



**COMMENTS ON THE PETITION OF CENTRAL HUDSON GAS & ELECTRIC CORPORATION, NEW YORK STATE ELECTRIC & GAS CORPORATION, NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID, and ROCHESTER GAS and ELECTRIC CORPORATION; IDENTIFYING AREA OF CONCERN NEEDS AND RECOMMENDED SOLUTIONS**

**SUBMITTED BY THE ALLIANCE FOR CLEAN ENERGY NEW YORK**

**May 31, 2022  
CASE 20-E-0197**

## **I. SUMMARY**

In response to the *Notice Soliciting Comments* issued by New York’s Public Service Commission (“Commission”) on April 21, 2022 in the above-referenced proceeding, the Alliance for Clean Energy New York (“ACE NY”) is hereby submitting these comments on the utilities’ March 8, 2022, above-referenced petition to the Commission identifying Areas of Concern needs and recommended solutions, (hereinafter, the “Petition” or “Phase 2A Petition”).

ACE NY strongly recommends that the Commission approve the Phase 2A projects proposed in the Petition swiftly; develop and implement approaches to closely monitor the progress of these projects; and further analyze the projects to determine additional means to further reduce expected basis and curtailment impacts. We make further recommendations as detailed below.

In the Petition, the utilities (New York Transmission Owners, or “NYTOs”), request that the Commission authorize the development and construction of the Phase 2A projects and approve the use of regional cost allocation and recovery through the proposed New York Independent System Operator (“NYISO”) Tariff. The utilities’ Petition was made pursuant to the Commission’s *Order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals*, issued September 9, 2021 in Case 20-E-0197. As the NYTOs clearly state in the Petition, these proposed upgrades, as requested by the Commission, will deliver benefits required by New York’s Climate

Leadership and Community Protection Act (“CLCPA”). Given the magnitude of the renewable energy need, and the subsequent order by the Commission for the NYTOs to provide a comprehensive solution to the transmission constraints preventing energy deliverability, ACE NY is encouraged by both the NYTO proposed Phase 2A projects and the Commission’s determination and commitment to the goals of the CLCPA. Such commitment is essential to provide developers and financiers with the confidence to move forward with the development and construction of billions of dollars of renewable energy projects which will create jobs, provide clean power, improve the environment, provide additional revenue to farms, and ensure the sustainability of our way of life long into the future.

**ACE NY urges the Commission to approve and accelerate the Phase 2A upgrades proposed in each area of concern (“AOC”) with opportunities for redesign and optimization that would be beneficial from a ratepayer cost impact perspective and would enable additional clean energy integration.** Further, ACE NY has identified several overarching concerns for the Commission’s consideration.

- 1) ACE NY would like to emphasize that unless the transmission constraints are *confirmed to be addressed via the approval of required upgrades*, Tier 1 REC procurements will begin to see increased bid prices to account for the risk of basis and curtailment impacts resulting from a constrained transmission system, and/or in some cases the inability of some projects to commence construction until that confirmation is received. The Commission’s swift approval is crucial to the continued development and construction of renewable energy projects and the compliance with the CLCPA.
- 2) ACE NY member analysis using Production Cost Modeling shows that significant basis and curtailment of renewable resources, beyond the acceptable 3% that was approved by the Commission in the Tier 4 contracts, persists in both the 70% and 100% dispatch cases proposed by the NYTOs. Furthermore, it is important to realize that transmission capacity supporting dispatch levels materially below 100% of nameplate capacity will result in untenable basis and curtailment for clean energy resources. The NYTOs should provide Production Cost Modeling results to verify the ACE NY member analyses and/or provide additional options to reduce renewable energy curtailments as discussed herein.
- 3) There are execution concerns that call into question the ability for these transmission projects to be built in a timely fashion, further exacerbating the curtailment issue and the ability for the State to satisfy the CLCPA goals in the most cost-effective manner.
- 4) In addition to approving Phase 2A upgrades, the Commission should declare a public policy transmission need in in the Southern Tier now and in the other AOCs in the very near future, to allow for bulk power solutions to be proposed and selected in a competitive manner to unlock additional near-term and longer term CLCPA generation.

- 5) The Commission should consider more robust utilization of Grid Enhancing Technologies (e.g., dynamic line rating, topology optimization, advanced power flow controllers), which can lower unit transmission costs and create additional and more near-term headroom.

These articulated concerns underlie the core recommendations of these comments: that these Phase 2A projects should be approved swiftly, monitored closely, and further analyzed for additional means to further reduce expected basis and curtailment impacts. Such actions would deliver clear signals to developers and financiers to continue development efforts, reducing the Tier 1 REC bid prices, and expediting renewable development in line with the CLCPA objectives.

Below, we provide our analysis for the three AOCs: Southern Tier, Watertown Area, and Capital Region along with our specific recommendations for each.

## II. INTRODUCTION

With the Commission's Clean Energy Standard ("CES") Program underway facilitating solicitations and supporting contract awards for renewable resources under its Tier 1 program, the Department of Public Service ("DPS") staff tasked the NYISO with completing a study in 2018 to identify so-called "renewable generation pockets," *i.e.*, areas on the system where congestion caused by transmission constraints was causing, or could cause, the curtailment of renewable energy. In July 2018, the NYISO published its first analysis of the renewable generation pocket issue, broadly identifying four pockets located in western New York (Pocket W), the North Country (Pocket X2 and X3), Eastern New York (Mohawk Valley and Hudson Valley corridors, Pockets Y1 and Y2) and the Southern Tier (Pocket Z1).<sup>1</sup> Building on this work, the NYISO agreed to include a scenario in its 2019 Congestion Assessment and Resource Integration Study ("CARIS"), the 70x30 scenario, designed to provide more details to bound the energy deliverability issues that will arise as the State continues with its CES Program and other public policy efforts to implement the CLCPA mandates.

In its "CES 2.0 Order," (*i.e.*, the *Order Modifying the Clean Energy Standard* issued October 15, 2020) to enhance its CES Program to implement the CLCPA, the Commission began to acknowledge the critical need to address the energy deliverability issues to ensure Tier 1 resources that receive contract awards would be able to deliver their energy to New York consumers.<sup>2</sup> To

---

<sup>1</sup> See New York Independent System Operator, Inc., "Public Policy Transmission Needs Study: Transmission Constrained Renewable Generation Pockets" (presented to July 27, 2018 Electric System Planning Meeting), available at [https://www.nyiso.com/documents/20142/2176070/PPTN\\_genpockets\\_ESPWG\\_20180727.pdf/27ba1fee-59ed-6602-02ba-1cc7ad8ffa60](https://www.nyiso.com/documents/20142/2176070/PPTN_genpockets_ESPWG_20180727.pdf/27ba1fee-59ed-6602-02ba-1cc7ad8ffa60)

<sup>2</sup> See NYPSC Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable*

that end, the Commission directed DPS Staff and the New York State Energy Research and Development Authority (“NYSERDA”) to develop a new portfolio risk factor to analyze issues related to congestion and curtailment.<sup>3</sup> The Commission further directed NYSERDA to expressly include this factor going forward in its solicitations.<sup>4</sup>

The *Accelerated Renewable Energy and Community Benefit Act*, enacted in 2020, provided the necessary vehicle to address the deficiencies on the transmission system so that the energy deliverability issues could be effectively resolved. In connection therewith, the New York transmission owners were required to file a joint study highlighting the areas of concern on their respective transmission and distribution systems. While their study was underway, the NYISO published the 2019 CARIS Report, putting a spotlight on the renewable generation pockets which became known as the “Areas of Concern.”<sup>5</sup> The NYISO provided a detailed assessment of the specific interfaces in these renewable generation pockets where resources were already being curtailed or would face curtailment with limited incremental renewable generation added in their vicinity.

Focusing on the 2019 CARIS Study results, the NYTOs identified upgrades to resolve the deficiencies in the Areas of Concern in their Joint Transmission Study filed on November 2, 2020, characterizing them as Phase 2 projects.<sup>6</sup> The NYTOs explained that the Phase 2 projects were the subset of projects required to implement the CLCPA but that were not otherwise needed to address system needs to reliably serve customers in their service territories.

On September 9, 2021, the Commission issued the *Order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals* in Case 20-E-0197 addressing the NYTOs’ Phase 2 proposals.<sup>7</sup>

As a general matter, the Commission found that the NYTOs should incorporate their Phase 2 proposals as part of the “bottoms up” coordinated grid planning process to be undertaken by the NYTOs.<sup>8</sup> Notably, however, the Commission focused on the Areas of Concern noting that these areas had been identified by the NYTOs, the NYISO, DPS Staff, NYSERDA and commenters “as in critical need of Phase 2 local transmission investment.”<sup>9</sup>[9] The Commission further noted,

---

*Program and a Clean Energy Standard*, Order Adopting Modifications to the Clean Energy Standard, 10/15/20.

<sup>3</sup> *Id.* at 33-34.

<sup>4</sup> *Id.* at 34.

<sup>5</sup> See New York Independent System Operator, Inc., “2019 CARIS Report” (dated July, 2020), available at <https://www.nyiso.com/documents/20142/2226108/2019-CARIS-Phase1-Report-Final.pdf/bcf0ab1a-eac2-0cc3-a2d6-6f374309e961?t=1595619194867>.

<sup>6</sup> See NYPSC 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*, “Utility Transmission and Distribution Investment Working Group Report” (dated November 2, 2020).

<sup>7</sup> See NYPSC Case 20-E-0197, *supra*, Order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals (issued and effective September 9, 2021).

<sup>8</sup> *Id.* at 34.

<sup>9</sup> *Id.*

“These areas are characterized by the presence of existing renewable generation that is already experiencing curtailments and a strong level of developer interest that exceeds the capability of the local transmission system.”<sup>10</sup> Based on these facts, the Commission determined, “the problem of existing and likely future curtailments in these areas justifies an immediate effort to explore cost effective solutions.”<sup>11</sup> The Commission thus directed the affected NYTOs (Con Edison, NYSEG, Central Hudson and National Grid, hereinafter, “Affected NYTOs”) to file a petition proposing projects to resolve the constraints in the Areas of Concern. The Commission included a set of parameters that the Affected NYTOs were required to meet in their filing to recognize that proposals could have varying benefits and would need to be both adaptable and expandable to address “real-world” system expansion based on where projects were ultimately sited.<sup>12</sup>

On March 8, 2022, the Affected NYTOs jointly submitted a petition with the Commission in the power grid proceeding (i.e., 20-E-0197) proposing upgrades to address the Areas of Concern. Delineating an expansive list of the benefits that will come from the Phase 2A projects, the Affected TOs established, “These Phase 2A projects are being developed under a new paradigm of planning local transmission to achieve the State’s climate goals, and not to address specific customer or community reliability or asset condition needs.”<sup>13</sup> The Affected TOs thus sought regional cost allocation for the recovery of the costs for these upgrades, asserting the Phase 2A projects “will help to transform New York’s energy future.”<sup>14</sup>[14]

Specifically, the Affected NYTOs pointed to the large amount of capacity and energy headroom that these projects will provide which, in turn, “will allow renewable generation developers to make substantial private investment in large-scale renewables in the areas of the State that are most favorable for such development.”<sup>15</sup> Seeking Commission authorization to construct these projects, the Affected NYTOs characterized their proposals as “transformative for the generation landscape in the State,” asserting:

Given the commitments already made to renewable generation in Areas of Concern, and strong interest in the development of additional renewable energy in those areas, it is highly likely that the headroom will be utilized to benefit customers statewide by delivering clean, renewable energy, and displacing non-renewable generation. This transformative expansion of transmission capacity to enable renewables will bring substantial carbon reduction benefits to the entire State and will reduce the cost to develop and interconnect renewable energy projects in the Areas of Concern, which also benefits customers statewide who ultimately pay for the renewable generation.<sup>16</sup>

---

<sup>10</sup> *Id.*

<sup>11</sup> *Id.* at 35.

<sup>12</sup> *Id.* at 37-38.

<sup>13</sup> See NYPSC Case 20-E-0197, *supra*, “Petition of Central Hudson Gas & Electric Corporation, *et al.* Identifying Areas of Concern Needs and Recommended Solutions” (dated March 8, 2022) at 2.

<sup>14</sup> *Id.* at 3.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 30.

### III. SOUTHERN TIER AREA OF CONCERN

The Southern Tier AOC analysis included by Avangrid in its filing reconfirms the need for upgrades in the area to unlock CLCPA generation in the near-term. Indeed, the headroom analysis performed by Avangrid identifies a negative headroom capacity of 1,986 MW which could be improved to a negative capacity headroom of 1,897 MW post Phase 1 upgrades, which are still awaiting Commission approval. To address this shortfall in grid capacity relative to the near-term CLCPA generation, Avangrid proposed several upgrades. ACE NY offers the following recommendations regarding Avangrid's Southern Tier AOC upgrades.

**1) The Commission should approve Phase 2A upgrades proposed by Avangrid.**

The Commission should approve the Phase 2A upgrades proposed by Avangrid, both for their benefits in unlocking current and future renewable generation, and also because they are replacing seriously aged infrastructure. These proposed Phase 2A upgrades are “no-regrets” projects.

The CLCPA need in the Southern Tier has been identified in many studies to-date, including the NYISO CARIS study and this latest analysis from Avangrid. Any delays in the Commission's action would only push out the timing for any relief, putting at risk several operating and advanced clean energy resources due to extreme congestion levels. Furthermore, Avangrid is noting that upgrades have significant non-CLCPA benefits with “half of the 458 miles of 34.5 kV, 115 kV and 230 kV transmission lines and most of the substations being upgraded as part of the Reinforcement option will have exceeded 70 years of age and thus are expected to be at-or-approaching the end of their expected useful life.” The unlocking of the near-term CLCPA generation and the aging-infrastructure need essentially make these upgrades “no regret” solutions. It is important to highlight that the aged infrastructure will require replacements/investments by 2030, irrespective of any CLCPA need. We also note that Avangrid's analysis indicates that several of the upgrades provide reliability and resilience benefits via improvements to flood threatened transmission and distribution facilities.

**2) The Commission should require Avangrid to prioritize and accelerate the schedule of Phase 2A upgrades.**

These projects need to be completed sooner than is proposed. Many of the proposed upgrades are shown with an in-service date of 2029-2030. This means that congestion relief would only come in the region by 2030. Absent acceleration of the upgrades, the extreme congestion indicated by the Avangrid analysis – with most facilities reported to be materially overloaded – would result in significant curtailment of clean energy generators through 2030. While for operating clean energy resources, the extreme congestion could threaten the ability to sustain operations, for

advanced resources which haven't started construction yet, it will be a significant headwind for securing financing and a final investment decision, despite award of a NYSERDA contract. The Commission should require Avangrid to accelerate upgrades to be better aligned with in-service dates of future generation.

**3) The Commission should require Avangrid to identify additional upgrades that would eliminate the persistent curtailment impacts to renewables that are expected to remain, even after the Phase2A upgrades are built.**

This Area of Concern needs upgrades additional to those proposed. Production Cost Modeling analysis was performed by an ACE member that included all awarded Tier 1 renewable projects, Tier 4 projects and limited projects, and projects at NYISO stage 6 and above. Production Cost Modeling is an analytical approach that deconstructs the behavior of the power system into an hourly model, accounting for the economic signals and reliability constraints that drive the operation of the power system as dictated by the NYISO. It is a more accurate expression of the outcomes of the power system that is used to drive decision-making based on economics. Line ratings assumptions were estimated based upon available information in the NYISO Gold Book.

The analysis revealed that the renewable energy curtailment of the portfolio of projects included would be 228 GWh in 2030, or a 12% loss of energy, in both the 70% and 100% nameplate cases, assuming the Phase 1 upgrades are all constructed and operational.

In this analysis, every NYSERDA contracted project experienced greater than 3% curtailment, which can be considered an acceptable maximum threshold that was approved by the Commission in the Tier 4 contracts in Case 15-E-0302. Other projects were also curtailed above the 3% threshold. Curtailments of this magnitude will cause developers to adjust their bid prices in NYSERDA Tier 1 RFPs, thereby increasing costs.

As such, Avangrid and the other NYTOs must continue to seek solutions to further reduce renewable energy curtailments. They must work together with stakeholders to design the Phase 2 Coordinated Grid Planning Process ("CGPP") to ensure that these solutions will be achieved, and that new congestion patterns that arise over time as the CLCPA mandate is met are also addressed in timely manner.

As currently proposed in this case, the CGPP is to be a "bottoms up" approach. Therefore, in the first instance, the responsibility to identify these upgrades will lie with the utility/TO. Our understanding is that articulated intention of the CGPP is that the TO's own internal analyses, along with the information that the NYISO will be providing in the System Outlook study, will direct these efforts. Once those proposals are identified, the NYISO bulk system process is to be used to identify upgrades in addition to, or where more efficient and cost-effective, in lieu of the TOs' proposals. Today, the planning responsibility is divided between the NYISO and utility; NYISO handles bulk transmission system, while the utilities manage non-bulk transmission and

distribution systems. The current approach demonstrates that there is a need for more coordination between these two planning authorities, as the Commission has clearly emphasized in relevant orders in this proceeding. In addition, as often is necessary, and as ACE NY has previously requested, the NYISO's Public Policy Transmission Needs ("PPTN") process should be triggered to address the issues discussed above. The need to use the NYISO PPTN as effectively as possible has also been highlighted in recent Commission orders.

ACE urges the Commission to reiterate in its response to this Petition that the utilities, DPS staff, and NYSERDA must work with all stakeholders as the CGPP is further defined and refined over the course of the remainder of 2022 for formal consideration by the Commission at year-end. As reflected in the Commission's September 9, 2021 Order, the Phase 2A Petition was only meant to address the AOCs that had been identified in the NYISO planning studies and reaffirmed in the November 2020 filing from NYTOs in the short-term. The Commission acknowledged that additional Phase 2 projects would need to be proposed and approved as the State proceeds with CLCPA implementation. The deficiencies in the NYSEG system in the Southern Tier AOC identified herein are the exact Phase 2 projects referenced by the Commission that must also be pursued in the short-term. ACE NY strongly urges the Commission to direct the TOS to include these projects in the Phase 2 proposals to be submitted by year-end.

**4) The Commission should declare Public Policy Needs for additional bulk alternative solutions to be proposed and selected.**

Avangrid notes that the proposed Phase 2A upgrades provide a capacity headroom of 176 MW to 593 MW depending on the curtailment scenario analyzed. Such headroom is not sufficient relative to the additional near and medium-term CLCPA generation in the region. As of May 2022, there are 1,055 MWs of additional clean energy resources in the queue, of which 424 MW are under advanced interconnection phase, which were not included in the study. Furthermore, Southern Tier is a strategic part of the NY grid, acting as a gateway for Western New York clean energy resources.

A bulk grid expansion project would provide a parallel path to the Central East to deliver western renewables downstate while creating additional grid injection capacity for Southern Tier resources in the queue. This approach will ensure that the most cost-effective upgrades are proposed, evaluated, and ultimately approved and built. It is important to note that the Avangrid filing recognizes the potential for long-term development to be more properly accommodated by a hybrid solution without the risk of redundant infrastructure spend: *"One potential way to plan for this future generation expansion could be to construct key portions of the existing 230 kV corridor that both solution Options propose to rebuild to a 345 kV construction standard. In this scenario, the 230 kV lines would remain in operation at 230 kV, and therefore right-of-way would not be immediately modified, but the cost of a future conversion to 345 kV, and the accompanying headroom benefits, would be significantly reduced. This option was not evaluated in detail as a*



*part of this study but can be optionally explored in the future in more detail. Additionally, the future development of an additional 345 kV line, parallel to the existing 230 kV corridor, could help unlock even more headroom in the Area of Concern. A project like this is expected to be highly synergistic with the Reinforcement Solution Set because such a line would be very effective at offloading the 115 kV system, thus creating headroom for 115 kV interconnections which could facilitate future generation development”*

**5) The Commission should require Avangrid to pursue further evaluation of Grid Enhancing Technologies (GETs) as bridge or temporary solutions to the extreme congestion conditions anticipated in the region absent acceleration of the proposed upgrades.**

GETs are low-cost solutions which could pay off in less than 1-2 years and have an implementation timeline often of weeks to months. Furthermore, mobile applications could present opportunities to be deployed elsewhere in the state if they are identified as temporary solutions in a pocket. GETs could address extreme congestion which is likely to arise during grid outage conditions and Avangrid should evaluate opportunities for GETs deployment for both outage and no outage conditions, given that some of the outages related to the proposed upgrades could be lengthy. GETs can provide both increased grid capacity and flexibility benefits and be implemented expeditiously, serving as a bridge or as a complementary cost-effective transmission solution for this and all AOCs.

## **IV. WATERTOWN AREA OF CONCERN**

The Watertown AOC analysis included by National Grid in its filing reconfirms the dire need for upgrades in the area to unlock CLCPA generation in the near-term. ACE NY offers the following recommendations regarding National Grid’s Watertown AOC upgrades.

**1) The Commission should approve Phase 2A upgrades in the Watertown area.**

There is a clear and immediate need for transmission upgrades in this area given the in-service dates of under construction and contracted clean energy resources in this area. These upgrades also address medium-term aging infrastructure needs and expand opportunities in an area where developer interest far exceeds the existing and expected generation volume dictated by the Commission's inclusion rules.

**2) The Commission should require National Grid to prioritize and accelerate the schedule of Phase 2A upgrades.**

The Watertown generation pocket currently suffers from negative headroom and faces increasing renewables congestion and curtailment. This congestion is stopping new renewables from coming online; well more than the studied existing and expected generation volume would otherwise come online between 2024 and 2026. Currently proposed Phase 2A implementation schedules, however, do not offer meaningful relief until August of 2029. Generally, the last of the proposed upgrades to the Watertown AOC must be completed for the entire upgrade program to provide meaningful increases in transmission capacity. ACE NY members encourage the Commission, the utilities, and renewables developers to work cooperatively together to accelerate upgrade schedules focusing on program specification, approval, permitting and construction. Absent acceleration of the upgrades, there will be extreme congestion and curtailment which put many of the contracted clean energy resources at serious risk of not moving forward. A basis and curtailment study commissioned by ACE NY members found basis and curtailment levels at unworkable levels that would threaten the successful completion and financing of clean energy resources in the region.

**3) The Commission should order National Grid to consult with stakeholders and submit an additional filing within 30 days from the Commission Order with an optimized upgrade proposal. There is opportunity for further optimization of the upgrade proposal package that can provide opportunities for reducing ratepayer cost impact while allowing for larger clean energy integration in the region.**

ACE NY members believe that optimizations to the proposed set of upgrades could be made without materially delaying implementation of the Phase 2A upgrades and could at the same time substantially increase the volume of unbottled generation and headroom and reduce the unit cost of the capacity expansion. We stress that this should be done without delaying the upgrades. Some suggestions are provided below for Commission and National Grid consideration. We note that an in-depth engineering study was not conducted to demonstrate the superiority of the elements below, but ACE NY members believe that these suggestions warrant further assessment given their likely additional benefits.

a. Deployment of Power Flow Control (“PFC”): Dispatchable PFC, such as that currently proposed elsewhere in National Grid territory, would allow greater utilization of the upgraded thermal line capacity, lowering the ratepayer burden per delivered MWh. Additionally, PFC can avoid unwanted power flows to or from the bulk transmission system which would otherwise complicate or preclude consideration of alternative bulk power access points such as Taylorville or Parish.

b. Taylorville to Adirondack connection: The existing Taylorville substation is sited less than 2,000 feet from the Adirondack station (and likely the proposed new Taylorville site would be similarly nearby.) The Adirondack substation currently

includes a 115 kV bus, which will remain when the station is rebuilt to 345 kV. The line from Adirondack terminates at Porter which is where the Phase 2A upgraded lines would otherwise terminate. The ability to export power to the soon-to-be-upgraded twin 345 kV path would potentially provide economic benefits in the upgrade proposal. Injecting power at Adirondack would reduce the power flow on the long segment from Taylorville to Porter, and potentially reduce or eliminate the scope of upgrade along this segment. ACE NY notes that relatively little queued generation exists between Taylorville and Porter.

c. Elimination of Oswego Upgrades: Like the strategy proposed with the Boonville Phase Angle Regulator, intending to limit power flow to Rome and thereby eliminating the upgrade requirement for the Boonville-Rome circuits, a similar opportunity exists between Oswego and Lighthouse Hill. There are no queued projects along this segment and with dispatchable PFC and expanded capacity to Clay (or Parish). The \$265 million cost of the proposed LHH-Oswego upgrades might be eliminated.

d. New Station at Parish (Intersection of Lighthouse Hill – Clay 115 kV lines with Volney-Marcy 345 kV line near Parish): Originally considered by National Grid, a new station at Parish to connect the lines from LHH to the Volney-Marcy bulk power lines could reduce upgrade costs, as proposed for the Lighthouse Hill-Clay segment. Again, with deployment of dispatchable PFC this alternative would appear to offer a cost savings over upgrading the additional 17 miles to Clay.

e. Expanded Capacity: The general Phase 2A solution in the Watertown AOC proposes to construct two parallel single circuits. National Grid acknowledges this solution would only provide 70 MW of headroom after serving the existing and expected generation, as reflected in column D of Table 4 in the Phase 2A Petition. It appears that after accounting for built and queued distributed energy resources (“DER”) the residual headroom post- existing and expected generation would, in fact, be negative. ACE NY notes that viable and reasonably certain queued generation in the area would more than double the capacity considered under the existing and expected generation (“EEG”) inclusion rules and the amount of generation served by the Phase 2A proposal. In order to fulfill the objective of providing medium- and long-term development potential for renewables, as well as serving existing proposed generation beyond what is included in EEG, ACE NY recommends that the Commission direct National Grid to expand their proposal to modify the proposed dual-single circuits to dual-double circuits. This would add approximately 1000 MW of additional transmission capacity for a low marginal cost, lowering the unit transmission cost burden to the ratepayer. At a minimum,

ACE NY would recommend designs go forward with a construction standard that would support structures that are capable of double circuits as mentioned above.

f. Balancing of Lyme Junction-Indian River-Black River: The proposed upgrades include a project to provide upgraded line capacity from Coffeen Street to Lyme Junction while separately National Grid proposes a new connection between Lyme Junction and Indian River. Without similarly upgrading capacity from Indian River to Black River, the capacity benefit of the Coffeen – Lyme Junction upgrade will not be realized. ACE NY recommends matching upgraded capacity on Lyme Junction – Indian River – Black River.

#### **4) Expected Generation Inclusion Criteria should be modified.**

Additional renewable energy projects should be included as “expected generation” in the forecast. The requirement to have a NYISO-approved System Reliability Impact Study (“SRIS”) in order to be included in the “expected generation” forecast severely narrows proposed viable generation without meaningful differentiation between a project that has an approved SRIS and one that does not. SRIS approval is not a milestone reflecting a meaningful increase in project certainty. SRIS approval is nearly a certainty once an interconnection request (IR) is filed, and most of the IRs are filed and advance successfully through SRIS approval. The approval of the study does not mark any material increase in investment or commitment by the developer. Given the current serious backlog of IRs pending with NYISO, the duration of these studies has become protracted and NYISO only completed four in the entire calendar year 2021. Setting November 2021 as a deadline for an approved SRIS, given the long lead time for transmission expansion, does not support the build out trajectory of what is in the queue which still falls well short of state goals. Thus, the NYTOs should use a more inclusive definition of “expected generation.”

## **V. CAPITAL REGION AREA OF CONCERN**

### **1) The Commission should approve Phase 2A upgrades in the Capital Region Area of Concern.**

There is a clear and immediate need for transmission upgrades in this area given the in-service dates of under construction and contracted clean energy resources in this area. These upgrades also address medium-term aging infrastructure needs and expand opportunities in an area where

developer interest exceeds the existing and expected generation volume dictated by the Commission's inclusion rules and used in the analysis.

**2) The Commission should require National Grid to prioritize and accelerate the schedule of Phase 2A upgrades.**

National Grid has proposed a single Phase 2A solution for the Porter – Rotterdam region (Marshville 345/115kV Station) which has a proposed ‘ready for load’ date of April 12, 2028. Given that all projects that currently have NYSERDA contract awards are required to be online no later than 2026, the Marshville Station project will not alleviate any of the anticipated curtailment of projects with NYSERDA contract awards. We strongly recommend the schedule be significantly accelerated so the project is ready for load prior to 2026.

**3) The Expected Generation Inclusion Criteria should be modified.**

As articulated above for the previous AOC, additional renewable energy projects should be included as “expected generation” in the forecast for the Capital Region AOC. The 760 MW of assumed existing and expected generation in the Porter – Rotterdam region is understated given the large quantities of generation in the NYISO queue and the estimates provided by the 2019 CARIS Report. Although we understand that the generator representation was developed using the approved Areas of Concern study methodology, this assumption greatly underestimates the required generation needed in the region to achieve the 70x30 goals of the CLCPA, which CARIS estimates to be 1719 MW. Approximately ten new interconnection applications are proposed on an annual basis in the Capital Region, in addition to the 1,000 MW of proposed projects currently in the queue. Given the strong renewable energy project developer interest, and an expected need of 1719 MW of renewable generation in the area, future studies will need to assume larger amounts of generation to properly model the required transmission needs, and ultimately, to develop projects that will meet the goals of the CLCPA.

**4) These Phase 2A Projects Need Augmentation.**

Lastly, if the Marshville 345/115kV Station project is built in a timely manner, it will only meet the thermal capacity needs of projects with NYSERDA contract awards and some additional generation in advanced stages of development. Given the estimates in the CARIS study and the immense developer interest in the region, we do not believe a single Phase 2A project is a robust enough solution that will properly pave the way to a 70x30 grid. The currently proposed solution will only provide approximately 80 MW of additional headroom capacity beyond the assumed 760 MW of existing and expected generation, though CARIS estimates an additional 1000 MW of renewable generation will be required in the region. Given the timing and scale of the proposed

Phase 2A solution, we strongly recommend that additional projects are provided by National Grid and these projects be accelerated to be enable the queued and future renewable generation.

## **VI. BENEFITS OF BULK POWER SOLUTIONS AND PPTN PROCESS**

In addition to approval of the Phase 2A upgrades (with any optimization opportunities as suggested above), the Commission should also declare public policy needs for further evaluation of additive bulk upgrades in the Southern Tier now and in the other two AOCs in the near future. There is significant interest in developing new clean energy projects in these three areas, as signaled by additional proposed projects in the NYISO queue not included in the utilities' AOC studies, and general development interest in the region. While Phase2A upgrades will help unlock some near-term CLCPA generation, additive bulk solutions can be further designed to unlock further CLCPA generation. In general, the utilities' assessment gave limited attention to bulk power solutions, but this process has clear benefits and should be pursued on a parallel track to the Phase 2A process and the Coordinated Grid Planning Process.

### **1) Benefits of Bulk Power Solutions**

Some of the well-known benefits of bulk power solutions include:

- They can provide for shorter construction schedule
- Simpler design, fewer segments
- No complex outage coordination
- Increased transmission redundancy
- Reduced curtailment during outages
- Opens 345 kV point of interconnection option for renewables
- Reduced transmission losses

### **2) Benefits of Competitive PPTN Process**

There are also benefits to the competitive public policy transmission needs (PPTN) process defined by FERC Order 1000, the NYISO, and the Commission. The PPTN process allows for New York to take a more planned approach vs. a reactionary approach to transmission investment. Planning the system from a holistic and long-term view to achieve the state's goals would ensure the grid is ready for 2030 and beyond. Making significant investment in the transmission system to serve only the near-term needs will lead to a less efficient, more costly transmission buildout, and likely longer timeline. The PPTN process provides for competition

and allows the NYISO to compare the full spectrum of proposed projects, including both local and bulk solutions. The competitive process puts pressure on developers to minimize costs, optimize solutions, and bring forth innovation. The open competitive market also brings in new market entrants that can bring new ideas to old problems not previously considered. The PPTN adds consumer protection through cost containment on the project costs.

Because of the potential benefits of a bulk system project, and the benefits of the PPTN process, ACE NY once again urges the Commission to declare a public policy need related to the CLCPA goals and allow the NYISO to solicit solutions. Indeed, if this had been done one or two years ago, the Commission would now have the benefit of competitively solicited and fully evaluated proposed projects in-hand to compare to the utilities' Phase 2A and Phase 2 project proposals today.

## VII. CONCLUSION

In developing these comments on the utilities Phase 2A Petition, ACE NY member companies struggled to balance the need for quick decision-making on the Phase 2A proposed projects – or, more directly – the need for rapid deployment of transmission solutions in the Areas of Concern given existing congestion and curtailment problems – with the need to select the most optimized and cost-effective solutions to unlock renewable energy development potential now and at least through 2030. Given the significant renewable energy needs dictated by the CLCPA and the long lead-times for the construction of transmission solutions, the Commission must also be struggling with achieving the correct balance of these competing concerns. We sincerely appreciate the DPS staff and Commission's efforts in Case 20-E-0197 and in implementing the letter and spirit of the transmission components of the *Accelerated Renewable Energy Growth and Community Benefit Act*.

The deliberations of ACE NY member companies regarding this balance lead to the recommendations in these Comments. That is, ACE NY strongly recommends that the Commission should approve the Phase 2A projects proposed in the Petition swiftly; develop and implement approaches to closely monitor the progress of these projects; and further analyze the projects to determine additional means to further reduce expected basis and curtailment impacts.

These Comments reflect our opinions on the analysis used to develop and select the Phase 2A projects. For example, we note that transmission capacity supporting dispatch levels materially below 100% of nameplate capacity will result in untenable basis and curtailment for wind and solar facilities. Also, we firmly believe that additional renewable energy projects should be included as “expected generation” in the forecasts, with more of a focus on the full amount of projects needed to reach the 2030 goals and less reliance on an arbitrary criterion like NYISO approval of a SRIS.

Following our specific comments on each of the three AOCs – which includes a request to the Commission to accelerate projects to earlier timelines than those proposed by the utilities – we highlight and reiterate our call for the declaration of a public policy transmission need in light of the CLCPA under the FERC Order 1000 process, and encourage a further pursuit of Grid Enhancing Technologies to realize some near-term benefits for transmission and deliverability.

The Alliance for Clean Energy New York appreciates the opportunity to comment on the utilities Phase 2A Petition and looks forward to working with DPS staff and the Commission on the continuing work to prepare New York's grid for a clean energy future.