

# **Comments on Proposed Transmission Needs Driven by Public Policy Requirements Submitted by the NYISO November 7, 2022**

Submitted by The Alliance for Clean Energy New York and Advanced Energy United

February 21, 2023

CASE 22-E-0633

## **I. Summary**

The Alliance for Clean Energy New York (ACE NY) and Advanced Energy United (United) respectfully request that the New York State Public Service Commission (Commission) declare a Public Policy Transmission Need (PPTN) in two areas of Upstate New York in the above referenced proceeding. These Comments are in response to the seventeen proposals submitted by the New York Independent System Operator (NYISO) to the Commission on November 7, 2022, as part of the 2022-2023 cycle of the NYISO's PPTN process.

The basis for this request is (1) the unprecedented level of renewable electricity generating capacity development required in New York to achieve the mandates of the Climate Leadership and Community Preservation Act (CLCPA) on time, and (2) the evidence of existing and future transmission curtailment and congestion and the lack of headroom, to interconnect new renewable energy and energy storage projects.

In short, achieving the legal mandates to decarbonize the grid by 2030, 2040, and 2050 require additional investments in the bulk transmission system. Declaring a PPTN will be a complementary initiative to the Coordinated Grid Planning Process and will allow the Commission to have a full menu of options for meeting the future needs of New York's zero-emissions grid. We applaud the Commission for approving additional utility transmission projects in the Areas of Concern through its February 16, 2023, Order and urge the Commission to fully consider this request as well.

## **II. Introduction:**

The landmark *Climate Leadership and Community Protection Act (CLCPA)*<sup>1</sup> sets forth New York's nation-leading goals for renewable resources in the State. The CLCPA establishes overarching targets of 1) assuring New York derives 70 percent of its electricity from renewable energy sources by 2030 and 100% emissions-free electricity by 2040; and 2) achieving economy-wide

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<sup>1</sup> Chapter 106 of the laws of 2019.

decarbonization of 85% from 1990 levels by 2050. In its 2022 System Outlook<sup>2</sup> the New York Independent System Operator (NYISO) included a Contract Case that models 9,500 MW of new renewable electricity generating capacity, including 4,262 MW of solar, 899 MW of land-based wind, and 4,316 MW of offshore wind that is under contract and projected to come on-line prior by 2030. Note that the Contract Case only includes renewable energy projects that currently hold contracts awarded by the New York State Energy Research and Development Authority (NYSERDA) but does not include the amount of renewable energy projects necessary to achieve the CLCPA requirement of 70% by 2030. The NYISO System Outlook also studies two Policy Cases over a longer time horizon that do achieve the mandates of the CLCPA.

The NYISO System Outlook estimates that a minimum of 5 TWh of renewable energy in 2030 and 10 TWh in 2035 will likely be curtailed due to transmission limitations, equating to roughly 5% less renewable energy that can be counted toward the CLCPA targets.<sup>3</sup> It further identifies that the Finger Lakes, Southern Tier, Watertown, and Long Island will experience persistent and significant limitations to deliver the renewable power from these pockets without further transmission upgrades.<sup>4</sup>

Moreover, the Policy Cases in the System Outlook underscore that the need for new renewables will grow exponentially over the NYISO's planning horizon. The NYISO projects a need for 95 GW of new emissions-free generation and associated transmission by 2040 to fulfill the CLCPA's mandate. As the Outlook states, "The scope of the renewable resource need is both substantial and unprecedented."<sup>5</sup> Clearly, New York needs new transmission in the Contract Case, but the entirety of the transmission need should be defined not by the Contract Case, but by the NYISO's modelled Policy Cases that are required to achieve the requirements of the CLCPA.

The New York State Public Service Commission (Commission) recognized the need for transmission upgrades, specifically in the Areas of Concern (AOC) that it identified in its September 09, 2021, Order in Case 20-E-0197. In that Order, the Commission required the transmission owners (TOs) in New York to file transmission project upgrades to alleviate the bottlenecks in the AOC. The projects proposed by the TOs in the Areas of Concern, and those approved by the Commission in its February 16, 2023 Order (AOC Order)<sup>6</sup>, while very helpful to address the "Near-Term CLCPA Need" as defined by the Commission, do not meet the complete needs that are required to meet climate goals, and further transmission upgrades are warranted. As the Commission acknowledged in the AOC Order, "the generation growth assumed as the foundation for the Sponsoring Utilities' determination of the Near-Term CLCPA

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<sup>2</sup> System Outlook, NYISO, etc.

<sup>3</sup> Outlook at 14.

<sup>4</sup> Id. at 15.

<sup>5</sup> Id. at 16.

<sup>6</sup> Case 20-E-0197, Order Approving Phase 2 Areas of Concern Transmission Upgrades, Issued and Effective, February 16, 2023

Need is a conservative basis upon which to propose local transmission solutions.<sup>7</sup>” The AOC Order further acknowledges that, “the AOC Projects authorized for development would add a total of 3,429 MW of capacity headroom in these regions by 2030<sup>8</sup>,” whereas Table 3 in the Order shows an updated need of over 7,000 MW<sup>9</sup>. It should be noted that the utility scope was mostly limited to the local transmission system upgrades without fully addressing the needs due to interactions between the local and the bulk system within the AOC, as well as interactions with renewable generation outside the AOC region. Bulk power solutions can also lead to production cost savings to consumers. For these reasons, ACE NY is recommending that the Commission declare a Public Policy Transmission Need (PPTN) in these areas to address the remaining incremental needs that exist over and above the AOC local upgrades to ensure policy goals can be met. That is, ACE NY is recommending a declaration of PPTN in addition to the projects the Commission approved in the recent AOC Order.

Further, the Commission should take note of the fact that in the just completed Class Year 2021 study by the NYISO, which took 22 months, more than half of the renewable generation projects statewide did not accept their cost allocation, and 75% in the North Country did not accept their cost allocation, primarily due to transmission constraints as discussed further below in the North Country PPTN section. This is just one illustration of the impediments to the growth of renewable energy generation. Transmission development is essential to address this impediment. Generation projects that are contracted or under advanced development could get canceled if congestion is not addressed in a timely manner, reducing the pool of resources that can help New York State reach its climate goals.

The AOC Order states that “proposals for public policy transmission needs have been submitted in the NYISO’s ongoing planning process, which the Commission will act on in due course,” and that, “the Commission expects that the Coordinated Grid Planning Process will re-evaluate these areas of the State in the future and provide recommendations on the need for local and bulk transmission solutions.<sup>10</sup> Meanwhile, the CGPP was re-filed by the utilities with the Commission on December 27, 2022, and comments on the CGPP proposal are due from stakeholders on March 27, 2023. The CGPP process itself will not commence until it is approved by the Commission. Thus, the CGPP process *may* start in Summer 2023 if the Commission approves the utility proposals before then. If the utility proposal is followed, it will take three years for a decision to be made. Waiting until Summer 2026 to declare a PPTN would be imprudent as we will be losing valuable time in advancing transmission solutions to meet the immense need for

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<sup>7</sup> Id, Page 27.

<sup>8</sup> Id, Page 25.

<sup>9</sup> Id, Page 26.

<sup>10</sup> Id, Page 37.

more transmission. As the Commission stated as an alternative, the NYISO PPTN process is the right one in which to act, and we urge the Commission to act now.

### III. The Commission Should Declare a PPTN in the North Country

The NYISO System Outlook finds that the introduction of large amounts of renewable generation will exacerbate existing deliverability challenges, resulting in growing levels of resource curtailment in the North Country.<sup>11</sup> It states: “The Watertown/Tug Hill Plateau renewable generation pocket (X3): the 115 kV network is expected to limit the availability of the already-contracted wind and solar generation in this area, and the limitation will become more severe when more renewable resources are interconnected. Additional transmission is necessary to provide the resources access to the bulk grid.”<sup>12</sup> Figures 31-36 in the System Outlook depict the amount of renewable energy that may be curtailed in the Contract Case and the Policy Case Scenarios 1 and 2, for the years 2030 and 2035.<sup>13</sup>

For example, under the Policy Case Scenario 2, solar resources are predicted to be curtailed by about 20% and 40% respectively for years 2030 and 2035 in pocket X3. In its AOC filing, National Grid proposed certain local transmission upgrades. The Watertown AOC will benefit from the AOC upgrade proposals. However, there are substantially more queued MWs in the Watertown AOC than are supported by the AOC upgrades. Additionally, bulk power solutions for some portion of the need in this area may well provide greater total transmission capacity expansion at lower unit and overall cost. These alternatives will be revealed through a PPTN solicitation and evaluation process for that region.

### IV. Delays in Transmission Deployment are Negatively Affecting Renewables Deployment

The following is an illustration from New York’s Watertown/Oswego/Porter Region of how delays in transmission deployment in New York are affecting the development of renewable energy projects today.

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<sup>11</sup> NYISO, *2021-2040 System & Resource Outlook (Draft Report)*, available at [https://www.nyiso.com/documents/20142/32663964/2021-2040\\_System\\_Resource\\_Outlook\\_Report\\_DRAFT\\_v15\\_ESPWG\\_Clean.pdf/99fb4cbf-ed93-f32e-9acfeb6a0cf4841](https://www.nyiso.com/documents/20142/32663964/2021-2040_System_Resource_Outlook_Report_DRAFT_v15_ESPWG_Clean.pdf/99fb4cbf-ed93-f32e-9acfeb6a0cf4841) (August 8, 2022) at 6.

<sup>12</sup> *Id.*, page 65.

<sup>13</sup> *Id.*, pages 73-78.

The most recent 2021 Class Year Study was completed on January 11, 2023. The Study included five projects in the Watertown/Oswego/Porter Region, listed in the table below. Of these projects, two have previously received NYSERDA contracts. The other three projects do not hold NYSERDA contracts but are eligible to participate in the current 2022 NYSERDA Tier I solicitation or future procurements.

NYISO Queue #	Project Name	MW (AC)	NYSERDA Contract
Q774	Tracey Solar	119	2020 Award
Q864	NY38 Solar	120	2019 Award
Q881	New Bremen Solar	100	
Q882	Riverside Solar	100	
Q953	Sugar Maple Solar	125	

The results of the 2021 Class Year Study indicated that only a portion of each project would be deliverable as outlined in Figure 1<sup>14</sup>.

*Figure 1 CY21 ROS Byway Assessment - Deliverable MWs*

Project	Available Deliverable MW (in UCAP)	EFORD	Deliverable MW (in UCAP)	Deliverable CRIS MW
Q774	120	0.524	26.1	55
Q864		0.524	26.1	55
Q881		0.524	18.1	38
Q882		0.524	26.1	55
Q953		0.524	23.4	49.1

For all five projects to be fully deliverable, a System Deliverability Upgrade (SDU) was proposed consisting of rebuilding 25 miles of the Taylorville – Boonville Lines 5 and 6, which is estimated to cost \$200M (+/-50%)<sup>15</sup>. Developers either needed to accept their allocation of the \$200M SDU or accept high levels of curtailment.

Ultimately, 4 of the 5 projects rejected their cost allocation and only one project (Q864) accepted its cost allocation.<sup>16</sup> Since the other 4 projects dropped out of the class year study, the SDU analysis was rerun and determined to no longer be required for Q864. Although Q864 appears to be moving forward, the Taylorville – Boonville transmission constraint has likely led to 444

<sup>14</sup> Table 19 from Class Year 2021 Facilities Study System Upgrade Facilities (SUF) and System Deliverability Upgrade (SDU) Report, issued October 17, 2022

<sup>15</sup> Class Year 2021 Facilities Study System Upgrade Facilities (SUF) and System Deliverability Upgrade (SDU) Report, issued October 17, 2022

<sup>16</sup> Class Year 2021 Notice of Results of Initial Decision Period and Initiation of Second Round, issued November 24, 2022

MW of late-stage projects **not** proceeding to construction (of which 120 MW had been contracted with NYSERDA).

As part of its AOC proposal, National Grid included a project which would specifically alleviate this constraint (W04 Taylorville – Boonville 115 kV Line Update). National Grid has estimated the cost to be ~\$254M and will have an estimated ready for load date of 1/17/2029.<sup>17</sup>

Until the Taylorville – Boonville Lines 5 and 6 project is completed, in concert with the other AOC projects proposed by National Grid, it is unlikely any significant renewable generation will be able to be added to the 115 kV system in this region. Not including the projects discussed above, there are over 1,200 MW of queued wind and solar proposed in this area to interconnect to the local transmission system (<230 kV).<sup>18</sup> Of this, 170 MW has been contracted with NYSERDA and not yet been through the Class Year Study process. Until the underlying transmission constraint is resolved, any projects that proceed through the Class Year Study are expected to receive the same SDUs that was identified in the 2021 Class Year Study. This will more than likely lead to the cancellation of these projects.

Similar situations are expected to occur throughout New York State on other projects proposed as part of the AOC upgrades. Many of the new wind and solar projects are contracted and ready to be built and more is waiting in the NYISO queue, however, the transmission system will continue to limit the amount of generation that can come online until transmission upgrades occur. It is imperative that New York accelerate the schedule of projects like the Taylorville – Boonville Lines 5 and 6 project to avoid future renewables projects from being cancelled.

We also note that other parties in this proceeding who proposed PPTN needs have identified the Northern country as a prime need area. For example, the New York Power Authority (NYPA) notes that in the Watertown area, bulk power options could be cheaper than distribution system upgrades and therefore warrant consideration of a PPTN.<sup>19</sup> NYPA points to the fact that the North Country region's highly limited transmission bandwidth will make development of the proposed 2 GW of renewable generation in the area exceedingly difficult, and cites comments filed in the Grid Study report as providing support for the cost effectiveness of bulk system upgrades to resolve existing constraints. Nextera also highlights the mismatch between the

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<sup>17</sup> Case 20-E-0197 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, dated March 8, 2022

<sup>18</sup> Wind and Solar proposed on 115 kV in St. Lawrence, Jefferson, Lewis, and Oswego Counties - NYISO Interconnection Queue, dated October 2022

<sup>19</sup> New York Power Authority Response to NYISO Solicitation of Transmission Needs Driven by Public Policy Requirements, October 31, 2022:

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>

Watertown/Tug Hill Plateau area's limited capacity and planned renewables development, and argues that, if resolved, the 2 GW of proposed renewables capacity will contribute to the state's realization of the CLCPA's goals<sup>20</sup>. They go on to argue that a PPTN should be used in support of the CLCPA to address the AOC's needs. Additionally, Nextera notes these bulk system solutions require less extensive transmission build-out and resolve challenges related to aging infrastructure. In this context, Nextera identifies a minimum of 2 GW of congestion relief in the Northern country region as necessary and appropriate. LS Power also identifies the Watertown/Tug Hill Plateau region as an AOC and recommends the utilization of a PPTN as a cost-effective way to both ease constraints and achieve CLCPA objectives through the integration of more renewable resources<sup>21</sup>.

Transmission development is a very lengthy process. The AOC projects' approval helps but as noted in the AOC Order it is insufficient in capacity and will not provide meaningful relief until 2030. A PPTN can be complimentary in terms of capacity, cost and schedule. As such and for the above reasons, the North Country region should be designated as a PPTN.

## V. The Commission Should Declare a Public Policy Transmission Need for the Southern Tier Region of New York.

The System Outlook designated the Southern Tier as vulnerable to curtailment of renewable resources and a high priority area for transmission upgrades. It also states that, "The land and natural resource availability in this region (wind and solar) attract renewable generation buildout in this area. Transmission expansion from this pocket to the bulk grid would benefit New York consumers statewide."<sup>22</sup> The Southern Tier region was also designated an Area of Concern by the Commission and has been identified by a broad range of stakeholders as a region deserving of a declaration of a public policy transmission need in prior NYISO-Commission PPTN cycles.

While the AOC upgrades by Avangrid are designed to unbundle the most mature clean energy projects in the region, there are a lot more renewables in the queue and that could be proposed and developed if a bulk transmission solution is deployed in the Southern Tier. Furthermore, the Southern Tier is an important west-to-east highway with the potential to also enable additional

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<sup>20</sup> Nextera Response to Proposed Transmission Needs Driven by Public Policy Requirements for the 2022-2023 Transmission Planning Cycle, October 31, 2022:

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>

<sup>21</sup> LS Power Response to Proposed Transmission Needs Driven by Public Policy Requirements, October 28, 2022:

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>

<sup>22</sup> Outlook at Page 60.

Western NY clean energy resources for delivery eastwards to loads, which in turn will reduce the strain on the main Central East interface. Because the infrastructure in this region is a combination of bulk and low-voltage transmission assets, there are further opportunities for optimization and expansion of the grid without making the projects approved in the AOC Order a redundant investment. For instance, Avangrid noted in its AOC filing that “the future development of an additional 345kV 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.”<sup>23</sup>

We also note that other parties who proposed PPTNs in this proceeding have identified the Southern Tier as a prime need area. For example, Invenergy notes that the Southern Tier is an AOC, pointing specifically to pockets Z1 and Z2, identified in the System Outlook as some of the most constrained pockets in the state as well as the pockets with the greatest potential for wind and solar penetration.<sup>24</sup> Nextera also calls for a PPTN in the Southern Tier region, underscoring the fitness of the region’s land and natural resources for renewable generation buildout.<sup>25</sup> Nextera goes on to argue that the region is underserved from a transmission capacity perspective and that a PPTN should be considered to facilitate the consideration of bulk and local transmission system upgrades by developers. In parallel to their recommendations for the Northern Country region, Nextera asserts that the Southern Tier has the capacity to integrate at least 2 GW of additional renewable capacity. Further, NYPA, in its filing, addresses the limitations of transmission in the Southern Tier by highlighting its lack of high voltage infrastructure and cites analyses that forecast an increase in pressure on the region in coming years if CLCPA targets are to be met. With over 2 GW of renewables set to be interconnected in the region by 2035, NYPA predicts that there will be exacerbated congestion in the area without infrastructure development. Given the sensitivity of pocket Z1, NYPA argues that the integration of bulk system solutions in the Southern Tier is ultimately less expensive and provides greater reliability benefits than “patched” distribution system upgrades.<sup>26</sup> LS Power also

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<sup>23</sup> Case 20-E-0197; AOC Filing, Attachment B, Page 40;

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={3FF0BF0F-4B04-4831-A09F-281E9935B201}>

<sup>24</sup> Invenergy Response to the Request for Proposed Transmission Needs Being Driven by Public Policy Requirements for the 2022-2023 Transmission Planning System, October 31, 2022:

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>

<sup>25</sup> Nextera Response to Proposed Transmission Needs Driven by Public Policy Requirements for the 2022-2023 Transmission Planning Cycle, October 31, 2022:

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>

<sup>26</sup> New York Power Authority Response to NYISO Solicitation of Transmission Needs Driven by Public Policy Requirements, October 31, 2022:

recommends a PPTN to address the Southern Tier's needs, especially as concerns the achievement of CLCPA objectives.<sup>27</sup>

For the above reasons, the Southern Tier should be designated as an area with a PPTN.

ACE NY also reiterates that were the Commission not to declare a PPTN, the Commission can request NYPA to submit priority projects, under the authority granted under the Accelerated Renewable Energy Development and Community Benefit Act of 2020, for the two above areas of concern, given the needs of the system as evidenced across many congestion and curtailment studies by NYISO and local utilities over the last several years.

## VI. Conclusion

In these Comments, ACE NY has urged the Commission to designate a Public Policy Transmission Need for the North Country area and the Southern Tier area of New York State, and in separate Comments filed by the New York Offshore Wind Alliance (NYOWA), we urge that a PPTN be designated to support the buildout of offshore wind infrastructure. The rationale for this request is that without additional investment in the bulk transmission system, New York will struggle to achieve the legal mandates for renewable electricity that are included in the CLCPA. The filings of various entities in this proceeding, as well as the data included in the NYISO System Outlook and the Commission's own AOC Order, support this position. We further note that a PPTN declaration can be complementary, and not competitive, with the Coordinated Grid Planning Process. Without a doubt, New York's decarbonized grid will require a diverse combination of upgrades to the distribution system, the local transmission system, and the bulk transmission system. To be able to make the more informed decision, based on a complete list of optional solutions, and the costs of these possible solutions, the Commission should declare these three PPTNs without delay, so that the private sector can begin coming forth with a variety of possible solutions.

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<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>

<sup>27</sup> LS Power Response to Proposed Transmission Needs Driven by Public Policy Requirements, October 28, 2022: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6ADAF01C-469E-4AFA-BE7C-153AD173A73C}>