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March 27, 2023

Hon. Michelle L. Phillips
Secretary
Department of Public Service
3 Empire State Plaza
Albany, NY 12223-1350

**RE: Proceeding on Motion of the Commission to Implement Transmission Planning
Pursuant to the Accelerated Renewable Energy Growth and Community Benefit
Act; Docket No. 20-E-0197**

Dear Secretary Phillips,

On behalf of the Alliance for Clean Energy New York, the New York Offshore Wind Alliance, the Natural Resources Defense Council, Advanced Energy United, and The American Clean Power Association, please accept these comments in response to the Public Service Commission's February 6, 2023, *Notice Seeking Comments* in the above referenced proceeding, on the revised Coordinated Grid Planning Process submitted by utilities on December 27, 2022.

Please feel free to contact me should you have any questions regarding this matter.

Sincerely,

Anne Reynolds
On Behalf of ACE NY

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Proceeding on Motion of the Commission
to Implement Transmission Planning Pursuant
to the Accelerated Renewable Energy Growth
and Community Benefit Act.

CASE 20-E-0197

Comments on Joint Utilities' Revised Coordinated Grid Planning Proposal

March 27, 2023

Submitted By:

Alliance for Clean Energy New York, New York Offshore Wind Alliance, Advanced Energy United,
Natural Resources Defense Council and The American Clean Power Association

I. EXECUTIVE SUMMARY

The Alliance for Clean Energy New York, the New York Offshore Wind Alliance, Advanced Energy United, Natural Resources Defense Council and the American Clean Power Association together submit these Comments on the utilities' Proposed Revised Coordinated Grid Planning Proposal submitted December 27, 2022.

Our organizations support timely Commission approval of the revised Coordinated Grid Planning Process (CGPP) with some important modifications discussed in these Comments.

First, **the CGPP cycle should be reduced to two years from three**. Three years is simply too long given the State's aggressive timelines for renewables deployment and climate action, and two years better aligns with the NYISO planning processes.

Second, the CGPP needs to **better integrate analysis and consideration of bulk transmission solutions**, and our organizations make several detailed suggestions for how this should be done.

Third, our groups make recommendations on **expanding the scope and membership of the Energy Policy Planning Advisory Council**.

Fourth, we strongly support modification to the analysis assumptions to reflect the full mandates of the Climate Leadership and Community Protection Act (“CLCPA”). Specifically, the CGPP should **use renewables generation and electrification levels** that the full achievement of the CLCPA dictates and require 100% dispatch solution **based on 100% dispatch assumption**.

In Sections 5-10, we make other recommendations regarding the CGPP. It should, for example, provide opportunities for expedited transmission proposals; use CGPP results aligned with CLCPA targets to set avoided costs for DER evaluation; coordinate with gas system planning; produce information to evaluate social equity impacts; and consider GETs and storage as transmission solutions. Finally, the CGPP should incorporate flexibility, multi-value benefits, the option of consulting support, once-per-year headroom assessments, regular reporting, stakeholder access to utility models, and transparency with respect to construction outages.

In all cases, our recommendations are submitted with the intent of creating a successful and timely Coordinated Grid Planning Process for New York.

II. INTRODUCTION

In its February 6, 2023, *Notice Seeking Comments* in the above referenced proceeding, the New York State Public Service Commission (“Commission”) sought comments on the revised CGPP submitted by utilities on December 27, 2022.¹

The Alliance for Clean Energy New York (“ACE NY”), the New York Offshore Wind Alliance (“NYOWA”), Advanced Energy United (“United”), Natural Resources Defense Council (“NRDC”) and American Clean Power Association (“ACP”) have developed these Comments in response to the *Notice Seeking Comments*.²

ACE NY is a member-based organization with a mission of promoting the use of clean, renewable electricity technologies and energy efficiency in New York State to increase energy diversity and security, boost economic development, improve public health, and reduce air pollution. Our diverse membership includes companies engaged in the full range of clean energy technologies as well as consultants, academic and financial institutions, and not-for-profit organizations interested in our mission.

¹ *Coordinated Grid Planning Process Proposal*, submitted by New York utilities, December 27, 2022, Case 20-0197.

² The views and opinions expressed in this filing do not necessarily reflect the official position of each and every individual member of the organizations.

NYOWA is the New York Offshore Wind Alliance, which works to ensure the timely and responsible development of offshore wind in the Atlantic Ocean off New York State's coast, at a level necessary to contribute to New York's mandate for a 100% emissions-free grid by 2040. NYOWA advocates for policies that achieve offshore wind power development and protect coastal and marine ecosystems, and will strive to create in-State, quality, family-sustaining jobs, and reinvestment in New York's disadvantaged communities.

United is a national association of businesses that are making the energy we use secure, clean, and affordable. United works to accelerate the move to 100% clean energy and electrified transportation in the U.S. Advanced energy encompasses a broad range of products and services that constitute the best available technologies for meeting our energy needs today and tomorrow. These include energy efficiency, demand response, energy storage, solar, wind, hydro, nuclear, electric vehicles, and the smart grid. United represents more than 100 companies in the \$238 billion U.S. advanced energy industry, which employs 3.3 million U.S. workers, including 157,000 individuals in the Empire State.

NRDC is a national nonprofit environmental organization with hundreds of thousands of members and online activists, including members and activists in New York State. NRDC has a long-standing interest in environmental issues in New York, particularly with respect to energy policy.

The American Clean Power Association ("ACP") is a national trade association representing a broad range of entities with a common interest in encouraging the expansion and facilitation of wind, solar, energy storage, and electric transmission in the United States. ACP is the voice of companies from across the clean power sector that are powering America's future and providing cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the U.S. economy, and driving high-tech innovation across the nation.

ACE NY, NYOWA, United, NRDC and the ACP are referred to collectively in these comments as "we," or "our." Our detailed comments follow.

III. DISCUSSION OF THE REVISED CGPP

As noted in our previous comments³ in this docket, transmission deployment is lagging the development of renewable generation resources and the Commission needs to consider adopting

³ *Comments on Implementation of the Transmission Portions of the Accelerated Renewable Energy Growth and Community Benefit Act*, Alliance for Clean Energy New York, February 27, 2023, Case 20-E-0197.

a ‘transmission first,’ philosophy. The approval of Areas of Concern (“AOC”) upgrades via the Commission’s *Order Approving Phase 2 Areas of Concern Transmission Upgrades*⁴ (“AOC Order”) is a good first step in enabling integration of near-term CLCPA resources in designated Areas of Concern, but more transmission is needed for the state to reach its CLCPA goals. Further, transmission also needs to be built to address the retirement of older fossil generation units and to serve load growth resulting from the electrification of the heating and transportation sectors.

Thus, the speed of transmission deployment in the State needs to be accelerated. If not, renewable energy projects will be delayed, leading to the State not complying with the CLCPA mandates. With increased uncertainty associated with transmission availability and concomitant potential for curtailment of renewable generation resources and/or low energy market prices for the renewable generators, the renewable developers will increase their renewable energy credit (“REC”) bids, leading to increased costs to NYSEDA, and thereby to ratepayers. The CGPP process is a critical tool for meeting these transmission needs strategically and cost-effectively.

Our organizations urge the Commission to approve the CGPP proposed by the utilities in a timely manner, but with the following important modifications:

1) REDUCE THE CGPP CYCLE FROM PROPOSED 3 YEARS TO 2 YEARS.

The utilities’ proposed revised CGPP (also referred to as “the Proposal” in this document), filed December 27, 2022, envisions a two-year study process for the utilities and an additional year for the Commission to make decisions. The proposal states: “The CGPP is envisioned to be a repeating 3-year process with approximately two years for a system study followed by Commission review.”⁵

ACE NY, United, NYOWA, and NRDC strongly recommend that the utility study process be shortened to 18 months (*e.g.*, by reducing the length of several stages such as the 12-month stage 3 local assessment) and the Commission approval process to a 6-month period, for a total of two years. Three years is too long of a cycle and will delay the implementation of renewable energy projects and the uncertainty in the timing of transmission development adds to the risk of renewable resource developers. As seen with the AOC projects that the Commission recently approved in the AOC Order,⁶ the in-service dates for many AOC upgrades span over many years,

⁴ New York Public Service Commission, *Order Approving Phase 2 Areas of Concern Transmission Upgrades*, February 16, 2023, Case 21-E-0197.

⁵ Revised CGPP Proposal, Page 5.

⁶ New York State Public Service Commission, *Order Approving Phase 2 Areas of Concern Transmission Upgrades*, February 16, 2023, Case 20-E-0197.

with congestion relief not fully achieved until all the upgrades are in place. The timely identification of future transmission needs is thus required to bring transmission upgrades into service before material congestion and curtailment of CLCPA resources happen.

The *2021-2040 System and Resource Outlook: A Report from the New York Independent System Operator* (“NYISO Outlook”) and the PPTN processes are also on a two-year cycle. If the CGPP was a two-year process, the NYISO Outlook could be completed at the same time as the CGPP study, enabling timely evaluation of both local and bulk systems with the latest topology of the NY grid.

We believe six months is reasonable for the Commission review. By the end of the CGPP cycle, the Commission staff will be well informed of the assumptions, constraints and solutions identified within the CGPP as staff will be actively participating in the study review across the multiple stages of the CGPP process.

We appreciate the fact that the utilities will be utilizing the new capacity expansion modeling in the CGPP that may involve a learning curve and require more time for them to do the studies, and that long-term power flow modeling is time and resource intensive. We urge the utilities to engage necessary consultants and work with the NYISO closely as it has gone through this exercise already to help reduce the study time needed. This issue is discussed further later in this document.

If the Commission moves forward with the approval of the CGPP with a 2-year study cycle, the Commission should require the utilities to submit a report at the end of the first CGPP cycle to identify future opportunities for shortening the study cycle. In any case, we urge that the Commission’s review of CGPP results does not take longer than 6 months.

2) REQUIRE THE DEVELOPMENT OF BULK POWER SOLUTIONS.

a) The Need to Consider High Voltage or Bulk Power Solutions in Concert with Local Solutions:

In developing transmission solutions, the utilities currently focus their attention on proposing mostly low voltage upgrades as local transmission projects.⁷ The NYISO identifies potential congested paths as part of its planning process but does not propose or recommend solutions, including at the bulk level, to the Commission. Thus, there is no obligation on any entity in the State to propose high-voltage or bulk power solutions unless a PPTN is triggered by the Commission.

The proposed CGPP process is overly limited in recommending when a PPTN would be triggered in the CGPP process and does not explicitly affirm that high-voltage or bulk power solutions can

⁷ Con Edison is generally an exception.

be proposed as local transmission projects. As has been acknowledged by many parties in various comments before the Commission, high-voltage or bulk power transmission solutions need to be considered alongside low-voltage transmission solutions to identify the optimal mix of grid upgrades. If exclusively low-voltage solutions are pursued by the utilities, the solutions may not be optimal or on par with long term CLCPA goals, and consumers could ultimately be paying a higher cost than necessary.

There are two overarching reasons for expanding the CGPP process to enable broader evaluation of high-voltage or bulk power solutions: (1) local limitations could have a high-voltage or bulk power solution that provides more benefits to the system and ratepayers over the short, medium, or longer term; and (2) any high-voltage or bulk limitations that could arise following the placement in-service of local upgrades should be evaluated concomitantly for an integrated solution or, at a minimum, trigger a quasi-automatic PPTN declaration for such limitations to be addressed. Local solutions should therefore be allowed to include both low-voltage and high-voltage or bulk power solutions to address congestion intra-zone and enable clean energy integration on par with legislated CLCPA mandates. This would be in addition to the inter-zonal “pipe” evaluation as currently proposed in the CGPP, and which could result in a PPTN consideration for inter-zonal bulk power transmission expansion.

b) Criteria for Triggering Evaluation of High Voltage or Bulk Power Solutions:

In their proposal, the utilities state that the CGPP will “identify opportunities for expansion of the bulk transmission system to advance CLCPA objectives. This will inform the Commission’s consideration of whether to establish a Public Policy Transmission Need (PPTN),”⁸ and that “the capacity expansion modeling simulations will include existing limits on the bulk system’s capability to transfer power between NYCA zones. To the extent that the bulk system transfer limits appear to be restricting the economic build-out of renewable generation, the Energy Policy Planning Advisory Council (EPPAC) may request that the Utilities perform sensitivity analysis to evaluate the effect of relaxing this bulk transfer limit. The results of this sensitivity analysis—with other assumptions held constant—may inform the need to consider expansion of the bulk system.”⁹ The inter-zone evaluation is an improvement from the initial CGPP proposal which had no bulk consideration. We welcome this expansion but request that NYISO affirm the timelines presented in the CGPP process that includes evaluation of bulk scenarios by stage 5.

Furthermore, we recommend the adoption of certain criteria (*e.g.*, reduction in curtailment levels of CLCPA resources; a particular level of overloading of constrained local or bulk facilities;

⁸ Revised CGPP Proposal, Page 5

⁹ Revised CGPP Proposal, Page 18

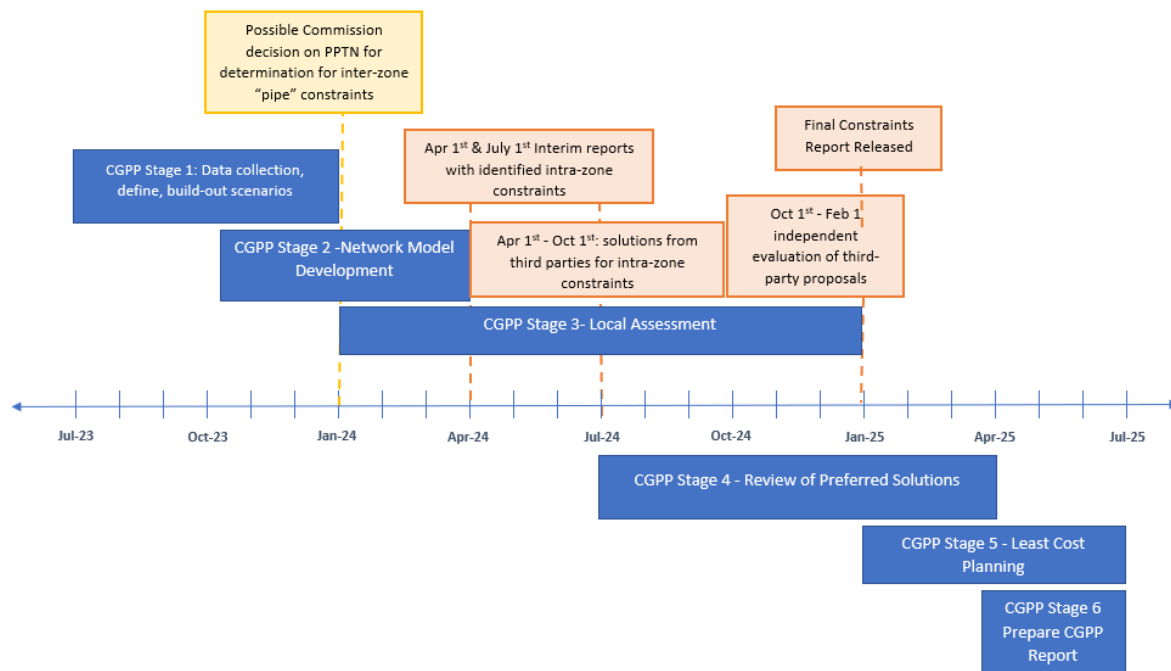
greenhouse gas emission reductions) or sensitivities that represent an objective approach to evaluating the need for high-voltage or bulk power solutions, especially to help resolve disagreements within EPPAC on whether there is a case to be made for a PPTN need for a high-voltage or bulk power solution to be considered for intra-zone constraints. For instance, for loading criteria for triggering a high voltage or bulk solution evaluation in the CGPP process, the criteria could be that there are observed thermal overloads on: (1) three or more 115 kV transmission lines; (2) two or more 230 kV transmission lines; or (3) one or more 345 kV transmission lines – with such facilities, if more than one, located within electrical proximity of each other. The EPPAC should also have the right to request additional sensitivities to inform a PPTN or high-voltage solution consideration.

c) Allow Third Parties to Propose High Voltage or Bulk Power Solutions in Stage 3:

Utilities note that the CGPP report will identify any bulk limitations identified across different stages of the CGPP. However, their proposal seems to be overly limiting their consideration of bulk power solutions to inter-zonal transmission needs. While these types of needs are important, and can be readily identified and proposed for a PPTN in Stage 1, there are many other needs, such as multiple overloads in a single zone identified in Stage 3, that might be better addressed by high voltage or bulk power solutions or a hybrid solutions that also warrant consideration of bulk solutions or a PPTN. Failure to address bulk limitations could ultimately reduce the value of any CGPP transmission solution and increase costs to ratepayers. A broader evaluation of solutions should also be achieved by expanding the CGPP process to enable third party proposals to be submitted and evaluated by an independent entity or via a PPTN process provided it can be run in parallel to the CGPP process to allow comparison of all solutions as part of the Stage 5 of the CGPP process.

Our organizations have developed the figure below to illustrate our recommendation. As shown, the CGPP should include a component whereby a third-party could identify and propose transmission solutions (beyond these proposed by the utilities) in Stage 3, likely with a high-voltage or bulk component for intra-zonal constraints. If any such solutions are proposed, the NYISO or a qualified third-party evaluator would assess all proposed solutions to preserve neutrality and confidentiality of the proposals. Such component would be kicked off as part of CGPP Stage 3: Local Assessment following interim reports by local utilities of identified local constraints with priority given to constraints meeting the loading criteria defined above. As illustrated in the figure below, such an interim report would be released by April 1st and July 1st of year 1 with a final report to be released by the end of Stage 3; while solutions by third parties would be submitted through October of year 1. A third-party evaluator or NYISO would then evaluate such proposals from October 1st through February 1st of year 2, when CGPP Stage 5 commences.

If projects proposed by third parties are ultimately chosen by the Commission as the preferred solution, the Commission should determine an approach for cost recovery for such projects. For example, the Commission already approved the Cost Recovery and Sharing Agreement for the recovery of certain utility developed transmission related costs through the NYISO tariff on a Statewide basis. A similar approach can be considered here.



d) Utilize NYPA “Priority Project” Authority to Address High Voltage or Bulk Solutions

High voltage or bulk solutions for both inter or intra-zone constraints should also be allowed to be proposed using NYPA authority under the AREGBA. NYPA ‘priority projects’ should be proposed and compared as part of stage 5 of the CGPP. NYPA should also be encouraged to propose priority projects outside the CGPP for bulk needs for any constraints identified in the CGPP that may warrant a bulk power or high voltage solution.

e) Comparing Local and Bulk Power Solutions in Stage 5:

The CGPP proposal suggests utilities would compare local projects with “any viable and sufficient bulk projects that are identified from the PPTN process.”¹⁰ It is critical that the CGPP include clear and detailed descriptions of what is needed by utilities for the objective evaluation of such bulk projects identified from the PPTN process given potential fair competition concerns. Furthermore, if such bulk projects are being represented at a high level (based on the improvement in the inter-zone transfer capacity and cost), proponents of such solutions should maintain the right to represent additional benefits the transmission project might offer. The same third-party evaluator used for evaluation of any third-party proposal should be part of stage 5 assessments for representation of third party solutions.

f) Expand the Scope of Application of Least Cost Criteria:

The utilities recommend using “least cost” solutions in their proposal. While it is appealing, we recommend additional criteria be used for evaluation of transmission solutions. The least cost criteria will not always result in the most efficient and cost-effective investment. The present PPTN process considers additional values, or benefits, that include flexibility, expandability, and operability to ensure such significant investment can withstand the test of time with the evolution and growth of our clean energy grid. Enabling consideration of higher value solutions could avoid unnecessary and short-sighted transmission investment. Also, the CGPP should assess constructability and outage schedule, which could be a big consideration where rebuild solutions will likely cause significant curtailment due to extensive outages during construction, where bulk solutions could minimize this extensively.

3) EXPAND THE SCOPE AND MEMBERSHIP OF THE ENERGY POLICY PLANNING ADVISORY COUNCIL (EPPAC).

We agree with the role assigned to DPS staff to provide guidance and, as necessary, undertake an arbitration role if there are disagreements within the EPPAC. Similarly, we agree that DPS staff, or a consultant selected by NYSERDA and DPS, should host and coordinate the committee. We recommend that the EPPAC be also given the authority to create any ad-hoc subcommittee or organize technical conferences for more in-depth discussions and due-diligence of assumptions or system trends that might benefit from broader expert-level insights from outside of EPPAC. Such

¹⁰ Revised CGPP Proposal, Page 34.

opportunities for creation of working groups would allow for in-depth discussions and ultimately minimize risks that opposing views paralyze the process with arbitration by DPS staff required.

Furthermore, in addition to the three build-out scenarios, the EPPAC should be allowed to provide input on how the generation build-out assumptions will be mapped into a nodal renewable generation representation. The proposed CGPP notes that, “This nodal model will include generation interconnection locations and unit-specific technical specifications. The Utilities will model DER on the distribution system assumed in each scenario as load modifiers placed in suitable and logical locations” and that, “during the first CGPP iteration, the Utilities will 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 EPPAC. This methodology will be updated in future CGPP cycles, as necessary.”¹¹

Any methodology for nodal generation mapping should benefit from stakeholder feedback, given that planning outcomes can be materially driven by what assumptions are being made about injection locations for DER and large scale CLCPA resources and there is varying degree of uncertainty based on where these generation resources are in their development phase.

Second, our organizations have some recommendations with respect to participation in the EPPAC. The Alliance for Clean Energy would like to have a representative on the EPPAC, as would the New York Offshore Wind Alliance, given that different transmission issues are critical to offshore wind versus other (mostly upstate) wind, solar, and storage projects. Second, the Alliance for Clean Energy New York, while it does have member companies engaged in competitive transmission, does not include competitive transmission in our mission per se. Our interest is primarily in renewables deployment and in the best and most cost-effective approaches to bringing forth transmission and distribution system investments that will facilitate renewables and energy storage deployment. Therefore, the Alliance for Clean Energy should not be viewed as the entity representing transmission developers on the EPPAC.

4. MODIFY ANALYSIS ASSUMPTIONS TO REFLECT CLCPA MANDATES.

- a) Require Inclusion of Generation and Electrification Levels in the CGPP Evaluation on Par with the Achievement of CLCPA Targets:**

¹¹ Revised CGPP Proposal, Page 23.

The purpose of the CGPP is to identify upgrades required for meeting the CLCPA mandates. Therefore, the renewable build out assumed in the CGPP analysis should be on par with the electrification necessary to achieve these mandates and aligned as much as possible with the NYISO *Resources and System Outlook* policy scenarios. Unfortunately, the assumptions used by the utilities in the development of transmission projects to address the constraints in the AOC were too conservative and not aligned with CLCPA mandates. For example, in its AOC Order, the Commission acknowledged,

“the generation growth assumed as the foundation for the Sponsoring Utilities’ determination of the Near-Term CLCPA Need is a conservative basis upon which to propose local transmission solutions.”

The AOC Order identified a need for over 7,000 MW of new renewable capacity¹² while saying,

“the AOC Projects authorized for development would add a total of 3,429 MW of capacity headroom in these regions by 2030.”¹³

Furthermore, as recognized in the CGPP proposal, distributed resources are a big component of the future clean energy mix and need to be properly accounted for within the CGPP process for an integrated distribution and local transmission planning. DER deployment has accelerated and any mismatch between the transmission capacity of the local system and the cumulative flows from both DER and large-scale renewables on that system would result in the curtailment of large-scale renewables, since DERs cannot be curtailed. Given lower lead times for DER development compared to lead time of grid upgrades and large-scale renewables, stress analyses should be conducted to determine the appropriate amount of DER resources and identify both local transmission and distribution upgrade needs in a timely fashion.

The CGPP should use assumptions consistent with the Climate Action Council’s Final Scoping Plan,¹⁴ which finds that, to meet the CLCPA’s greenhouse gas emission reduction mandates, “[b]y 2050, across all modeled pathways, New York will install over 60 GW of solar capacity (both utility-scale and distributed resources), between 16-17 GW of new land-based wind capacity (including imported wind from neighboring ISOs), and between 16-19 GW of offshore wind resources.”¹⁵

b) Require 100% Dispatch Solution Based On 100% Dispatch Assumption

¹² AOC Order, Page 26

¹³ AOC Order, Page 25

¹⁴ New York State Climate Action Council, *Climate Scoping Plan*, December 2022. See <https://climate.ny.gov/resources/scoping-plan/>

¹⁵ Final Climate Action Council Scoping Plan at 221 (2022)

The CGPP proposal notes that a 100% dispatch assumption will be used for renewables, stating: “To identify local system constraints, all renewable generation within each local pocket, or regionally as required, would be simultaneously dispatched to 100% of nameplate capability and offset by an associated reduction in generation outside of the study area, starting with fossil resources.”¹⁶ We agree with the use of a 100% dispatch assumption for renewable generation within an area and also recommend that local transmission upgrades be proposed for a no curtailment (100% dispatch) case. In contrast, the analysis conducted for selection of the AOC projects included a 70% dispatch solution in the Southern Tier. In the AOC Order, the Commission stated its rationale for selecting the Limited Curtailment option as:

“We find that the Limited Curtailment option is reasonable and appropriate for several reasons. First, as demonstrated in the Appendix, this option has the lowest per unit cost of incremental headroom. Second, the upgrades provide a sizeable surplus of headroom above the Near-Term CLCPA Need and thus should accommodate additional renewable development, depending on future generation siting locations. In contrast to the Northern New York areas, the updated generation growth projection for this region does not significantly exceed the Long-Term potential identified in the Petition, and thus the No Curtailment Option would present a higher risk of over building.”¹⁷

However, such dispatch levels imply a material level of curtailment of CLCPA resources if all the assumed resources come online, due to unrelieved constraints in the area. For instance, in the Southern Tier AOC projects, a highly overloaded line remains un-addressed, the Meyer to Moraine to Bennett 115kV, which will result in material curtailment of CLCPA resources on that circuit when contracted Tier 1 and Tier 4 resources are built. Upgrades must be sized to enable integration of existing renewable resources, all contracted Tier 1 and Tier 4 resources, and all additional resources needed to achieve CLCPA mandates.

Limited curtailment upgrade scenarios assuming 70% dispatch would generally result in untenable curtailment levels for many or most new wind and solar projects in an area, putting their successful development and operation at risk. A wind or solar project required by the CLCPA project will likely not be able to secure financing if studies show material curtailment levels. In general, any curtailment higher than 2-3% must be considered material; certainly, curtailment levels above 10% would jeopardize successful completion of contracted resources and increase the bid REC prices for future resources who need to account for the higher congestion/curtailment risk if upgrades are not designed for 100% dispatch. While some diversification is expected and normal across generation profiles and types within a specific area, there is still a high number of hours when cumulative regional output is above 70% of nameplate capacity of resources. Furthermore,

¹⁶ Proposal page 25-26

¹⁷ February 16, 2023, PSC Order APPROVING PHASE 2 AREAS OF CONCERN TRANSMISSION UPGRADES - page 35

a limited curtailment solution would also put the area at higher risk of overloads in the area's transmission system if distributed energy resources were to come online faster or in higher amounts than assumed in studies. This was well acknowledged in the National Grid Phase 2 AOC filing, which stated, "Because energy produced from DER can directly change available transmission capability (e.g., less load to be served direct from utility scale solar or DER production exceeding the associated load), DER is expected to have a similar impact as the generation directly connected to the transmission system and would benefit from the same projects identified as necessary to unbottle the region."¹⁸

5. PROVIDE OPPORTUNITIES FOR EXPEDITED TRANSMISSION PROPOSALS.

If there is a demonstrated need that local infrastructure expansion is immediately required, utilities should be allowed to submit an out-of-cycle filing for approval of upgrades deemed necessary to support CLCPA integration. This can be, for instance, as result of DER or existing/contracted Tier 1 and 4 wind and solar development that might be different to prior buildout assumptions. Utilities should be allowed to propose local transmission projects at any time as opposed to waiting for the 3-year CGPP cycle to be finalized. This would be akin to the March 2023 filing by local utilities,¹⁹ (the New York Utilities' Capacity Expansion Analysis of Phase 2 Local Transmission & Distribution Project Proposals).

Such filing and analysis could occur on as-needed basis if, for instance, the amount renewable resources (including existing and planned DER, plus existing and planned/contracted Tier 1 and Tier 4 resources) is above an area's transmission system capacity and either (1) such overloads have not been identified already in the last Stage 3 local assessment or (2) the demonstrated need has a "no-regret" transmission solution. In this case, waiting for the CGPP process to run for another 3 years would result in upgrades being identified too late and extreme levels of congestion that would put the development or operation of CLCPA resources at risk. Furthermore, accelerated needs could also be based on NYISO's studies showing new areas of concern for which solutions need to be proposed on an accelerated basis.

6. USE CGPP STUDY RESULTS ALIGNED WITH CLCPA TARGETS TO SET AVOIDED COSTS FOR DER EVALUATION.

¹⁸Attachment B, Area of Concern Congestion Assessments, March 2022, page 8.

¹⁹ *New York Utilities' Capacity Expansion Analysis of Phase 2 Local Transmission & Distribution Project Proposals*, March 3, 2023, Case 20-E-0197.

Comprehensive, time-varying avoided costs are critical in regions with clean energy policies and high renewable penetration, because the value of avoided energy, capacity, and emissions vary significantly with time. Aligning the CGPP study with achievement of CLCPA targets will internalize the cost of policy compliance in a manner that can help establish more accurate and comprehensive avoided costs for DER cost effectiveness evaluation. Using CGPP study outputs aligned with the achievement of CLCPA targets to set time-varying avoided costs enables DER solutions to be considered on an even playing field with local and bulk transmission solutions and hedges against costly overreliance on transmission upgrades to achieve CLCPA targets because as grid upgrade costs increase, so do the avoided cost that justify increased DERs penetration to optimally complement traditional infrastructure solutions.

7. THE CGPP PROCESS SHOULD COORDINATE WITH GAS SYSTEM PLANNING.

The clean energy transitions of the utility gas system and electric system are inextricably linked and thus should be planned together. According to the Climate Scoping Plan, “All the information before the Climate Action Council indicates that achievement of the emission limits will entail a substantial reduction of fossil natural gas use and strategic downsizing and decarbonization of the gas system.”²⁰ The Plan’s integration analysis identified the vast majority of current fossil natural gas customers (residential, commercial, and industrial) will transition to electricity by 2050 and identified fossil natural gas use reductions statewide by at least 33% by 2030 and by 57% by 2035.²¹ The Scoping Plan thus calls for a well-planned and strategic downsizing of the gas system.²² The transition of the gas system has significant, location-specific implications for electric grid upgrades that require electric and gas system planning to be closely coordinated.

The Commission should require that the CPGG consider electric and gas consumption, technology options, prices, and sales in an integrated manner.²³ Each gas utility has a different relationship with the electric utility or utilities that serve its customers. In some cases, the utilities are part of the same corporate entity, in other cases not. The GCPP should incorporate and reflect each utility’s situation and demonstrate how the utilities are working together.²⁴

²⁰ New York State Climate Scoping Plan, Page 350.

²¹ *Id.*

²² *Id.*

²³ Asa Hopkins, PhD, Alice Napoleon, Kenji Takahashi, *Gas Regulation for a Decarbonized New York: Recommendations for Updating New York Gas Utility Regulation*, Synapse Energy Economics, June 29, 2020. <https://documents.dps.ny.gov/public/MatterManagement/MatterFilingItem.aspx?FilingSeq=248440&MatterSeq=62227>.

²⁴ *Id.*

8. ENSURE CGPP PRODUCES INFORMATION TO EVALUATE SOCIAL EQUITY IMPACTS.

The CGPP should include a process to produce the information necessary to enable a holistic evaluation of equity impacts of the alternative grid solutions identified through capacity expansion modeling. Many equity impacts are difficult to accurately capture in a quantitative model based primarily on metrics like dollar values and greenhouse gas emissions. Given the complexity of the larger capacity expansion model, using imprecise or speculative quantitative metrics of social equity goals could be ineffective or even counterproductive. But even where they do not fit well within the model, equity impacts of potential grid solutions should be measured quantitatively in a way that is fair and objectively quantifiable to inform the best solutions for achieving state policy. Whenever possible, the equity impacts need to be evaluated early in the process; timely consideration allows greater input and can help avoid potential late-stage conflicts. The modeling and quantitative equity information should then inform a holistic discussion of the alternative viable solutions for their equity contributions and characteristics. Moreover, from a procedural standpoint, having a separate, social equity-focused stage of review can allow for greater transparency as to how that review is conducted. Having a social equity-focused review stage where community groups and advocates can voice their priorities would best facilitate the full consideration of the different needs and opinions that could inform siting of these projects.

9. CONSIDER GRID ENHANCING TECHNOLOGIES AND STORAGE AS A TRANSMISSION ASSET IN THE CGPP.

It is encouraging that the CGPP proposal identifies the opportunity for non-wires alternatives (NWA) and grid enhancing technologies (GET), stating,

“In accordance with the Phase 1 and Phase 2 Orders, Utilities will consider the sufficiency of advanced technologies and NWA solutions that may be suitable for mitigating CLCPA needs. The Utilities will evaluate NWA and advanced technology opportunities within CGPP Stage 3 prior to identifying the preferred solution to system constraints. If, based on the application of NWA suitability criteria, the Utilities determine that an NWA is not suitable for a particular CLCPA need, then no NWA solution will be developed for consideration in later stages. The Utilities will solicit the advice of the ATWG concerning the consideration of NWA and advanced technologies as solution opportunities.”²⁵

In addition to any solutions identified by local utilities, we recommend that the Commission allows for third party proposals for GETs/NWA if such solutions are pre-identified as promising ways to

²⁵ Revised CGPP Proposal, Page 29.

address congestion either in complement with or pending traditional upgrades. Solutions could be proposed following an initial report of identified local constraints during Stage 3, for inclusion in the Stage 4 Review of Preferred Solutions.

The Commission should place greater emphasis on the integration of GETs, where feasible, including but not limited to high-capacity advanced conductors, compact tower designs, power flow controllers, and dynamic line ratings in its grid planning processes – as alternative or bridge solutions to addressing system congestion and curtailment of CLCPA resources. These GET technologies can help integrate significant renewable resources by using capacity on existing transmission lines while needed new transmission is being built. As examples of the benefits that GETs provide, line ratings (DLR) and advanced power flow control (APFC) devices offer transmission providers the opportunity to do more with existing or proposed infrastructure. These technologies provide customers with more efficient and cost-effective solutions while maximizing limited rights-of-way and potentially avoiding or minimizing environmental and property impacts that can bog down siting and permitting proceedings. APFCs also have diverse applications due to their modularity, redeployment capabilities, substation placement flexibility, their capacitive and inductive capabilities, and their cost effectiveness relative to other solutions. Many DLR systems are also modular and can be utilized for the period that the DLR is beneficial before being redeployed on another line or network area. A line that meets DLR requirements today can later be re-conducted or complemented by the construction of additional transmission lines to permanently increase capacity. Advanced conductors, such as carbon core conductors (TS carbon core conductors and ACCC), can increase a line rating by approximately two-fold without the need to replace structures or acquire a new right of way.²⁶ In this way, DLRs and advanced conductors can complement transmission enhancements and expansion. Ultimately, GETs like APFC and DLR provide an opportunity for enhanced grid efficiency by helping to minimize curtailments of zero marginal cost resources, like wind and solar, while minimizing congestion costs borne by consumers. APFC and DLR further provide an opportunity for enhanced grid efficiency by helping to mitigate curtailment and congestion caused by ambient conditions such as wind, which helps avoid transmission losses at times of high resource demand.

Published in February 2021, a Brattle Group study further illustrated the potential of GETs for both grid reliability and the energy transition.²⁷ Using the Southwest Power Pool (SPP) grid as a case study, researchers quantified the combined benefits of APFCs, DLRs, and topology optimization (which automatically identifies reconfigurations to re-route power flow around congested or

²⁶ ACCC conductor carbon/glass fiber core embedded in epoxy matrix: <https://ctcglobal.com/accc-conductor/>
TS Conductor | The Future of Energy Delivery: <https://tsconductor.com/>

²⁷ The Brattle Group, February 1, 2021, *Unlocking the Queue with Grid Enhancing Technologies*. [See https://watt-transmission.org/wp-content/uploads/2021/02/Brattle_Unlocking-the-Queue-with-Grid-Enhancing-Technologies_Final-Report_Public-Version.pdf90.pdf]

overloaded facilities while also meeting reliability criteria) for the integration of renewable resources, with an emphasis on added capacity, economic impacts, and carbon emissions reductions. The study found that GETs enable the integration of over twice the amount of additional renewables as compared to the baseline scenario (2,580 MW in the base case and 5,250 MW in the GETs case). Further, the GETs scenario yields an estimated annual production cost savings of \$175 million, assuming a conservative \$20/MWh savings for 8,776 GWh of energy. Finally, the GETs scenario was associated with the creation of roughly 12,000 jobs, and a reduction of over 3 million tons of carbon per year.

The PSC should therefore prioritize evaluation of the myriad benefits of these advanced technologies and give preference to transmission proposals or scenarios that incorporate these GETs as part of a comprehensive transmission plan if such solutions are identified as most robust and cost-effective for the system.

Similarly, storage as a transmission asset should be considered in the CGPP.

Storage is a unique asset that can provide least-cost reliability and a market solution in wholesale markets.²⁸ This is due to its unique capability to provide transmission and generation services (dual-use storage) to the interconnecting system. The deployment of storage is relatively faster than for transmission lines which take 5 to 10 years considering siting, permits, procurement, and installation of equipment. As a dual-use resource, storage is a fast-responding resource which can play a key role in mitigating the reliability impacts and supporting operations.

Specifically, storage assets are modular and flexible, highly responsive, efficient, compact, comparatively easy to site, and cost-effective.²⁹ In some cases, energy storage can optimize transmission buildout or more efficiently meet transmission needs where a traditional transmission solution may not be possible or may be exceedingly difficult given local conditions.

The benefits of such a framework can be seen in markets both across the U.S. and internationally, where the ability of storage to meet identified transmission needs while providing significant cost savings, as compared to wires solutions, is evident. For example, in its 2020 transmission expansion plan, the Midcontinent Independent System Operator (“MISO”) selected a \$8.1 million, 2.5MW/5 MWh battery to “improve customer reliability,” that project was more cost-effective than the alternative of rebuilding double 115 kV transmission lines for \$11.3 million.³⁰

²⁸ WECC published the following white paper proposing the dual-use storage in their region.
<https://www.wecc.org/Administrative/Energy%20Storage%20Services%20White%20Paper.pdf>

²⁹ See (7- See, e.g., *Western Grid Development, LLC* 130 FERC ¶ 61,056 (2010)

³⁰ See Quanta Technology, “Storage as Transmission Asset Market Study” (January 2023), *available at* https://cdn.ymaws.com/ny-best.org/resource/resmgr/reports/SA T A_White_Paper_Final_01092.pdf

Like GETs, storage should be provided full consideration in the CGPP.

10. THE CGPP SHOULD INCORPORATE FLEXIBILITY, MULTI-VALUE BENEFITS, THE OPTION OF CONSULTING SUPPORT, ONCE-PER-YEAR HEADROOM ASSESSMENTS, REGULAR REPORTING, STAKEHOLDER ACCESS TO UTILITY MODELS, AND TRANSPARENCY WITH RESPECT TO CONSTRUCTION OUTAGES.

In this section, we include some other characteristics of the CGPP that our organizations feel are positive. They are:

Flexibility. The CGPP Proposal states that “the Utilities emphasize the value of informed stakeholder input and the incorporation of lessons learned through experience at each stage of the CGPP.”³¹ Accordingly, we recommend that the Commission allow for flexibility in the CGPP as per the utility proposal given the novelty of the process, the myriad of assumptions required for robust long-term modeling, the importance of lessons learned, and the need to incorporate improvements on an ongoing basis. The CGPP should embed enough flexibility for such a “first of a kind” process to be completed successfully. If changes are being proposed, discussed, and approved within the EPPAC forum, and they do not represent material changes to the core elements of a Commission-approved CGPP design, these changes should be made.

Multi-value. We agree with the CGPP proposal that transmission projects can offer multi-value benefits including CLCPA integration, reliability, replacement of aging infrastructure, and resilience. Flexibility should be allowed in evaluating and proposing such multi-value transmission projects. We support the utilities’ request that “the Commission direct the Utilities to develop a process for taking these timing needs into account.”³²

Consultants. The CGPP proposal identifies opportunity for support from consultants: “The Utilities expect that certain stages of the first CGPP cycle will require external analytic support from one or more qualified technical consultants selected by the Utilities in consultation with DPS Staff and NYSERDA. The Utilities expect that the NYISO will support these analyses in future CGPP cycles, provided it is able to secure the necessary resources. If resource constraints prohibit the NYISO from being able to complete the requisite analyses, the Utilities may continue to rely on a consultant for analytic support.”³³ We recommend that the NYISO undertake an evaluation of resources required to support such important transmission planning process that would benefit from coordination and alignment with as many NYISO assumptions, models, and data as possible. If NYISO cannot dedicate resources to this process, we agree with the need for external

³¹ Proposal Page 2

³² Revised CGPP Proposal, Page 28.

³³ Revised CGPP Proposal, Page 14.

consultants to appropriately support the CCPP given the extent of technical and niche expertise required to undertake capacity expansion modeling and power flow modeling for a 40-year planning horizon.

Headroom Calculations. The CGPP proposal states that the headroom estimates might no longer be provided every six-month as is the case now: “In lieu of the existing interim requirement to assess both capacity and energy headroom every six months, the Utilities will include headroom assessments as part of the CGPP cycle. The capacity and energy headroom assessments will identify the headroom available on the existing system and the additional capacity and energy headroom that would be created by the identified solutions to the local system constraints. The headroom available on the existing system, as well as the new headroom created by proposed projects, are important inputs for CGPP Stage 5, the Least Cost Planning Assessment.”³⁴ We disagree. We recommend that the headroom estimates be calculated and provided at a minimum once per year, and before each NYSERDA RFP. Headroom estimates provide transparency on available transmission capacity data across a large set of grid locations under specific assumptions documented with each calculation and as part of the Commission-approved methodology. Such estimates provide value and transparency on grid capacities across a wide range of stakeholders for development, siting, and procurement decisions, and can easily get out of date with additional Tier 1 and 4 awards, or development of distributed energy resources. The headroom estimates would not be as valuable and accurate if updated only every 3 years as opposed to every 6 to 12 months.

Regular Reporting. Like the Commission requirement for the approved AOC projects, utilities should be required to file a report regularly with the Commission with progress updates for all CGPP-approved upgrades.

Access to detailed topology/models. The CGPP should include a process whereby another party with valid need for access to the detailed utility models can obtain such access under proper Critical Energy/Electric Infrastructure Information (CEII) guidelines.

Construction Outages. There are over 80 major transmission upgrades expected (from rate cases, Phase 1, Areas of Concern, Tier 4, and PPTN). Most of these major infrastructure projects will require significant multi-year outages for extended durations. Is it critical for the forecast of construction outages to be periodically shared by the utilities as part of the CGPP or semi-annual updates to the Commission. This will help renewable developers better align generator construction timelines with nearby transmission upgrade timeline to minimize any potential delays or redundant outages.

³⁴ Revised CGPP Proposal. Page 28.

IV. CONCLUSION

ACE NY, NYOWA, United, NRDC and ACP appreciate the opportunity to respond to the February 6th *Notice Seeking Comments* issued in this proceeding. In these Comments, we have attempted to explain each of the modifications to the Utilities' revised CGPP proposal that our organizations recommend. Chief among these recommendations is the need to better integrate timely exploration of bulk system transmission upgrades into the CGPP. We also highlight that the assumptions used for the level of renewable deployment should match with the legal requirements of the CLCPA, and the fact that these resources should not be materially curtailed.

We appreciate that since the passage of the Accelerated Renewable Energy Growth and Community Benefit Act, the Commission has had a renewed focus on transmission planning. An important part of this effort has been the design of the CGPP; the planning process design has improved over time. Our organizations believe the CGPP should be timely approved, but with the modifications we have described herein. We fully expect the CGPP to be a critical tool in New York's ongoing transition to a grid that is emissions-free. We hope that the utilities and other stakeholders can embark on this planning process beginning in the third quarter of 2023 so that NYS's grid can begin to benefit from this planning, analysis, and new investment.