would start in mid-2023 and take approximately two years to be completed. The Utilities and LIPA would initiate the next planning cycle within 30 days following a Commission order on the system upgrades identified in the first cycle's final report. According to the Utilities and LIPA, this approach would support "an efficient and orderly system expansion that builds on prior assessments and eliminates ambiguity regarding project status in subsequent CGPP cycles."[11]

The Proposal includes an illustrative timeline, but notes that it may require adjustment. While each stage of the CGPP depends on the completion of the prior stages, the Utilities and LIPA propose to overlap the work streams to the extent feasible to complete the studies and assessments within two years. The six stages of the CGPP, which are described below, would be:

1) Data Collection and Determination of Scenarios;
2) Network Model Development;
3) Local Assessments;

[11] Id., p. 12.

4) Review of Preferred Solutions;

5) Least Cost Planning Assessment; and

6) Least Cost Plan Report.

The Utilities and LIPA state that certain stages of the first CGPP cycle would require analytic support from one or more technical consultants selected by the Utilities in consultation with DPS Staff and NYSERDA, but indicate an expectation that NYISO would support these analyses in future CGPP cycles, provided it secures the necessary resources. The Utilities and LIPA expect that the EPPAC's involvement in the process would be most significant during CGPP Stages 1, 5, and 6, and propose additional touchpoints during Stages 2, 3, and 4.

1. Stage 1: Data Collection and Determination of Scenarios

The Utilities and LIPA state that the central objective of the CGPP Stage 1 is to establish up to three clean energy generation build-out scenarios as the basis for the evaluations conducted in the later stages. To accomplish this, the Utilities and LIPA would propose to the EPPAC appropriate criteria for consideration along with generation build out scenarios representing different pathways to achieve CLCPA objectives. The Utilities and LIPA would also propose zonal allocations assumed for future distributed energy resource (DER) development. The Utilities and LIPA would then consult with the EPPAC on how to incorporate various factors into the modeling, including: CLCPA objectives and other relevant public policy requirements; load forecasts and shapes; resource adequacy requirements; NYSERDA procurement data; expected generator retirements; forecasts for DER development; and other information that would help inform the model results. The Utilities and LIPA note that this work would also leverage

modeling assumptions and results from similar studies conducted by the NYISO and State entities.

The data collected at this stage would be incorporated into a capacity expansion model. The Utilities and LIPA would use the capacity expansion model to identify the optimal installed capacity of each type of renewable or emissions-free resource in each New York Control Area (NYCA) zone to satisfy the scenario assumptions and CLCPA objectives. The Utilities and LIPA would share the results of the model runs with the EPPAC and work with the stakeholder group to identify three generation build out scenarios for further analysis.

The Utilities and LIPA propose that the capacity expansion model initially represent ideal conditions where local constraints do not exist, serving as the "ideal" build-out plan. Simulations would identify the amount and type of utility-scale renewable generation, storage, and emissions-free generation needed to meet CLCPA objectives, distributing that capacity across NYCA zones in what the Utilities and LIPA assert will be the most cost-effective build-out plan.

The capacity expansion modeling simulations would include existing limits on the bulk transmission system's capability to transfer power between NYCA zones. To the extent that bulk transmission transfer limits appear to constrain a potentially more economic build-out of renewable generation, storage, and/or emissions-free generation, the Proposal provides that the EPPAC may request a sensitivity analysis to evaluate the effect of relaxing a bulk transfer limit.

The Utilities and LIPA suggest that where the relaxation of a bulk interface that crosses utility service territories facilitates achievement of CLCPA goals, a Commission finding of a "public policy transmission need" (PPTN) and solicitation for transmission solutions under the NYISO's Public

Policy Transmission Planning (PPTP) process, as prescribed under the NYISO tariff, may be appropriate. The Utilities and LIPA propose that the Commission authorize DPS Staff, after consultation with the EPPAC, to file information describing such an identified need for the Commission's consideration. The Proposal suggests that, if the Commission were to identify a PPTN, the NYISO would then administer the PPTP process and provide bulk project benefits and cost estimates for inclusion in CGPP's Stage 5 evaluation.

2. Stage 2: Network Model Development

In Stage 2, the Utilities and LIPA would develop the detailed short circuit and power flow models that they would use in subsequent stages to assess their local systems.[12] For the first CGPP cycle, the Utilities and LIPA would develop these models using NYISO's most recent Federal Energy Regulatory Commission (FERC) Form 715 database of system models and auxiliary files and the NYISO Load and Capacity Data (referred to as the Gold Book) as the starting point. Because NYISO's FERC Form 715 database may not include base cases for the longer term 20-year planning horizon under the various load conditions that need to be assessed, the Utilities and LIPA expect they would need to develop these longer-term base cases using the Gold Book forecast, in collaboration with the EPPAC. The proposed list of cases for the first CGPP is as follows:

[12] Short circuit and power flow models are sophisticated computer simulation models and the fundamental tools used by utility planners to evaluate a power system's response to abnormalities such as short circuits and to test a myriad of other abnormal events or contingencies that could arise (e.g., loss of generation and transmission circuits and transformers) to ensure that equipment is not damaged and all remain within applicable operating ranges, and that the power system remains stable and able to reliably serve load.

- 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
  - 2030 light load
  - Summer 2035 baseline coincident peak demand
  - Winter 2035 baseline coincident peak
  - 2035 off-peak (shoulder) load
  - 2035 light load
  - Summer year n+20 baseline coincident peak demand
  - Winter year n+20 baseline coincident peak
  - Year n+20 off-peak (shoulder) load
  - Year n+20 light load
- Short Circuit:
  - System representation (studied-year, as needed)

The next step would be to establish three separate sets of network models for the three build-out scenarios selected in CGPP Stage 1. The Utilities and LIPA would take the New York Control Area (NYCA) zonal build-out and then overlay it onto a nodal model. The nodal model would include generation interconnection locations and unit-specific technical specifications. The Utilities and LIPA would disaggregate the zonal DER forecasts and distribute the DERs based on local assumptions and techniques. The Utilities and LIPA propose to discuss the appropriate methodology for translating the zonal utility scale capacity build-out assumptions from the capacity expansion model to nodal power flow models with the EPPAC during the first CGPP iteration. This methodology would be updated in future CGPP cycles as necessary. The Utilities and LIPA may

also consider modification of the zonal load to represent the forecast more closely in the capacity expansion model or modification of the nodal load model within a zone based on input from the utilities' distribution planners. In total, 36 steady state cases and three short circuit cases would be developed.

The Utilities and LIPA communicate that if the cases show the bulk system exceeding its limits when the renewable generation is dispatched, this would be noted in the final report for that CGPP cycle. However, those conditions would be ignored for the purpose of evaluating the local systems under the assumption that a PPTN solution could resolve the issue. Subsequent rounds of the CGPP would require the development of steady state and short circuit base cases with topology representations for years that may vary from those developed in the first cycle.

3. Stage 3: Local Assessments

At this stage, each of the Utilities and LIPA would evaluate conditions within its service territory to determine whether local transmission and distribution (LT&D) system upgrades are necessary to accommodate the integration of DERs and utility-scale generation resources included in the build-out scenarios. Local solutions could include a combination of traditional LT&D upgrades, a non-wires alternative (NWA), and/or the use of advanced technologies that are capable of enhancing system performance.

Using the databases validated in Stage 2, the Utilities and LIPA would conduct short circuit and power flow analyses to determine their local systems' limitations. To identify constraints, all renewable generation within each local pocket, or regionally as required, would be simultaneously dispatched to 100 percent of nameplate capability and offset by

an associated reduction in generation outside of the study area, beginning with fossil resources.

At the distribution level, the Utilities and LIPA would apply DERs and load assumptions developed in Stage 1 to utility distribution network models to identify where system constraints may need to be addressed through an infrastructure or NWA solution. For distribution needs within the next five years, the Utilities and LIPA would develop solutions to mitigate the identified constraints. For longer-term needs, the Utilities and LIPA would characterize the need and timeframe, and then develop specific distribution system plans for upgrades as the need date approaches in future CGPP cycles.

The Utilities and LIPA propose that the development of solutions would follow a similar process to other planning efforts and would consider estimated costs, constructability, schedule, operability, expandability, impacts on customer reliability and resiliency, and impacts or synergies with broader capital planning efforts. Solutions could include "on-ramps" or "off-ramps" from the bulk system or "internal" solutions, as well as NWAs.

Because a 20-year planning horizon exceeds the traditional 10-year reliability planning horizon, the Utilities and LIPA indicate that they might identify new reliability needs on the local systems. If a utility identifies a new reliability need near a grid constraint identified through the CGPP, the utility may evaluate a comprehensive alternative to address both with a single project. If the cost of addressing both needs is greater than the cost of a project that addresses only the constraint on renewable generation, but is less than the cost of implementing two distinct projects, then the more comprehensive project would be evaluated in CGPP Stage 5 using the lower cost of the more limited project. The Utilities and LIPA recommend

that the Commission take steps to develop a process for taking the timing of reliability drivers into account.

The Utilities and LIPA propose to include headroom assessments as part of the CGPP cycle. These would identify available headroom on the existing system and determine the additional capacity and energy headroom that would be created by the identified solutions to local system constraints.[13]

The Utilities and LIPA would also consider the sufficiency of advanced technologies and NWA solutions for mitigating CLCPA needs in accordance with the Phase 1 and Phase 2 Orders.[14] The Utilities and LIPA would solicit the advice of the Advanced Technology Working Group (ATWG) regarding potential NWAs and advanced technology solutions and collaborate to develop processes and guidelines for evaluating and implementing NWAs in the context of CGPP.[15]

4. Stage 4: Review of Preferred Solutions

The Proposal suggests that CGPP Stage 4 begin with modifying the database of power flow and short circuit cases established in Stage 2 to include all local solutions so that the aggregate impact as a portfolio of projects may be established. This would be done separately for all scenarios.

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[13] Existing headroom describes the amount of generation output that can be delivered to load by the existing power system facilities. Additional headroom is then the amount of increased generation output above existing that a proposed power system upgrade can deliver to load.

[14] Case 20-E-0197, Order on Phase 1 Local Transmission and Distribution Project Proposals (issued February 11, 2021) (Phase 1 Order).

[15] In response to the Power Grid Study Order, the Utilities and LIPA established the ATWG, tasked with addressing "the challenge of identifying and removing barriers to the deployment of new technologies." See Power Grid Study Order, p. 38.

A "Synergy Assessment" would qualitatively review the entire portfolio of solutions to identify potential interactions or conflicts. If a potential solution scope adjustment is required due to a negative interaction, projects may be modified or removed from the analysis. A subsequent assessment would determine the viability of a more comprehensive solution set that can address all local CLCPA needs across more than one generation pocket. The Utilities and LIPA would identify opportunities to perform cost-effective scope combinations or reductions to any of the individual local solution components. If any modifications are made, the cost, as well as capacity and energy headroom created by the projects, would be recalculated. The Proposal notes that any project cost estimates developed in Stage 4 may have a wider accuracy range than those developed in Stage 3 due to time limitations prohibiting development of higher accuracy estimates.[16] This review would not replace any requirements that may exist for projects in the NYISO-administered interconnection process.

As the Proposal suggests, the database of power flow and short circuit cases may require an update in this stage to include modifications to projects identified in the Synergy Assessment, done separately for all scenarios. A "Statewide System Impact Review" would confirm that the inclusion of all local solutions does not result in any material adverse impacts on neighboring systems or the bulk transmission system. If projects are modified, the cost and capacity and energy headroom created by the projects would be recalculated. The Proposal states that, as with the Synergy Assessment, any revised cost

[16] As we discuss below, the Commission recognizes that the cost estimates generated in Stages 3 and 4 will be rate case quality cost estimates.

estimates may have a wider accuracy range compared to CGPP Stage 3, due to time constraints.

5. Stage 5: Least Cost Planning Assessment

The Utilities and LIPA propose that in CGPP Stage 5, they would identify a portfolio of LT&D and bulk projects that would facilitate the achievement of the State's policy goals at the least cost. To accomplish this, the capacity expansion models for each scenario would be updated to represent the system with the existing local limits included. The Utilities and LIPA would then compare this version of the capacity expansion model with a second iteration that would make local transmission projects that create additional headroom and their associated costs available.

The model could then select the least cost combination of generation and transmission to achieve CLCPA objectives, which the Utilities and LIPA could consider along with other supplementary analyses, to recommend projects. The assessment would produce 1) the total capital cost of policy-driven resource additions for each scenario, and 2) a proposed investment plan comprising the least cost portfolio of projects.

If one of the selected scenarios in CGPP Stage 1 was a sensitivity that included relaxed bulk system transfer limits and a PPTN was identified by the Commission, the costs and benefits of the proposed bulk solutions would be added for consideration in the capacity expansion model in Stage 5. The Utilities and LIPA would then compare the local projects identified in CGPP Stage 3 to any viable and sufficient bulk projects identified in the PPTP process. The capacity expansion model would inform what mix of generation, local solutions, and PPTN solutions is the preferred path forward. If the results favor a PPTN solution, the Utilities and LIPA may inform NYISO of local projects that could address some or all of the PPTN

more efficiently or cost-effectively, which NYISO may consider in its assessment.

The Utilities and LIPA, with input from the EPACC, would determine the most appropriate means to consider multiple PPTN solutions in the model, which may require one proxy project. The final CGPP Report would identify whether the capacity expansion model finds the PPTN solution to be cost effective, allowing the Commission to determine whether the NYISO's PPTP process should continue.

6. Stage 6: Least Cost Plan Report

The Proposal indicates that the final CGPP Report would identify the projects that were found to be beneficial in the Stage 5 Least Cost Planning Assessment and rank the portfolios of solutions using Capacity Headroom ($/MW) and Energy Headroom ($/MWh). Projects found to be beneficial in multiple scenarios may be recommended as "no regrets" solutions. Projects with secondary benefits would be noted and discussed.

The CGGP Report would identify and describe:

- the recommended LT&D system solutions under each scenario for which the Utilities seek Commission approval;
- the risks and benefits of each generation build-out and project portfolio;
- the benefits of pursuing a PPTN solution for the Commission's consideration;
- portions of the bulk system that limited cost-effective generation build-out in the capacity expansion model in CGPP Stage 1 or Stage 5;
- any bulk system limitations that the Utilities and LIPA identified in the development and analysis of the power flow cases in Stages 2 and 3;

- any bulk system solutions that were identified in CGPP Stage 4 and selected in the Least Cost Planning Assessment in Stage 5; and
- lessons learned from that CGPP cycle for consideration of process improvements in the next cycle.

NOTICE OF PROPOSED RULE MAKING

On January 25, 2023, a Notice of Proposed Rule Making was published in the State Register with respect to the Proposal filed by the Utilities on December 27, 2022, as corrected on January 5, 2023 [SAPA No. 20-E-0197SP14]. In addition, on February 6, 2023, the Secretary to the Commission issued a Notice Seeking Comments on the Proposal. The time for submission of comments pursuant to these notices expired on March 27, 2023.

Comments on the Revised CGPP were received from the Alliance for Clean Energy New York (ACENY), together with the New York Offshore Wind Alliance, Advanced Energy United, Natural Resources Defense Council, and American Clean Power Association (collectively, ACENY et al.), the City of New York (the City or NYC), Clean Energy Parties,[17] Ecogy Energy (Ecogy), Environmental Defense Fund (EDF), EDF Renewables New York (EDFR), LS Power Grid New York Corporation I (LS Power), NextEra Energy Transmission New York. Inc. (NEETNY), the NYISO, the New York Power Authority (NYPA), Transource Energy, LLC and Transource New York, LLC (together, Transource), Vote Solar, and the WATT

[17] The CEP is a group of aligned commenters including the Solar Energy Industries Association, the New York Solar Energy Industries Association, New York Battery Energy Storage Technology Consortium, the Coalition for Community Solar Access, Vote Solar, the Alliance for Clean Energy New York, and Advanced Energy United.

Coalition (WATT). The comments are summarized in the Appendix and discussed below.

LEGAL AUTHORITY

The Accelerated Renewables Act directs the Commission and DPS Staff to take action to ensure that renewable energy can be efficiently and cost-effectively injected into the State's transmission and distribution system for delivery to regions of the state where it is needed.[18] The Accelerated Renewables Act further requires the Commission to develop plans that "provide for the timely development of local transmission and distribution upgrades" by the state's regulated utilities and LIPA.[19]

In addition, the Public Service Law (PSL) provides the Commission with broad authority to direct actions to ensure that energy supplies and transmission resources are adequate to meet demand in a manner that is protective of the environment. In particular, PSL §4(1) expressly imbues the Commission with "all powers necessary or proper to enable [the Commission] to carry out the purposes of [the PSL]" which include, without limitation, the provision of safe and adequate service at just and reasonable rates,[20] environmental stewardship, and the conservation of resources.[21] Further, PSL §5(1) provides that

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[18] Accelerated Renewables Act §7(2).

[19] Accelerated Renewables Act §7(3).

[20] See Int'l Ry. Co. v. Pub. Serv. Comm'n, 264 A.D. 506, 510 (1942).

[21] PSL §5(2); see also Consolidated Edison Co. of N.Y., Inc. v. Pub. Serv. Comm'n, 47 N.Y.2d 94 (1979) (overturned on other grounds) (describing the broad delegation of authority to the Commission and the Legislature's unqualified recognition of the importance of environmental stewardship and resource conservation in amending the PSL to include §5).

the "jurisdiction, supervision, powers and duties" of the Commission extend to the "manufacture, conveying, transportation, sale or distribution of ... electricity." Under PSL §5(2), the Commission is required to "encourage all persons and corporations subject to its jurisdiction to formulate and carry out long-range programs, individually or cooperatively, for the performance of their public service responsibilities with economy, efficiency, and care for the public safety, the preservation of environmental values and the conservation of natural resources."

In addition, PSL §65(1) grants the Commission authority to ensure that "every electric corporation and every municipality shall furnish and provide such service, instrumentalities and facilities as shall be safe and adequate and, in all respects, just and reasonable." The Commission has further authority under PSL §66(5) to prescribe the "safe, efficient and adequate property, equipment and appliances thereafter to be used, maintained and operated for the security and accommodation of the public" whenever the Commission determines that the utility's existing equipment is "unsafe, inefficient or inadequate." Moreover, PSL §66(2) provides that the Commission shall "examine or investigate the methods employed by ... persons, corporations and municipalities in manufacturing, distributing and supplying ... electricity ... and have power to order such reasonable improvements as will best promote the public interest, preserve the public health and protect those using such ... electricity." The actions taken in this Order fall within the scope of this authority.

DISCUSSION

The Commission recognizes that the development of the CGPP has been a significant undertaking and commends the

Utilities and LIPA for their efforts and their willingness to work with stakeholders after the Initial Filing. Overall, we find the proposed process has been improved by those interactions, and we generally accept the Revised CGPP. However, we also find that some additional modifications are needed to bring the process closer to our expectations and to deliver the system-wide view of investment needs that the Accelerated Renewables Act requires. The changes we require here relate primarily to areas in which the CGPP can be better coordinated with the NYISO's planning responsibilities and secondarily address other aspects of the CGPP.

In addition, we recognize that the process approved in this Order may change in the future. We expect the Utilities/LIPA and stakeholders, including the NYISO, to identify opportunities to refine long-term system planning in New York State in ways that will accomplish our objectives and produce cost-effective infrastructure plans to benefit New Yorkers.[22] Thus, we agree with the Utilities/LIPA that "lessons learned" in the first cycle of the CGPP should be raised for our review and, if approved, incorporated into subsequent study cycles.

Further, in recognition of the fact that this is a new process involving complex technical assessments, we direct DPS Staff and the Utilities, and we encourage LIPA, to engage in frequent coordination as the work proceeds. While we establish some specific consultation points in this Order, we do not mean those to exclude other possible communications. We encourage

[22] We note that FERC has initiated a proceeding to address similar long-term planning needs in a recent Notice of Proposed Rulemaking. See Building for the Future Through Electric Transmission Planning and Cost Allocation and Generator Interconnection, 179 FERC ¶61,028 (2022).

the Utilities/LIPA to take advantage of DPS Staff's expertise and guidance throughout the course of the work.

Finally, we share the concerns raised by many commenters with the proposed three-year cycle time for the CGPP. We find that a more efficient process is needed in order to identify transmission investments in time to support the CLCPA targets. For this reason, we will require the Utilities to consult with LIPA, DPS Staff, and the NYISO and to file recommendations for reducing the CGPP cycle time to two years. We note that the NYISO's planning studies generally follow a two-year cycle, and we believe the CGPP should be adapted in the future to be consistent. We will require the Utilities to make this filing by June 1, 2024. To inform our consideration of those recommendations, we also direct DPS Staff to provide a mid-cycle assessment to the Commission by June 1, 2024, describing how the CGPP is progressing and any suggestions for process improvements.

With those general comments, we now address two issues relating to the organization of the proposed process.

Role and Composition of the EPPAC

The Proposal to establish the EPPAC responds appropriately to the Commission's directions relating to stakeholder participation in the CGPP. The Commission will accept it, with the modifications and clarifications set forth below.

First, the Commission agrees that EPPAC membership should be broadly representative, as the Proposal suggests, while also recognizing that limiting participation to representatives with appropriate technical qualifications is important to ensuring an effective and efficient process. However, we find the suggested list of industry participants omits at least one sector that several commenters, including

NEETNY, NYPA, and Transource, suggested should be added to the process. That sector consists of independent transmission developers, a number of whom are currently active in the State; these entities are experienced in transmission planning and are capable of making valuable contributions to the discussion. Representatives of this sector should therefore be included.

We recognize the possibility that other views might also be valuable, but we will not attempt to identify them here; rather, we will rely on DPS Staff's judgement as to when or whether additional views might benefit the process. Further, we will require all represented entities to nominate members with the technical experience to contribute substantively to the planning process. We believe the EPPAC should be structured similarly to the Interconnection Technical Working Group, which is limited to technical experts in DER interconnection issues.[23] We will allow DPS Staff to review applications for EPPAC membership with this criterion in mind.

We further agree that DPS Staff, which is independent of any of the EPPAC participants, should play a significant role in managing the EPPAC. This is essential to ensure that the group functions efficiently within the overall CGPP timeline. Thus, where the EPPAC is designated to provide input or direction to the planning entities, DPS Staff will, in cases where consensus among members does not emerge, make any decisions needed to advance the process.

Last, without prescribing the details of the process, so as to give the participants flexibility, we find that the EPPAC must have frequent touch points with the Utilities/LIPA. We agree that EPPAC input is clearly critical to Stage 1 and Stages 5 and 6. The Commission further agrees with those

[23] https://dps.ny.gov/interconnection-technical-working-group.

commenters, including ACENY et al., the CEP, EDF, the NYISO, and NYC, that suggest that EPPAC's feedback is also likely to be valuable in the intervening stages. We therefore direct the Utilities to consult with LIPA and DPS Staff and to establish any additional touch points that will enable the stakeholder experts to comment meaningfully on all phases of the work. Among other things, this approach will allow the EPPAC to provide constructive ideas and "lessons learned" for future CGPP cycles.

Other stakeholder communications and transparency requirements are discussed below.

Role of the Advanced Technology Working Group

Consistent with the Commission's directions in the Power Grid Study Order, the ATWG is focused on three existing technologies: dynamic line ratings, power flow controls, and energy storage for transmission and distribution services.[24] The ATWG published an initial research and development plan in July 2022 and a Progress Report in January 2023.[25] The ATWG also held a technical conference on April 27, 2023, that provided an update and status of the three existing technologies the group has been evaluating. The ATWG discussed proposed communication and collaboration efforts going forward with the CGPP and how the public, vendors, and others can contact and keep up to date with the ATWG process.[26]

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[24] Power Grid Study Order, p. 38.

[25] Case 20-E-0197, Research and Development Plan for Advanced Transmission and Distribution Technologies (July 20, 2022). Case 20-E-0197, Research and Development Plan for Advanced Transmission and Distribution Technologies – Progress Report (January 20, 2023)(Progress Report).

[26] See Case 20-E-0197, Slides and Recording of 4-27-2023 ATWG Technical Conference (April 28, 2023). https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={2000C987-0000-CB13-89E8-3F162485AFD9}.

In the recent Progress Report, the ATWG explains that it intends to support the CGPP, particularly during the Stage 3 local assessments. The report says "ATWG activities will include, but are not limited to, technology scouting for advanced [transmission and distribution] technologies and applications of those technologies. For example, as the CGPP looks at system constraints that affect renewable energy integration, the ATWG will examine the ability of available technologies to do the following: (1) address the identified constraints (2) specify what parameters apply for addressing the problem (3) determine how size and performance will be evaluated (4) establish the efficacy and cost-effectiveness of various solutions."[27]

We find that the ATWG has a critical role to play in identifying advanced technology applications that will help reduce the overall costs of CLCPA-supporting transmission infrastructure. To secure those potential benefits, we encourage the ATWG to follow through on its commitments to support the CGPP, and we direct the Utilities to consult with the ATWG in Stages 3 and 4 of the planning process. We further require the Utilities to explain their approach to implementing advanced technologies and the ATWG's recommendations in the Stage 6 Least Cost Plan Report. In addition, as WATT proposed, we direct the Utilities to explore interim applications of technologies that may improve system capacity or efficiency at low cost while long term solutions are being developed.

At a minimum, the Commission expects the Least Cost Plan Report to reflect the planners' consideration of the three technologies currently under ATWG review. However, we agree with commenters, including the CEP, EDF, Transource, and WATT,

[27] Progress Report, p. 4.

expressing concern that this focus is too narrow. We believe the ATWG's technology scouting and screening functions could identify additional options for evaluation in this CGPP cycle. We note that, in its initial research and development plan, the ATWG states that it expects to publish the results of its first "Technology Scouting and Assessment" at the end of 2024. In the Progress Report, the ATWG states that this work is now underway. We recommend and encourage the ATWG to hold a technical conference, in early 2024 (Q1/Q2) and in coordination with CGPP Stage 1, to report on its technology scouting efforts and to take comments and suggestions from technology developers and other interested stakeholders.

The information provided at such a technical conference should include the ATWG's current views about any additional technologies, including the interim technologies referenced above, that might be appropriate for consideration in the first CGPP cycle. The ATWG shall consult with DPS Staff to set a date for the technical conference, and DPS Staff is directed to ensure public notice of the conference date and an agenda is posted in this proceeding. Additional technical conferences may be warranted at future dates to keep the efforts and activities of the ATWG and its coordination with the CGPP open and transparent for those interested.

We now turn to the specifics of the planning process laid out in the Proposal.

CGPP Process Modifications

Stage 1 in the proposed process involves 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 potential solutions. Because these steps are the foundation for what follows, it is important that they be carefully developed

and well-considered. In particular, the quality of the capacity expansion model, as a projection of the future supply, is critical to the entire exercise. We find that there are some changes or enhancements to the process proposed by the Utilities that will improve it. For this reason, we require several modifications to Stage 1.

First, we find that Stage 1 offers an opportunity for closer coordination with the work of the NYISO than the Proposal suggests. As noted above, the development of the capacity expansion model and scenarios for analysis are key milestones in the CGPP. The NYISO is now in the early stages of building the models it will use to perform its second System & Resource Outlook (Outlook) study.[28] Furthermore, the NYISO has informally requested input from DPS Staff on how the Outlook can best represent the direction of State policy. With DPS Staff's input, NYSERDA has identified, among other things, a number of improvements to the capacity expansion model that the NYISO used in the first Outlook.[29]

The Commission finds that the timeline for the Outlook process provides an opportunity for improving the coordination and alignment of the CGPP and the NYISO's planning. The Commission therefore directs DPS Staff to consult with the EPPAC and deliver to the NYISO a complete set of modeling assumptions for the first scenario of the CGPP, on an accelerated basis for this first CGPP cycle. This first scenario of the CGPP will be referred to as the "State Scenario." The Commission anticipates that the EPPAC will have more time to develop the assumptions

[28] https://www.nyiso.com/documents/20142/38248072/2023-2042_Outlook_Kickoff_Final.pdf.

[29] NYISO Electric System Planning Working Group, November 18, 2022, https://www.nyiso.com/documents/20142/34528410/NYSERDA%20High%20Level%20Outlook%20Suggestions_11_18_22.pdf.

for the State Scenario in future cycles of the CGPP; however, an accelerated timeline is necessary at this point to accommodate inclusion in the NYISO's second Outlook.

The Commission agrees with ACENY et al. that the Outlook and the CGPP should be "aligned as much as possible."[30] The Outlook and the CGPP studies will benefit from using a common State Scenario at the beginning of each respective process, ensuring consistency and that both planning efforts draw from the best available policy assumptions. By modeling the State Scenario in the Outlook, the NYISO planning team will generate capacity expansion planning results that can be leveraged by the CGPP in the first quarter of 2024, according to the most recent schedule published by the NYISO.[31] The Commission notes that shared modeling is more efficient and will ultimately result in a shorter time cycle than the alternative, where the Outlook and CGPP would develop separate economic planning models using common assumptions. This approach partially addresses the numerous comments raising concern over the lengthy proposed timeline for the CGPP, and concerns raised by NYC about inefficiencies associated with separate processes.[32]

Building from the State Scenario, the NYISO planning team could complete the capacity expansion planning and production simulation modeling for the additional scenarios defined by the EPPAC as early as the end of the second quarter of 2024, in the first cycle of the CGPP. The Commission further notes that NYISO's FERC Form 715 submission, which the

[30] Comments by ACENY et al., p. 11.

[31] See Slide 28, https://www.nyiso.com/documents/20142/38248072/2023-2042_Outlook_Kickoff_Final.pdf.

[32] ACENY et al., the CEP, Ecogy, EDFR, NEETNY, and NYC recommend a shorter timeline.

Utilities/LIPA propose to use as the starting point for the power flow and short circuit models in Stage 2 of the CGPP, is due by the first day of April each year. The sequencing of the FERC Form 715 filing, followed by the potential completion of the Stage 1 modeling by the end of the second quarter aligns well with the Utilities/LIPA's proposed CGPP timeline, shifting the start of Stage 2 to approximately April 1, 2024, and the end of Stage 1 to June 30, 2024. The Commission therefore adopts an adjusted timeline for the first CGPP Cycle.[33] As modified, Stage 1 will effectively end on June 30, 2024, with Stage 2 beginning on or shortly after April 1, 2024, and the remaining stages shifting such that the final report developed at Stage 6 is completed by January 2, 2026.

The coordination between the NYISO Outlook planning process and the CGPP that we describe here requires the NYISO to fill the role the Utilities assigned to the technical consultant for the capacity expansion modeling, as described in the Proposal.[34] The Commission acknowledges that the Outlook planning process is subject to FERC oversight and thus, the NYISO's participation may be limited by the priorities and requirements articulated in its tariffs. Our determinations addressing coordination between the CGPP and the Outlook are therefore dependent on the State Scenario being accepted into the NYISO Outlook process, the adoption of DPS Staff's proposed modeling improvements, and the NYISO having the flexibility to execute the State Scenario and subsequent EPPAC-defined scenarios in accordance with the timing requirements of the CGPP. Recognizing its many responsibilities, if the NYISO cannot commit to completing a sufficient level of the modeling

[33] Revised CGPP, p. 13.

[34] Revised CGPP, Figure 1, p. 6.

improvements to the satisfaction of DPS Staff, or to delivering capacity expansion results in time to meet the CGPP schedule established in this Order, the Utilities, in consultation with LIPA and DPS Staff, shall hire a technical consultant to undertake the capacity expansion analysis, as suggested in the Proposal.

Looking ahead to future CGPP cycles, the Commission anticipates that there will be opportunities to refine the collaboration and coordination between the State process and the NYISO's planning processes. The Commission notes that the NYISO has taken steps to secure additional resources to support CGPP coordination via its stakeholder process-driven Budget Priorities Working Group. Those proposals have received strong support from the NYISO's market participants.[35] While hopeful that these resources will be available in the coming year, the Commission recognizes that obtaining these resources is critical to the NYISO's ability to support the CGPP. Understanding that the immediate focus is executing the first cycle, we direct DPS Staff to engage with the NYISO's planners and to offer recommendations for how additional NYISO resources might be deployed to align the planning processes and to improve the overall efficiency of the CGPP.

Second, we reject the Utilities' proposed approach to identifying bulk system needs.[36] The full vision of potential system investments that we expect from the CGPP must, as the Commission has said in prior orders, include those needs that

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[35] https://www.nyiso.com/documents/20142/38718756/BPWG%202023-07-12%20Market%20Projects%20Scoring%20Results%20Final.pdf/5963fa77-1892-b024-9235-60d025ebd3c3.

[36] We note that a number of commenters were critical of this aspect of the Utilities' Proposal, such as ACENY, et al., the CEP, the City, LS Power, NEETNY, the NYISO, and NYPA.

may be solved through the NYISO's PPTP process.[37] However, the Revised CGPP's proposal to have the Commission make a determination at Stage 1, before the range of local transmission investments is known, could put competitive transmission developers in the position of having to invest in developing multiple project proposals that the Commission might ultimately reject. The objective of the solution assessment contemplated in the CGPP is to understand the costs and benefits of alternative approaches from a system-wide perspective. Thus, we find that the 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.

To accomplish this objective, we will insert an optional mechanism in Stage 1. We agree with the Proposal's suggestion that, where the relaxation of a bulk transfer limit on an interface that crosses utility service territories facilitates achievement of CLCPA goals, one or more public policy transmission solutions under the NYISO Tariff may be appropriate.[38] At the point in Stage 1 when the system planners relax bulk transfer limits, we will require DPS Staff to consult with the NYISO and the EPPAC and determine whether the results of the relaxation indicate that an assessment of conceptual bulk solutions may be warranted. In the event DPS Staff recommends

[37] Phase 2 Order. Power Grid Study Order.

[38] To relax a transfer limit means to remove the bulk transfer capability limit between at least two NYISO zones for modeling purposes, to assess the benefits to the capacity expansion plan in doing so.

taking this step, NYSERDA, in consultation with and on behalf of DPS Staff, will engage a consultant to identify potential bulk solutions and to develop estimates of their possible system benefits and costs, for consideration in the context of the other investments developed through the CGPP.[39] The work of the consultant will be directed by DPS Staff and will proceed in parallel with the other stages of the CGPP work.

Where this mechanism has been invoked, the consultant's relevant conceptual solution shall be reviewed with the EPPAC as soon as it is ready. On DPS Staff's recommendation, one or more identified solutions shall be included in the comparative analysis performed at Stage 5 of the CGPP and evaluated in the final Least Cost Plan Report. With this information, the Commission will be in a position to determine whether to initiate the NYISO's PPTP process, and to refer PPTNs to the NYISO for the solicitation and evaluation of transmission proposals under its planning tariffs. This same information may also be appropriate for NYPA to examine whether it believes there is a need to accelerate the deployment of one or more potential bulk transmission solutions that are necessary or appropriate to meet the renewables targets specified under the CLCPA and, if so, whether it should petition the Commission

[39] We encourage DPS Staff and NYSERDA to take steps in advance to engage a third-party consultant to take on this function, to avoid delay in the process.

to identify such solutions through the Priority Transmission Project (PTP) process.[40]

With this modification and clarification, we conclude that the CGPP will provide a comprehensive view of system needs that will enable the Commission to make orderly, efficient, and well-informed decisions about the investments needed to meet our CLCPA goals. We do not intend, however, to displace the NYISO's existing PPTP process; we expect the NYISO will continue to implement the biannual process as it has to date, and the Commission will continue to exercise its role identifying PPTNs under the tariff. We do expect that information gathered through the CGPP will inform the Commission's review of proposed Public Policy Requirements that may be driving the need for transmission facilities in future NYISO planning cycles, as prescribed under the NYISO tariff.

Third, the Commission directs the Utilities to modify the proposed approach to representing local constraints in the capacity expansion model during Stage 1. The Utilities propose to develop "ideal" build-out plans assuming local constraints do not exist, with the intent of identifying the most cost-effective mix of new generation and storage resources, independent of LT&D upgrade costs. The CGPP would then use the "ideal" build-out plans to perform power flow and short circuit analysis in Stages 2 through 4, to develop a portfolio of solutions that are needed to address any resulting LT&D

[40] The Accelerated Renewables Act §7(5) authorizes NYPA to undertake bulk transmission investments found by the Commission "to be needed expeditiously to achieve CLCPA targets." In a subsequent order, the Commission established the process to be utilized by NYPA in filing a petition related to a PTP, as well as the criteria to be applied in assessing such petition. See Case 20-E-0197, Order on Priority Transmission Projects (issued October 15, 2020), pp. 15-20.

constraints, called the "preferred solutions." The preferred solutions would be added into the capacity expansion model during Stage 5, where the model develops the least cost combination of generation and LT&D and bulk transmission upgrades to achieve the CLCPA objectives.

The Commission agrees that the "ideal" build-out plan is likely to yield interesting and potentially useful insights; however, the Commission is concerned with the potential for this approach to result in sub-optimal generation builds during Stage 1 and preferred solutions in Stage 4. By ignoring LT&D costs during Stage 1, the capacity expansion model may predict generation in locations where the LT&D costs are discovered to be above average during Stages 3 and 4, potentially overlooking other areas of the grid with more beneficial combinations of LT&D and generation costs. If this circumstance should arise, the preferred solutions identified during Stage 4 may be sized incorrectly or overlook more cost-effective outcomes for ratepayers at Stage 5. To address this concern, the Commission directs the Utilities to, in consultation with LIPA and DPS Staff, develop conceptual cost estimates for LT&D upgrades beyond the existing local headroom. The Utilities will work with DPS Staff to determine the approach to incorporating the conceptual LT&D cost estimates into the capacity expansion model, including determinations on the most reasonable zonal and sub-zonal areas to characterize in the model. Incorporating these cost estimates in Stage 1 will benefit the entire process by seeding the subsequent stages of the CGPP process with an expansion plan that is closer to the least cost combination of generation, transmission, and distribution upgrade costs.

The Commission further recognizes the concerns raised by a number of the commenters[41] regarding the lengthy timeline proposed for the CGPP. We believe that taking this approach and including conceptual LT&D costs in Stage 1 may eliminate future iterations between Stages 3 through 5. That said, the Commission recognizes that iterations between Stages 3 through 5 may be necessary, depending on the findings at the end of Stage 5, and directs the Utilities to consult with LIPA and DPS Staff to determine if, and when, additional iterations are necessary.

The Commission recognizes that developing conceptual cost estimates for local transmission and distribution facilities is challenging, given the wide range of potential solutions and local considerations that can impact the actual costs. The Commission therefore directs DPS Staff to work with NYSERDA to assess the approach used during the first cycle of the CGPP and to propose modifications and enhancements for the use in future cycles.

Even with the existence of conceptual cost estimates for LT&D and bulk solutions, the Commission recognizes that it is still the case that the more granular rate case quality cost estimates generated in Stages 3 and 4 may result in costs that deviate significantly from the conceptual cost estimates. Such a deviation would raise the possibility that a different portfolio of generation, transmission, and distribution investments, which may have been deemed too costly, should have been contemplated further. The ideal approach would be to have multiple solutions for every local and bulk constraint which the capacity expansion model could choose from during Stage 5. The Commission also recognizes that the two-year timeline for the CGPP analysis and report does not allow for the Utilities/LIPA

[41] ACENY et al., the CEP, Ecogy, EDFR, NEETNY, and NYC recommend a shorter timeline.

to create such detailed costs estimates during Stages 3 and 4, for a range of different outcomes in each local area. As a near-term solution, the Commission directs the Utilities to work with LIPA and DPS Staff to identify an approach to best address the dynamic nature of the range of upgrade sizes and locations. The Commission notes that the Utilities will complete as many as three scenarios, which may result in a range of preferred solutions by location that can be leveraged across scenarios during Stage 5, along with the conceptual cost estimates.

Finally, the Commission recognizes the importance of developing granular forecasts of DERs, such as medium- and heavy-duty electric vehicle charging, as EDF outlines in their comments. The Commission notes that a separate proceeding to develop planning approaches that proactively address the long-term transportation electrification needs created by New York's climate policies is the most appropriate venue to establish the initial planning methods.[42] The Commission envisions that the proactive planning process for transportation electrification developed in that proceeding may be integrated into future CGPP cycles.

Inter-Stage Modifications

To develop estimated LT&D solutions that eliminate the potential for curtailment, the Utilities/LIPA propose to simultaneously dispatch all renewable generation within the local area of each LT&D solution at 100 percent of nameplate capacity during the short circuit and power flow analysis in Stages 3 and 4. To balance the rest of the NYISO system during these "100 percent dispatch" sensitivities, generation outside of the study area is backed down, starting with fossil-fired generation. The Commission finds that this method can be

[42] See Case 23-E-0070, Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure.

improved upon, particularly if the NYISO Outlook process is integrated with the CGPP.

A notable benefit from the integration with the Outlook is that the NYISO will be able to provide production simulation analysis along with the capacity expansion planning analysis. The Commission agrees with WATT that production cost simulation modeling can help "quantify the economic tradeoffs and deliverability benefits."[43] Results from the production simulation analysis will provide more granular, hourly dispatch projections that can be used to determine the dispatch inside and outside of the study areas, including hours which may be overlooked in the power flow analysis. Assuming the NYISO is able to provide this information, the Commission directs the Utilities to leverage production simulation analysis during Stage 5, to provide more granular insight into the forecasted curtailment and assessment of the conceptual bulk solutions. The Utilities may engage the NYISO or a different technical consultant to complete the Stage 5 production simulation analysis.

The refinements to Stages 1 through 5 discussed above should also reasonably achieve the objective laid out in the Commission's order approving a revised benefit cost analysis (BCA).[44] As explained in the Phase 2 Order, the BCA method was intended to "guide the Utilities toward the most cost-effective expenditure of ratepayer dollars to meet the CLCPA mandates."[45] Specifically, these CGPP process refinements should fulfill the objective of the BCA method as they will allow for a reasonable identification of the most cost-effective combination of local

[43] Comments by WATT, p. 6.

[44] Case 20-E-0197, Order Approving Revised Benefit Cost Analysis Method (issued June 17, 2022).

[45] Phase 2 Order, p. 10.

transmission and distribution upgrades and associated renewable energy resources.

CLCPA Compliance

Consistent with the CLPCA's clean energy and greenhouse gas (GHG) emissions reductions objectives, the CGPP approved in this Order will assist in identifying the electric transmission and distribution facilities needed to facilitate the delivery of clean energy, including renewable resources, throughout New York State.[46] Accordingly, the actions taken in this Order will aid in the attainment of statewide GHG emissions limits. The Commission also finds that approval of the CGPP will not disproportionately burden disadvantaged communities.[47] Although the CGPP could ultimately result in the selection of transmission and distribution facilities for development, the approval of the CGPP here simply creates a planning process that does not place any burdens on disadvantaged communities.

The focus at this point is to ensure that the Utilities and LIPA identify, in the context of the CGPP, the recommended projects for the Commission's consideration in a subsequent order. In this respect, we direct the Utilities, in consultation with LIPA, to identify, as part of Stage 5 of the

[46] Section 7(2) of the CLCPA requires that State agencies, in considering and issuing permits, licenses, and other administrative approvals and decisions, "consider whether such decisions are inconsistent with or will interfere with the attainment of the statewide [GHG] emissions limits" established under Article 75 of the Environmental Conservation Law (ECL) and, if so, provide "justification as to why such limits/criteria may not be met, and identify alternatives or [GHG] mitigation measures to be required where a project is located."

[47] Section 7(3) of the CLCPA requires that State agencies, in considering and issuing permits, licenses, and other administrative approvals and decisions, "shall not disproportionately burden disadvantaged communities" as identified pursuant to ECL §75-0101(5).

CGPP, any proposed projects that would be entirely or partially located in disadvantaged communities, and to provide sufficient information for the Commission to make the required finding under Section 7(3) of the CLCPA. To the extent Stage 5 results in a recommended project that would be partially or wholly located in a disadvantaged community, the CGPP final report shall justify that decision based upon, among other things, available alternatives not located within such communities, issues related to constructability, congruity with the existing grid, cost, and potential environmental impacts.[48] The justification must provide details related to the elements of a project to located in the disadvantaged community, including whether it is to be sited in an existing right-of-way, the zoning of the relevant area, and the project's relative proximity to residential communities. In the end, the Commission will evaluate the potential burdens on disadvantaged communities based on the entire portfolio of projects recommended in the final report.

To assist in making these findings, we approve the recommended approach in the Revised CGPP to include a representative of environmental justice communities on the EPPAC. We agree that this will help the Commission to ensure

[48] The environmental impact analysis at this stage is expected to be preliminary given that the projects themselves would be subject to review under either PSL Article VII or the State Environmental Quality Review Act (SEQRA), ECL Article 8. The CGPP and related planning studies, as approved in this Order, establish a process that will assist in identifying potential upgrades to electric distribution and transmission facilities and for presenting them to the Commission for future consideration. Accordingly, the action taken in this Order is exempt from SEQRA because it does not commit the Commission to a course of action on any such upgrades that may be proposed. See 6 NYCRR §617.5(c)(27).

that impacts to disadvantaged communities are being properly considered in the CGPP.

Data Reporting and Transparency

As the Commission has stated in its Phase 2 Order, the CGPP must be conducted in a transparent way, and the information needed to help stakeholders and policy makers make investment decisions must be widely available.[49] To that end, adopting the practice at the Interconnection Technical Working Group, we will require EPPAC meetings to allow interested stakeholders to attend and listen to the proceedings, while at the same time limiting active participation to the member entities and their experts, as discussed in this Order. We also direct the Utilities to consult with DPS Staff and establish effective and timely means for sharing information about the process with the public and interested stakeholders. While we will not prescribe all the elements of the information sharing strategy here, we will require the Utilities to conduct at least two public events in the course of the work; one such event shall describe and explain the results of the work done in Stage 1, and the second event shall provide a detailed review of the findings and recommendations in the final report (Stage 5 or 6).

The Commission's prior orders in this proceeding have included periodic data reporting requirements. It is appropriate to revisit these requirements now that the CGPP is ready for implementation, and to consolidate data reporting or eliminate redundant reporting mandates. Our aim is to leverage the CGPP to serve as the primary source of the data that developers, policy makers, and other stakeholders need to understand regarding how the transmission system is adapting to meeting CLCPA targets.

[49] Phase 2 Order, pp. 12, 20.

As the Commission has taken steps toward implementing the planning and investment requirements of the Accelerated Renewables Act, the Commission has approved funding for projects and required periodic reporting on the status of those projects.[50] We will leave these reporting requirements in place as they provide useful information on the Utilities' progress toward CLCPA objectives. However, we will modify the semi-annual headroom reporting requirement established in the Phase 2 Order. Under that order, the next semi-annual headroom assessment is due February 1, 2024. We direct the Utilities to consult with DPS Staff and NYSERDA to determine an annual headroom reporting date that the Utilities will observe beyond that date. We further direct the Utilities to file the annual reporting date as a compliance filing in this proceeding. Once the filing is accepted by the Commission, the semi-annual requirement of the Phase 2 Order shall terminate.

Of course, the CGPP Least Cost Plan Report will be available to the public. To ensure that stakeholders know what to expect once that document is available, we clarify here our intent to provide for a significant public comment period following the filing of the report and to consider stakeholder comments in any action on its recommendations, such as approvals of proposed investments. In addition, because the CGPP will be a source of information, and the basis for the investment plans called for in the Accelerated Renewables Act, we direct the Utilities to include information in the final CGPP Least Cost Plan Report identifying previously funded Phase 1 and Phase 2 projects so that the document presents a view of both proposed

[50] See, e.g., Phase 1 Order; Phase 2 Order; Case 20-E-0197, Order Authorizing Development of Phase 1 Transmission Projects and Cost Recovery Measures (issued July 14, 2022); and Case 20-E-0197, Order Approving Phase 2 Areas of Concern Transmission Upgrades (issued February 16, 2023).

new projects emerging from the CGPP work and funded CLCPA-driven investment.

CONCLUSION

Through this Order, the Commission is taking another key step in implementing the Accelerated Renewables Act and steering the State and its electric utilities toward meeting the climate targets established in the CLCPA. The system planning process improvements addressed in this Order will provide a well-informed, efficient, cost-effective, and transparent path to identify the transmission investments required to meet the State's climate objectives. For the reasons discussed herein, the Commission approves the Revised CGPP, with the modifications described above.

The Commission orders:

1. The Revised Coordinated Grid Planning Process Proposal is approved, with modifications, as discussed in the body of this Order.

2. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to modify the proposed approach to representing local constraints in the capacity expansion model during Stage 1 of the Coordinated Grid Planning Process, as discussed in the body of this Order.

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

with Department of Public Service Staff to develop conceptual cost estimates for local transmission and distribution upgrades beyond the existing local headroom and, in coordination with Department of Public Service Staff, determine how to incorporate the conceptual local transmission and distribution cost estimates into the capacity expansion model, as discussed in the body of this Order.

4. Department of Public Service Staff is directed to work with the New York State Energy Research and Development Authority to assess the approach used to develop conceptual cost estimates for local transmission and distribution upgrades during the first cycle of the Coordinated Grid Planning Process and propose modifications to the approach for future cycles, as discussed in the body of this Order.

5. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to consult with Department of Public Service Staff to determine if and when additional iterations between Stages 3 through 5 are necessary, as discussed in the body of this Order.

6. Department of Public Service Staff shall consult with the Energy Policy Planning Advisory Council and the New York State Energy Research and Development Authority to provide modeling assumptions for the first scenario of the first cycle of the Coordinated Grid Planning Process, as discussed in the body of this Order.

7. Department of Public Service Staff shall consult with and offer recommendations to the New York Independent System Operator, Inc.'s planners regarding how additional resources of the New York Independent System Operator, Inc.

might be deployed to align the planning processes and to improve the overall efficiency of the Coordinated Grid Planning Process, as discussed in the body of this Order.

8. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to consult with the Long Island Power Authority, Department of Public Service Staff, and the New York Independent System Operator, Inc. and to file by June 1, 2024, recommendations for reducing the Coordinated Grid Planning Process cycle time to two years, as discussed in the body of this Order.

9. Department of Public Service Staff shall provide a mid-cycle assessment to the Commission by June 1, 2024, as discussed in the body of this Order.

10. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, shall consult with the Advanced Technology Working Group and Department of Public Service Staff to schedule a public technical conference, as discussed in the body of this Order.

11. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to consult with the Advanced Technology Working Group and the Long Island Power Authority during Stages 3 and 4 of the Coordinated Grid Planning Process, as discussed in the body of this Order.

12. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, shall explain their approach to implementing advanced technologies and the Advanced Technology Working Group's recommendations in the final Least Cost Plan Report of the Coordinated Grid Planning Process cycle, as discussed in the body of this Order.

13. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to explore interim applications of technologies that may improve system capacity or efficiency at a low cost while long-term solutions are being developed, as discussed in the body of this Order.

14. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to identify any proposed projects that would be partially or entirely located in a disadvantaged community, and to provide sufficient information and justification for the Commission to evaluate impacts on the disadvantaged community, as discussed in the body of this Order.

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

Long Island Power Authority and Department of Public Service Staff to establish additional points in the process for stakeholders to provide meaningful input, as discussed in the body of this Order.

16. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to consult with Department of Public Service Staff to establish effective and timely means for sharing information about the process with the public and interested stakeholders, including at least two public events, with one event to explain the results of the work done in Stage 1 and one event to provide details of the findings and recommendations in the final Least Cost Plan Report, as discussed in the body of this Order.

17. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation, are directed to consult with Department of Public Service Staff and the New York State Energy Research and Development Authority and to file a proposal in this proceeding for an annual headroom reporting date that, once accepted by the Commission, will replace the semi-annual headroom reporting requirement, as discussed in the body of this Order.

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

information on previously funded Phase 1 and Phase 2 projects in the final Least Cost Plan Report, as discussed in the body of this Order.

19. In the Secretary's sole discretion, the deadlines set forth in this Order may be extended. Any request for an extension must be in writing, must include a justification for the extension, and must be filed at least three days prior to the affected deadline.

20. This proceeding is continued.

By the Commission,

(SIGNED) MICHELLE L. PHILLIPS
Secretary

SUMMARY OF COMMENTS

Alliance for Clean Energy New York (ACENY), New York Offshore Wind Alliance (NYOWA), Advanced Energy United (United), Natural Resources Defense Council (NRDC), and the American Clean Power Association (ACP) (collectively, ACENY et al.)

ACENY et al. recommend several modifications to the CGPP, including reducing the process to two years, integrating bulk transmission solutions, expanding the scope and membership of the EPPAC, using levels of renewables generation and electrification at the full achievement of the CLCPA in any analyses, providing opportunities for expedited transmission proposals, and using CGPP results to set avoided costs for DER evaluation. ACENY et al. also recommend increasing flexibility, combining multi-value benefits, developing annual headroom assessments, requiring regular reporting, giving stakeholders access to utility models, providing transparency on construction outages, coordinating with gas system planning, providing analysis to evaluate social equity impacts, and considering other solutions such as grid enhancing technologies (GETs) and storage as a transmission asset (SATA).

CGPP Stages and Timelines

ACENY et al. suggest that the CGPP cycle should be expedited to comply with the CLCPA goals and reduced from three to two years to accelerate transmission deployment to reach the State's climate and renewable targets and to better align with the NYISO planning process. Specifically, ACENY, United, NYOWA, and NRDC recommend shortening the utility study process to 18 months and the Commission approval process to six months, explaining that the proposed three-year cycle would delay the implementation of renewable projects and create risk to renewable developers because of the uncertainty in the timing of transmission development.

Stage 2: Network Model Development

ACENY et al. recommend that high-voltage or bulk power solutions be considered concurrently with local solutions so as not to limit the identification of the most favorable and desirable solution, emphasizing that local solutions should be integrated with high-voltage or bulk solutions for optimal upgrades.

ACENY et al. propose that the timeline of evaluating bulk system transfer scenarios be affirmed by the NYISO by Stage 5. Additionally, ACENY, NYOWA, United, NRDC, and ACP recommend that criteria such as the reduction in curtailment levels, the overloading of constrained local or bulk facilities, and greenhouse gas emission reductions, be adopted to assist in the resolutions of any discord within the EPPAC on whether there is a PPTN that should be considered. ACENY et al. recommend hiring a third-party evaluator to identify proposed solutions prior to Stage 5. In addition, ACENY et al. suggest that the CGPP be used to compare and propose NYPA's priority projects during Stage 5 and recommend that a comparison of local and bulk power solutions be objectively evaluated. ACENY et al. also propose expanding the scope of least cost criteria to include additional values such as flexibility, expandability, operability, constructability, and outage schedule.

EPPAC

ACENY et al. advocate for expanding the scope and membership of the EPPAC and recommend that the EPPAC be given the power to initiate ad-hoc subcommittees, organize technical conferences, and provide input on the mapping of the generation build-out assumptions, as necessary. ACENY and NYOWA request representative status on the EPPAC. ACENY indicates that its representation in the EPPAC would not be as a developer but in

bringing forth the best and most cost-effective approaches to renewable deployment.

Network Models

ACENY, et al. request modification to the analyses assumptions to include the total generation and electrification levels that reflect CLCPA mandates. ACENY et al. note that due to the shorter lead times for DER development compared to large-scale renewables and grid upgrades, stress analyses should be used to identify the appropriate amount of DER and the necessary local transmission and distribution upgrades. In addition, ACENY et al. support dispatch solutions based on 100% dispatch assumptions so that developers are better able to secure financing.

CGPP Stages and Timelines

ACENY et al. recommend that utilities be allowed to submit out-of-cycle filings for approval of upgrades necessary to support the CLCPA. ACENY et al. urge that CGPP study results that align with CLCPA targets be used to set avoided costs for DER evaluation, in order to consider DER solutions on an even playing field with bulk and local transmission solutions. ACENY et al. endorse coordinating the CGPP process with gas system planning and a process that evaluates social equity impacts.

Stage 3: Local Assessments

ACENY et al. advocate for third-party proposals that contain GETs and NWA solutions to be evaluated during Stage 3 for inclusion in Stage 4 review. ACENY et al. recommend that more attention be given to technologies such as high-capacity advanced conductors, compact tower designs, power flow controllers, and dynamic line ratings, in the grid planning process, as such technologies can integrate renewable resources by using capacity on existing transmission lines while new transmission is being built. Additionally, ACENY et al. state

that storage is another technology that should be included in the CGPP process, as storage is modular and flexible, highly responsive, efficient, compact, comparatively easy to site, and cost-effective.

Stage 4: Review of Preferred Solutions

ACENY, et al. recommend that the CGPP incorporate additional criteria including flexibility, multi-value benefits such as a consulting support option, annual headroom assessments, regular reporting, access to utility models, and transparency with construction outages.

Clean Energy Parties (CEP)

CGPP Stages and Timelines

The CEP recommend identifying opportunities to accelerate the CGPP, such as reducing the cycle to two years to incorporate multi-value projects and near-term distribution needs. The CEP recommend shortening the study process to 18 months and the Commission decision process to 6 months. The CEP indicate that the shorter timeline could potentially reduce some of the risks to ratepayers.

The CEP suggest a separate distribution planning process that integrates into the CGPP to enable development of additional processes to achieve CLCPA targets. However, the CEP claim that the current planning processes, as identified in the Distribution System Implementation Plans (DSIPs), are not effective. The CEP comment that the existing DSIP process does not provide for robust stakeholder input, does not provide sufficient information for clean energy developers to use, and does not present information on why many favorable endeavors do not reach fruition.

Instead, the CEP recommend using the CGPP to confirm that bulk and LT&D upgrades are integrated into the distribution system upgrades. The CEP propose three recommendations to be

included within the CGPP and to update DSIPs: 1) at Stage 1, complete an evaluation and alignment of load and DER adoption forecasts being used for future DER development and investment selection; 2) at Stage 3, a transparent and comprehensive evaluation between local constraints and the near-term and long-term solutions being proposed; and 3) a consistent process to communicate the adequacy, timing, and implementation status of NWAs and other alternative solutions throughout the CGPP process.

EPPAC

The CEP state that, as currently structured, the EPPAC does not have the capability to meaningfully influence the process. Thus, the CEP recommend some additional responsibilities for the EPPAC, including identifying model inputs, providing input on model sensitivities, establishing the methodology for zonal disaggregation from generation build-out scenarios, providing input on the value of optionality in the probabilistic analysis with multiple scenarios, and evaluating non-traditional and advanced technology solutions. The CEP also recommend a more participatory EPPAC framework and propose a consensus-based decision making structure, third-party facilitation, and formal recommendations that require consensus.

Stage 1: Data Collection and Determination of Scenarios

Regarding EPPAC and the scope of data requirements, the CEP request a more specific list of data sets to collect from stakeholders. For Stage 1, the CEP recommend a holistic approach by identifying the least cost system build-out necessary to meet the needs of the grid incorporating both clean energy generation expansion and electrification-related demand growth. The CEP recommend developing stages of the CGPP process such that, for locations where the forecast generation growth is lower than identified levels, projects and programs should be

identified for consideration within subsequent stages. The CEP state that, during Stage 1, forecasts should be expanded to identify the growth in applications and interconnections without the current headroom constraints and identify pent-up demand for interconnections in constrained locations to accurately determine which areas are most likely to see growth and which areas would benefit from removing headroom constraints.

Stage 2: Network Model Development

For Stage 2, CEP recommend that the CGPP align with the DSIP process.

Stage 3: Local Assessments

The CEP state that the assumption of 100% simultaneous dispatch of renewable energy is problematic because it is not representative of actual expected performance, as the full nameplate operation will overestimate production and underestimate generation capacity. Within the solution phase, the CEP recommend an oversight and stakeholder feedback mechanism to verify the reasonableness of the project recommendations. The CEP agree with the proposal in the Revised CGPP to consider timing and suggest an early assessment of multiple values, rather than least cost, to unlock capacity. The CEP agree with the Revised CGPP approach to determine whether NWAs, such as storage or other advanced technologies, are suitable.

The CEP recommend considering storage as part of the bulk system and as a component of the proposed solution in the form of NWAs or SATAs. The CEP urge the Commission to direct a modification of the CGPP to ensure incorporation of SATAs and NWAs to meet local transmission needs and provide the greatest benefits and lowest costs to ratepayers.

The CEP suggest that the CGPP should accelerate deployment of commercially proven technologies for transmission

and distribution purposes, and that a mechanism be developed so that third-party solutions are considered for advanced technologies. The CEP disagree that headroom assessments be conducted every three years and recommend any solution selected at Stage 6 and approved by the Commission should be incorporated on a more frequent basis with the hosting capacity maps and headroom analyses.

Stage 4: Review of Preferred Solutions

The CEP suggest consideration of recommended solutions that provide multi-value benefits no later than this stage. According to the CEP, the Revised CGPP is unclear as to how load growth or load changes beyond five years will be managed. The CEP propose that project evaluation for identified solutions consider a timeline toward implementation. The CEP suggest that optionality be considered and valued in the project evaluation process to encompass changing conditions and requirements.

Stage 5: Least Cost Planning Assessment

The CEP states that distribution-connected resources are crucial to achieving an investment plan that includes least cost considerations and maximum benefits available through NWAs for reliability and resiliency. The CEP emphasize that the inclusion of such capabilities within the selection process is essential for a complete and efficient portfolio.

Stage 6: Least Cost Plan Report

The CEP recommend a holistic approach that is coordinated and identifies all factors that drive grid investment to meet the needs of all stakeholders.

Additional Considerations

The CEP express concern about the CGPP timelines and recommend a fast-tracked cycle or parallel process that builds on known constrained areas that have high demand for interconnections to enable investments in a timely manner. The

CEP reiterate that the DSIP process requires improvements. The CEP recommend that the State continue to improve upon near-term solutions in forums such as the Interconnection Policy Working Group, the Interconnection Technical Working Group, and the Advanced Technology Working Group and that these working groups should including other topics such as Cost Share 2.0 expansion for multi-value projects, Flexible IX, "Active Curtailment" (Dynamic Power Control), and distributed energy resource management systems, DER communications, and advanced distributed management systems.

Ecogy Energy (Ecogy)

Stage 1: Data Collection and Determination of Scenarios

Ecogy recommends including zonal allocation input of DER by prioritizing Dynamic Hosting Capacity (DHC). Ecogy identifies two options for DHC, including 1) uncoordinated dynamic hosting capacity, and 2) coordinated dynamic hosting capacity, which it notes has been previously referred to as flexible interconnection or Active Network Management.

Ecogy contends that solutions such as DER and NWAs are cost effective, can be applied rapidly, are adjustable, and are able to provide information in both geographical and temporal nature. Ecogy emphasizes that providing access to measurement information is key to finding solutions quickly. Ecogy indicates that it can provide low-cost, reliable, and proven interoperability technology that could assist the Utilities when granting DER owners smart meter data access.

Stage 3: Local Assessments

Ecogy recommends conducting parallel processes by continuing with the three-year CGPP process while also addressing immediate challenges to meet the 70% renewables by 2030 CLCPA target. Ecogy characterizes the distribution system as an untapped opportunity that can be maximized by using

different parts of the grid based on engineering and planning advice. According to Ecogy, DHC can present a clear idea for calculating the hosting capacity for a specific location in real-time at given intervals and can be expanded to calculate hosting capacity across all grid levels in any given timeframe. Ecogy states that according to the National Renewable Energy Laboratory (NREL), DHC can consider the behavior of distributed photovoltaics, loads, and grid devices over time and can account for some over-voltages and thermal loading that are acceptable for short periods of time and during a limited number of points during the year.[51] Ecogy suggest that providing a DER connection solution can provide for an economic and cleaner grid.

Ecogy claims that a DHC solution could allow utilities to ramp up solar arrays when necessary and, if developed as an open-source community-based solution, the public could leverage it at the lowest cost and with existing commercially available technology. Ecogy maintains that legislation could be introduced to mandate that utilities address curtailment of a solar array if it is curtailed more than a specified percentage. Ecogy asserts that an equitable cost sharing plan could eliminate concerns regarding financing DER projects, particularly when DER providers are given certainty that the curtailment amount will not exceed an agreed upon amount. Ecogy insists that the DHC approach works and includes a case study in its comments (i.e., Ecogy Delaware – In Partnership with Wilmington Housing Authority) that documented the results.

[51] Ecogy references NREL's analysis, available at: https://www.nrel.gov/solar/market-research-analysis/advanced-hosting-capacity-analysis.html.

Environmental Defense Fund (EDF)

CGPP Planning and Timelines

EDF supports the 20-year planning horizon put forth by the Utilities and LIPA, but suggests that improvements are needed to the generation build-out scenario. EDF states that the proposal for up to three generation build-out scenarios allows little room for the uncertainty in the future of the State's energy systems and leaves little flexibility to adapt going forward. EDF recommends setting the three generation build-out scenarios as a floor rather than a celling to ensure flexibility in the planning process and reflecting the "mitigation scenarios" laid out in the New York State Climate Action Council Scoping Plan.[52]

EPPAC

EDF expresses concern that the proposed role for the EPPAC is only to provide feedback while leaving the specifics and minimum requirements entirely up to the Utilities. EDF recommends that the EPPAC, with broader stakeholder input, create a framework of general requirements and constraints for the scenarios. EDF believes that the EPPAC, rather than the Utilities, should be responsible for developing the framework for the creation of generation build-out scenarios.

EDF supports the creation of the EPPAC and, in addition to its recommendation regarding build-out scenarios, suggests three further modifications. First, EDF recommends that decisions should be made by EPPAC through consensus-based decision-making. Second, while EDF supports the proposed EPPAC participant list, it notes that the list is lacking in some

[52] EDF references pp. 118-124 of the New York State Climate Action Council Scoping Plan (December 2022), available at: https://climate.ny.gov/-/media/project/climate/files/NYS-Climate-Action-Council-Final-Scoping-Plan-2022.pdf.

areas and would be improved with the addition of end-use electrifiers, broad-scope environmental non-profits, and labor groups. In addition to the environmental interests included in the proposed list, EDF recommends adding representation from non-governmental environmental organizations that could inform new or modified ways for achieving environmental goals. Third, EDF recommends inclusion of labor groups to provide expertise on the pace of decarbonization efforts and identify hurdles that may slow or redirect efforts that impact EPPAC's scenarios. EDF notes that it is crucial that the Commission provide opportunities for stakeholder involvement through and apart from the EPPAC.

Stage 1: Data Collection and Determination of Scenarios

EDF advocates for improving the Proposal through two modifications to the forecasting process. First, EDF suggests that the zonal granularity for DER forecasting should be amended to require greater spatial and temporal granularity. Second, EDF recommends that the methodology for forecasting should be transparent and include data already collected by State agencies.

EDF believes that the process of zone-level forecasting and disaggregation is insufficient to provide the requisite data and fails to accurately capture the assortment of some DERs, such as medium- and heavy-duty vehicles. EDF advises that the Utilities run the risk of underbuilding in some areas and overbuilding in others. EDF recommends that the Utilities conduct bottom-up forecasting of DERs, at least at the secondary substation level. EDF states that this would equip the Utilities with the level of detail needed to make informed decisions about distribution grid upgrade needs in Stages 2 through 5.

EDF believes that the Utilities should provide an explanation of forecasting methodologies and assumptions, supplemented with a path for stakeholders to provide feedback. EDF also recommends that the CGPP acknowledge the role of the many State agencies that have access to information than could inform and support forecasting efforts.

Stages 2 through 5 – Grid Needs and Solution Assessments

EDF proposes that the CGPP recognize that a diverse group of DERs can impact the grid and that a wide array of technologies provide demand response based on grid conditions. EDF advises that the full suite of possible DER technologies and expected electrified end uses should be applied collectively to the Utilities' models, rather than separately. EDF also suggests that the CGPP should clarify that NWAs that will be considered as potential solutions include a broad array of DERs.

EDF recommends that the CGPP be modified to include greater temporal granularity than the CLCPA target dates and n+20. EDF also urges that the CGPP should conduct system and solution analysis for fixed years, such as annually or biannually through n+20.

EDF believes that the CGPP should consider system reliability in the face of a changing climate. EDF suggests that the CGPP could study what system improvements may be needed in disadvantaged communities unduly impacted by system outages, and as public transit and other transportation services electrify, could include identifying what system upgrades or solutions can avoid or mitigate the impact of outages on vulnerable communities.

EDF Renewables (EDFR)

CGPP Stages and Timeline

EDFR recommends reducing the study cycle to two years followed by a six-month review by the Commission. EDFR notes

that the three-year study jeopardizes timely investments and upgrades resulting in delays and increased costs. However, if the three-year CGPP timeline is approved, EDFR believes that the Utilities and LIPA should have the flexibility to submit out-of-cycle studies that demonstrate the need for expedited local solutions.

EPPAC

EDFR suggests that the EPPAC and other avenues for stakeholder engagement should solicit stakeholder feedback regarding the types of criteria to be used for CLCPA build-out assumptions. EDFR urges the Commission to consider additional opportunities for comment on the CGPP models to ensure sufficient feedback from all stakeholders. EDFR identifies the criteria for nodal build-out assumptions as an example for an EPPAC vetting process and stakeholder feedback. EDFR advocates for flexibility and frequent evaluation of the CGPP through stakeholder input to identify opportunities to improve the CGPP.

Stage 1: Data Collection and Determination of Scenarios

EDFR states that it is critical that the CGPP include additional consideration of high-voltage grid expansion and not be limited to low-voltage solutions to local constraints. EDFR also encourages flexibility in considering the multi-value benefits that transmission upgrades can provide, including resilience, reliability, electrification, addressing aging infrastructure, and integrating CLCPA resources.

Stage 3: Local Assessments

EDFR strongly recommends rejecting the CGPP proposal to change to the headroom process that requires estimates to be calculated as part of Stage 5, as opposed to every six months. EDFR advises that updating headroom estimates on a three-year cycle would considerably reduce the value and accuracy of published values. Instead, EDFR proposes that headroom

estimates occur on an annual basis to better align generation and transmission expansion.

Grid Constraints

EDFR notes that GETs can be cost-effective solutions to address grid constraints pending traditional, wire-based upgrades. EDFR recommends deploying GETs or storage solutions to minimize renewable curtailments and congestion impacts from CLCPA resources while transmission upgrades are being evaluated and/or constructed.

LS Power Grid New York Corporation (LS Power)

CGPP Stages and Timelines

LS Power reiterates the concerns it has expressed during the development of the CGPP regarding what it views as an inappropriate expansion of local planning into bulk power planning. LS Power believes there should be a clear distinction between LT&D and the bulk scale projects identified in the CGPP. LS Power warns that the proposed CGPP is a new and different way to evaluate transmission that would allow the Utilities to displace bulk upgrades with local upgrades that are less efficient.

LS Power notes that the NYISO's PPTP process is a competitive process requiring the identification and selection of the most efficient or cost-effective proposals, which has provided benefits to New York consumers, including increased production cost savings, reduced cost per MW of incremental transfer, reduced emissions, and cost containment. LS Power references its proposal for an expedited competitive process as an alternative to the CGPP.[53] LS Power emphasizes that non-competitive processes can be detrimental to New York consumers.

[53] See Attachment 1, FERC Docket ER22-2154 Protest of LSP Transmission Holdings II, LLC and LS Power Grid New York Corporation I (July 12, 2022).

EPPAC

LS Power recommends delaying the proposed CGPP until the NYISO has identified areas where the CGPP and current set of NYISO processes can be better aligned. LS Power urges that the stakeholder process be transparent if the Commission decides to move forward with the CGPP. LS Power claims that the EPPAC, as currently proposed, excludes the full participation of some stakeholders. By contrast, according to LS Power, the NYISO stakeholder process provides a framework that should be followed as a proven and effective means for achieving consensus on energy market issues.

LS Power notes that the having the Utilities and LIPA act as the technical consultant in the CGPP is at odds with the EPPAC being able to provide independent feedback. Instead, LS Power recommends that an independent third-party entity provide consultation to the EPPAC.

NextEra Energy Transmission New York, Inc. (NEETNY)

CGPP Stages and Timeline

NEETNY asserts that the Revised CGPP fails to comprehensively address bulk solutions and does not properly apply the PPTP process at the NYISO. NEETNY recommends that the application of bulk power solutions to inter-zonal constraints should be considered when appropriate. NEETNY suggests that Stages 1 and 3 could be bifurcated, such that each identified need would follow either the CGPP or PPTP process, based on the characteristics of the constraint. According to NEETNY, if a PPTN is declared within or between zones, the PPTP should provide the forum to determine the best solution and should not be used as an input into the CGPP. NEETNY contends that the CGPP will abate competitive transmission solutions and will remove any incentives for bulk storage proposals and solutions to be developed. NEETNY emphasizes that the PPTP process is

competitive, buildable, and has unique cost containment criteria.

NEETNY cautions that the CGPP process favors local transmission solutions over bulk power solutions to the disadvantage of customers. NEETNY argues that the NYISO's PPTP process can scrutinize for the best solutions, regardless of whether they are inter-zonal, intra-zonal, or a combination of both. NEETNY reiterates that the criteria used to derive a solution should focus on the most efficient and cost-effective measure rather than on least cost.

Stage 4: Review of Preferred Solutions

NEETNY proposes that an independent evaluator (e.g., the NYISO or a third-party consultant) be engaged in the CGPP to facilitate identification of the preferred transmission solution.

To achieve CLCPA goals, NEETNY recommends modifications to improve the CGPP process: 1) Stages 1 and 3 should be split into two separate pathways with defined criteria (i.e., CGPP or PPTN); 2) all New York transmission owners, including competitive transmission owners, should be represented in the EPPAC; and 3) transmission developers and other interested stakeholders should be given access to data and modeling. According to NEETNY, solutions can be compared simultaneously, allaying any delays and cost inefficiencies.

City of New York (The City or NYC)

The City recommends that the Commission reject the CGPP Proposal. NYC advises that the CGPP proposal does not adequately incorporate the input and concerns provided by stakeholders, including timing conflicts between the CGPP and the NYISO's transmission planning processes. The City argues that, as the one of the largest electricity users in the State, it should have a role in providing feedback into the Utilities'

local planning process. The City expresses concern that the CGPP proposal does not provide safeguards for the selection of the most cost-effective transmission projects and recommends that the Commission reject the CGPP proposal.

EPPAC

The City characterizes the intended role of the EPPAC as an independent, stakeholder-led group without the inclusion of the Utilities. The City recommends the engagement of a third-party consultant to assess the Utilities' plans. NYC proposes that EPPAC membership be expanded to include more diverse groups, such as environmental and industry trade organizations. The City also recommends formalizing the process to designate and remove EPPAC members, which NYC asserts should be done by the Commission or, if the Commission rejects that recommendation, under guidelines to govern DPS Staff's designation and removal of members.

In addition, the City notes that the CGPP identifies the NYC Mayor's Office of Climate and Environmental Justice as an EPPAC member; however, the City contends that it should designate the appropriate representative for NYC. The City suggests that the EPPAC's role should be clearly defined and that the EPPAC should be engaged at every stage of the CGPP. The City claims that the CGPP proposal limits the role of the EPPAC to generation built-out scenarios only and excludes the consideration of all technologies. The City asserts that the CGPP Proposal is lacking an explanation of how the Utilities will provide education and training for stakeholders to improve their understanding of power system characteristics and project developments.

CGPP Stages and Timelines

The City advises that the CGPP requires refinement to better align the CGPP cycle with the NYISO's planning processes.

The City advocates for a CGPP that encompasses, or at least harmonizes, local and bulk system planning and, if warranted, contemplates evaluating more than the three scenarios proposed. The City states that it is unnecessary for DPS Staff to seek authorization for a PPTN declaration from the Commission, as any stakeholder should be allowed to seek a PPTN declaration. In addition, the City expresses concern that the CGPP only provides one year to complete any PPTP process identified in Stage 1 because the CGPP provides that it be included in the Stage 5 evaluation. The City notes that compliance with the SAPA process would reduce that timeframe to approximately nine months, which is a very limited amount of time, given the complexity of the grid and requisite analysis. The City recommends incorporating a longer timeframe to allow the NYISO to complete a more thorough evaluation process.

Stage 3: Local Assessments

The City maintains that to provide consistency for future needs, local assessments should consider the Utilities' existing long-range plans and not create a separate and different set of plans for the CGPP. The City agrees that the Utilities should identify projects with multiple benefit streams and that the most cost-effective solutions should be selected.

Stage 4: Review of Preferred Solutions

The City recommends adjusting the proposed allotted time to provide sufficient time to develop more accurate cost estimates.

Stage 5: Least Cost Planning Assessment

The City expresses puzzlement with the Utilities' proposal for comparing local and bulk solutions and opines that the explanation of the sequence of the analysis and information sharing provided by the Utilities is insufficient. In addition, the City suggests that it may not be appropriate to reduce

multiple solutions to a single project, as the Utilities suggest, because of the uniqueness of the projects and differences between zones.

The City asserts that the Utilities provide no showing that any of the costs incurred will be incremental to costs they already recover through rates in their unilateral planning processes. The City advises the Commission to refrain from considering the Utilities' request for cost recovery until a proper showing is made in support of such a request.

New York Power Authority (NYPA)

CGPP Stages and Timelines

NYPA expresses concern that the Revised CGPP would not integrate well with the NYISO transmission planning process because the NYISO process is a two-year process and the CGPP is three years, consisting of a two-year planning cycle and a one-year review cycle. According to NYPA, the proposed CGPP does not provide sufficient details on how the two processes will align, how PTPs will be integrated, and an acknowledgment that the NYPA Board of Trustees must approve any PTP. Additionally, NYPA notes that the CGPP does not address how costs incurred by NYPA and any co-participant on a PTP will be treated if the Commission withdraws the PTP designation or halts a PTP resource. NYPA asserts that any prudently incurred costs should be recoverable despite the termination of a PTP.

NYPA outlines additional concerns with the CGPP's approach to bulk constraints occurring within or across service territories. First, NYPA argues that leaving the Commission and the Utilities to select bulk or more local solutions may raise jurisdictional issues in the context of the NYISO's role in selecting solutions to meet PPTNs under FERC's oversight. NYPA indicates that distinguishing between inter-utility bulk constraints and local bulk constraints does not alleviate its

concern. Second, NYPA notes that the Utilities and LIPA may be biased toward local solutions instead of bulk solutions due to significant incentives to control the build and recover the costs.

Stage 4: Review of Preferred Solutions

NYPA states its preference for having local bulk constraints and inter-utility bulk constraints, including any violations of bulk contingencies identified in the CGPP process, feed into the PPTP process. NYPA asserts that the process would allow other stakeholders the opportunity to present creative solutions that may be more efficient and cost-effective. NYPA also notes that the CGPP proposal incorporates least cost criteria for selecting solutions; however, the PPTP process selects among bulk solutions based on which solution is the more efficient or cost-effective. NYPA asserts that the least cost principle would put bulk solutions at a disadvantage, potentially harming the competitiveness of bulk PPTP solutions. NYPA recommends providing a consistent level of cost estimation detail for all proposed solutions.

EPPAC

NYPA expresses concern that the proposed EPPAC is comprised of a sampling of stakeholders as its members. NYPA indicates that some stakeholders are under-represented or not represented (e.g., competitive transmission developers, and large commercial and industrial energy consumers) while each utility has representation that, collectively, could dominate the EPPAC decisions.

New York Independent System Operator, Inc. (NYISO)

CGPP Stages and Timeline

The NYISO supports the proposed approach to use the PPTP process to identify bulk transmission investments that will address transmission needs identified through the CGPP. The

NYISO suggests that the Commission consider whether the CGPP's evaluation methodologies will result in meaningful consideration of alternative bulk transmission solutions based on cost-effectiveness and efficiency of transmission investments. The NYISO notes that the Revised CGPP proposes to use capacity expansion to identify least cost transmission solutions, whereas the PPTP process uses a broad set of metrics. The NYISO indicates that the differences in methodologies and criteria have the potential to reduce the meaningfulness of the alternative bulk solutions by only using least cost, local transmission solutions. According to the NYISO, that may result in solutions that are less favorable for ratepayers in the long term and missed opportunities for transmission solutions that may more efficiently or cost-effectively achieve CLCPA targets. Furthermore, the NYISO encourages the Commission to consider the differences in the evaluation methodology and criteria for the proposed CGPP and the NYISO's system planning process, to ensure a robust and meaningful process.

EPPAC

The NYISO offers several suggestions for the Commission to consider for engagement of the EPPAC throughout the CGPP. The NYISO encourages the Commission to expand the membership to include a broader group of entities and individuals, such as public interest groups and other interested parties related to transmission development. The NYISO notes that many entities provide valuable viewpoints that may not be technical but directly influence technical issues and provide a more collaborative process. The NYISO suggests that the Commission further define the participation of the EPPAC and interested parties through all CGPP stages. The NYISO recommends that the Commission require that the CGPP include greater specificity on: 1) timing and information that will be

shared with the EPPAC during each stage; 2) the nature and level of collaboration between the Joint Utilities and the EPPAC; and 3) the method to resolve issues related to EPPAC's input and feedback.

Stage 3: Local Assessments

The NYISO notes that the Revised CGPP would establish a limited scope of the situation in which alternative bulk transmission solutions can be used to address local transmission needs. The NYISO recommends that the Commission provide more defined criteria to help guide the EPPAC in making recommendations to DPS Staff to avoid a preference for local transmission where a regional solution can more efficiently achieve CLCPA targets and benefit ratepayers. The NYISO also encourages the Commission to require clear criteria for the prioritization of solutions in a multifaceted planning process.

Transource Energy, LLC and Transource New York, LLC (Transource)

Stage 1: Data Collection and Determination of Scenarios

Transource recommends that Stage 1 of the CGPP include a public process to identify proven technologies and update the advanced transmission technology list to determine the most cost-effective and efficient infrastructure for the local transmission system and for the NYISO's PPTP process for bulk transmission.

Stage 3: Local Assessments

Transource notes that the ATWG identified several advanced transmission technologies for CLCPA-based projects but that the Utilities only used a limited list of the identified technologies in their Phase 1 and Phase 2 proposals. Transource asserts that other effective advanced technologies have not been evaluated or deployed and should be part of the planning process going forward. Transource recommends that the CGPP include details on how the list of proven transmission

technologies will be maintained and augmented over time and outline an evaluation process that identifies what advanced technologies will be included.

Transource argues that the CGPP proposal does not sufficiently implement the Commission's pronouncement that proven advanced transmission technologies should be deployed for the benefit of New York consumers. Transource contends that the composition of the EPPAC should be expanded beyond the plurality of investor-owned and State-run utilities to include transmission developers to ensure that advanced transmission technologies are identified and the list is updated frequently.

Transource suggests that a more defined structure for comprehensive evaluations of all advanced technology options be required and recommends that timely reports be required to include the stakeholder process, the alternative analyses, and the basis for the selection made for each project.

Transource notes that there are other proven advanced technologies solutions, such as Breakthrough Overhead Line Design (BOLD), which have been deployed effectively in other areas of the country and that can be utilized in New York. Transource states that BOLD has demonstrated that it can exceed design criteria, is cost-effective, and is easily maintained. Transource recommends using operational capability data generated in other regions and utilizing advanced transmission technologies that have been successfully deployed elsewhere.

EPPAC

Transource reiterates its proposal to expand EPPAC membership to include transmission developers. Transource emphasizes that the EPPAC, as proposed, lacks the mission and expertise to effectively assess the viability of advanced transmission technology on a project-specific basis. Transource cautions that, unless the proposed EPPAC is modified to reflect

Transource's recommendations, the same three advanced technologies will be evaluated over and over again, to the exclusion of new and more efficient advanced technologies, causing New York consumers to pay more for less efficient service.

Vote Solar

EPPAC

Vote Solar maintains that it is unclear from the CGPP proposal how feedback from the EPPAC will be incorporated into system planning and further clarification of the EPPAC's role is necessary to ensure that there is fair representation in its decision making. Vote Solar recommends that representation from an environmental justice organization be included in the EPPAC. Vote Solar suggests that all organizations dedicating time to the EPPAC should be compensated to encourage participation.

Stage 3: Local Assessments

Vote Solar suggests that the State adjust interconnection processes and transmission resources to facilitate stakeholder participation and ensure equitable investment in disadvantaged communities. Vote Solar also recommends that the Utilities prioritize upgrading the electric grid in low-income communities and that projects serving disadvantaged communities receive preferential interconnection. In addition, Vote Solar asserts that the Commission should only approve major grid investments that facilitate disadvantaged communities receiving their fair share of hosting capacity.

Vote Solar recommends that the Final CGPP Report clearly delineate how each benefit is defined and measured. Further, Vote Solar suggests that the CGPP Final Report should include how project classifications will impact environmental justice communities. Vote Solar notes that the discussion of

cost segmentation in the proposed CGPP was brief.[54] Vote Solar indicates that the Revised CGPP proposed by the Utilities and LIPA would benefit from outlining the type of upgrades that ratepayers would be expected to fund or direct stakeholders to where they can find updates on cost assignments for utility infrastructure investments.

Working for Advanced Transmission Technologies Coalition (WATT)

Stage 3: Local Assessments

WATT recommends that the CGPP integrate grid optimization solutions and practices into the planning process. WATT states that the CGPP process does not sufficiently incorporate GETs into the planning process. According to WATT, GETs enable low-cost generation to interconnect to the grid, reduce congestion costs, and maximize the value of new transmission investment.

WATT advocates for using GETs to optimize the grid prior to grid upgrades and expansion. WATT indicates that, by using GETs to fully utilize the grid's capacity, the State can control costs, optimizes transmission construction in the short and long term, and accelerate progress to meeting the New York's climate targets. WATT asserts that GETs are cost-effective and can be deployed in weeks or months to immediately create capacity and reduce congestion costs. WATT recommends that the Utilities commit to using GETs to alleviate constraints and expedite renewable generation connections without the need for new infrastructure.

[54] Vote Solar also references a separate proceeding addressing interconnection cost-sharing. Case 20-E-0543, Petition of Interconnection Policy Working Group Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements.