Comments of the New York Transmission Owners on
Transmission Needs Being Driven by Public Policy Requirements for the
2020-2021 Transmission Planning Cycle

October 2, 2020

The New York Transmission Owners ("NYTOs")[1] submit these comments in response to the New York Independent System Operator, Inc.'s ("NYISO") August 3, 2020 "Request for Proposed Transmission Needs Being Driven by Public Policy Requirements for the 2020-2021 Transmission Planning Cycle."[2]

I. Introduction and Executive Summary

In recent years, New York State has adopted policies requiring increasingly ambitious climate and clean energy goals. Since the NYISO's last Solicitation Period (for the 2018-2019 Public Policy Transmission Planning Cycle), however, New York State has enacted the Climate Leadership and Community Protection Act ("CLCPA")[3] – the most ambitious decarbonization and climate change legislation in the country. Moreover, the State, New York City, the New York Public Service Commission ("NYPSC"), the New York State Energy Research & Development Authority ("NYSERDA") and other State instrumentalities have adopted or implemented additional legislation, regulations, and policies ("State Policies") requiring actions to reduce greenhouse gas ("GHG") emissions and to increase the need for non-emitting electricity.

The State Policies will require the development of substantially more than the 18,000 MW of new wind (9 GW), solar (6 GW) and storage (3 GW) capacity specifically identified in CLCPA ("State Policy Resources") in order to ensure that 70% of the State's energy will be renewable by 2030 and the electric sector will be carbon neutral by 2040. These system changes are already driving the need for substantial bulk and local transmission and distribution projects to allow for the reliable and economic deployment of State Policy Resources.

There are currently several ongoing and parallel studies and processes to identify and facilitate needed transmission and distribution investment, including those by the NYISO, the NYPSC, NYSERDA and the NYTOs. Continuing close coordination among all stakeholders will

[1] For purposes of this response, the NYTOs include: Central Hudson Gas & Electric Corp.; Consolidated Edison Company of New York, Inc.; Niagara Mohawk Power Corporation d/b/a/ National Grid; New York Power Authority ("NYPA"); New York State Electric & Gas Corp.; Orange & Rockland Utilities; and Rochester Gas & Electric Company.

[2] The NYISO's Public Policy Transmission Planning Process is conducted on a two-year cycle and begins with a 60-day solicitation period ("Solicitation Period") for interested entities to identify proposed transmission needs that are potentially driven by Public Policy Requirements. A "Public Policy Requirement" is "a federal or New York State statute or regulation, including a New York State Public Service Commission ("NYPSC") order adopting a rule or regulation subject to and in accordance with the State Administrative Procedure Act, any successor statute, or any duly enacted law or regulation passed by a local governmental entity in New York State, that may relate to transmission planning on the Bulk Power Transmission Facilities." NYISO Open Access Transmission Tariff, Section 31.1.1. In these comments, we refer to transmission needs resulting from Public Policy as "Transmission Needs."

[3] Climate Leadership and Community Protection Act ("CLCPA"), A.8429 (Englebright)/S.6599 (Kaminsky) (N.Y. 2019), *available at:* https://legislation.nysenate.gov/pdf/bills/2019/S6599.

be required to efficiently and cost-effectively plan, develop, construct and complete the needed transmission and distribution investments to satisfy CLCPA requirements. The processes for projects on Bulk Power Transmission Facilities ("BPTFs"), local transmission facilities and distribution facilities differ. The NYPSC will have to authorize the transmission and distribution projects needed to achieve CLCPA requirements and other State Policies through the appropriate processes and after due consideration of the studies discussed below. The NYTOs fully support CLCPA and other State Policies and will continue to work with the State and the NYISO to achieve the Transmission Needs.

II. Recently Adopted Public Policy Requirements Are Driving Transmission Needs

The policy landscape in New York continues to change rapidly as the State moves forward achieving its climate and clean energy policies. Major State Policies implemented since the last Solicitation Period include, but are not limited to, the following:

A. CLCPA

In July of 2019, New York State enacted, and Governor Cuomo signed, CLCPA into law. CLCPA establishes specific requirements for reducing GHG emissions for all sectors of the economy and removing carbon produced by energy generation. Specifically, CLCPA requires:

- the addition of 6,000 MW of solar generation by 2025;
- the addition of 3,000 MW of energy storage by 2030;
- the addition of 9,000 MW of offshore wind generation by 2035;
- a 40% reduction in GHG emissions from 1990 levels by 2030;
- a NYS economy-wide 85% reduction in GHG emissions by 2050, which requires substantial electrification;
- achieving 70% renewable electric production by 2030 ("70x30"); and
- achieving that "the statewide electrical demand system will be zero emissions" by 2040 ("100x40").

In furtherance of CLCPA, in 2019, NYSERDA awarded two contracts for a total of 1,700 MW of offshore wind capacity in its first solicitation and, in 2020, commenced a second solicitation authorized by the NYPSC for up to 2,500 MW of offshore wind capacity.[4]

On a standalone basis, CLCPA contains many Public Policy Requirements driving Transmission Needs – simply to allow the electric system to carry/deliver the 18 GW of

[4] On July 21, 2020, NYSERDA formally opened its second offshore wind procurement solicitation, seeking up to 2,500 MW of offshore wind and a complementary multi-port infrastructure investment. Proposal submissions are due no later than October 20, 2020. *See* https://www.nyserda.ny.gov/All%20Programs/Programs/Offshore%20Wind/Focus%20Areas/Offshore%20Wind%20Solicitations/2020%20Solicitation. Additionally, NYSERDA submitted a white paper to the NYPSC in which it proposes an accelerated procurement trajectory for offshore wind renewable energy credits ("ORECs") intended to meet the 9,000 MW by 2035 requirement. *See* Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, White Paper on Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act, pp. 37-44 (June 18, 2020).

specifically-mandated clean energy resources. The overall need for new resources, however, will be much greater because achieving the non-electric sector GHG emission reductions required by the 40% and 85% reduction targets (in 2030 and 2050, respectively) will require electrification of gas heating and vehicles at the same time that the electric system is seeking to achieve 70x30 and 100x40. Transmission solutions will be needed both to enable renewables to access the State's transmission backbone and to deliver the renewable energy to customers in major load centers.

B. New York City Climate Mobilization Act

Also in 2019, the New York City Council passed the NYC Climate Mobilization Act (the "Mobilization Act"),[5] which creates a path for New York City to reach carbon neutrality by 2050. Local Law 97 of the Mobilization Act[6] requires buildings over 25,000 square feet to cut climate emissions 40% by 2030 and 80% by 2050. These New York City requirements will drive the need for transmission system investments to deliver zero and lower emitting resources to the City, which must be implemented with due consideration to network impacts associated with increased end-use electrification economy-wide.

C. Accelerated Renewable Energy Growth and Community Benefit Act

In April 2020, New York State enacted the Accelerated Renewable Energy Growth and Community Benefit Act (the "Act"),[7] which recognizes that achieving CLCPA's climate protection targets requires substantial investment in the State's electric transmission and distribution infrastructure. The Act affirms that CLCPA drives Transmission Needs. Specifically, the Act calls for, among other things, meeting Transmission Needs via three related pathways: (1) local transmission and distribution upgrades to be completed by the utilities; (2) priority bulk transmission projects to be developed by NYPA, alone or in partnership with others ("NYPA Priority Projects") [8]; and (3) other bulk transmission projects to be solicited through the NYISO

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[5] New York City Council, "Climate Mobilization Act" (Apr. 18, 2019), https://council.nyc.gov/data/green/#green-bills (last accessed Sept. 22, 2020)

[6] Local Laws of The City Of New York For the Year 2019, No. 97, *available at* https://www1.nyc.gov/assets/buildings/local_laws/ll97of2019.pdf.

[7] Accelerated Renewable Energy Growth and Community Benefit Act, Chapter 58 (Part JJJ) of the Laws of 2020.

[8] On July 2, 2020, NYPA and the New York State Department of Public Services ("DPS") filed a joint petition with the NYPSC requesting the Northern New York Project be designated a Priority Transmission Project ("PTP") pursuant to the Act. *See* 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*, New York Power Authority and New York Department of Public Service, Petition Requesting Adoption of Criteria for Guiding Evaluation of Whether a Bulk Transmission Investment Should Be Designated as a Priority Transmission Project, and for Designation of Certain Transmission Investments in Northern New York as a Priority Transmission Project (July 2, 2020). Subsequently, on July 13, 2020, NYPA filed a similar petition with the NYPSC for the Western New York Energy Link transmission project to be designated as a PTP. *See* 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*, New York Power Authority, Petition Requesting Designation of Certain Transmission Investments in Western New York as a Priority Transmission Project Or in the Alternative Requesting the Public Service Commission to Direct the Construction of the Project Components by the Affected Utilities (July 13, 2020). As of the date of this submission, the NYPSC has not issued an order with respect to either petition, and NYPA continues to assert that these projects are a priority and should be designated as PTPs by the NYPSC.

Public Policy Planning Process.[9]

In accordance with the Act, the NYPSC is conducting the "Power Grid Study," in consultation with other State agencies and authorities, the NYISO, the utilities and other stakeholders. The Act requires a "comprehensive study for the purpose of identifying distribution upgrades, local transmission upgrades, and bulk transmission investments that are necessary or appropriate to facilitate the timely achievement of the CLCPA targets."[10] As part of the Power Grid Study, NYSERDA is examining, with others, onshore transmission upgrades that will be necessary to accommodate 9 GW of offshore wind. The Study will also identify "a distribution and local transmission capital plan" for each utility, by describing and prioritizing the local transmission and distribution "upgrades" that the NYPSC determines are "necessary or appropriate" to meet the CLCPA targets.[11]

D. DEC Peaker Rule

In 2019 and 2020, the New York State Department of Environmental Conservation ("DEC") adopted and started to implement the compliance filing phase of the so-called "Peaker Rule," which limits nitrogen oxide ("NOx") emissions from simple-cycle combustion turbines affecting NOx non-attainment areas. This rule imposes new requirements on these peaking power plants.[12] Operators of these peaking power plants submitted compliance plans to NYISO in March 2020.

E. Other State Policies and Initiatives

Other State Policies and initiatives demonstrate New York State's commitment to development and deployment of new renewable resources and reduction of GHG emissions. New York has long been a member of the Regional Green House Gas Initiative. New York's Renewable Portfolio and Clean Energy Standards have long signaled substantial renewable and clean energy growth.

While New York has been on a consistent trajectory to reduce GHG emissions and transform its electricity supply resource landscape, the recent changes in State Policy require expedited and significant transmission development to meet the challenge of State law.

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[9] The Act also, among other things, (1) creates the Office of Renewable Energy Siting to improve and streamline the process for environmentally responsible and cost-effective siting of large-scale renewable energy projects across New York while delivering significant benefits to local communities; (2) creates a Clean Energy Resources Development and Incentives Program, pursuant to which NYSERDA will work with its State partners and local communities to rapidly advance new "Build-Ready" projects; and (3) amends Article VII of the New York Public Service Law to create an expedited permitting process for major electric transmission facilities.

[10] Act, subsection (2). An initial report of the findings and recommendations of the Power Grid Study is required by December 31, 2020.

[11] Act, subsection (2).

[12] N.Y. Dep't Envnt'l Conservation, "Adopted Subpart 227-3, Ozone Season Oxides of Nitrogen (NOx) Emission Limits for Simple Cycle and Regenerative Combustion Turbines," https://www.dec.ny.gov/regulations/116131.html (last visited Sept. 22, 2020).

II. NYISO Studies Addressing the Mandates Set Out in the State Policies

The NYISO has acknowledged that State Policies have a significant impact on current transmission system conditions and future transmission needs.[13] In addition to the NYPSC and NYSERDA studies, the NYISO has conducted several studies that indicate that achieving State Policy objectives will require substantial additional transmission capacity in New York to deliver renewable resources from constrained generation pockets to the bulk electric grid for delivery to consumers.[14] In its Grid in Transition Report, the NYISO explained that the "[f]ailure to expand transmission capabilities across the [S]tate could induce market inefficiencies, including increased curtailment of renewable generation and additional generator deactivation notices from units needed for reliability." [15] The NYISO further explained that "if markets are unable to produce appropriate price signals due to the expansion of renewable capacity without an adequate expansion of transmission capability, the state's goal of achieving 70% of end-use-energy generated by renewable energy systems by 2030 will be at risk, because energy delivery from renewable resources to load centers will be constrained."[16]

In its recently-completed Congestion Assessment and Resource Integration Study ("CARIS"),[17] the NYISO included an energy deliverability study of the State Policy Resources needed to meet CLCPA's 70x30 mandate.[18] The NYISO preliminarily identified a number of bottlenecks on utilities' local (non-bulk power transmission facility ("non-BPTF")) systems. The NYISO concluded that "renewable generation pockets are likely to develop throughout the state as the existing transmission grid would be overwhelmed by the significant renewable capacity additions,"[19] and found that its study "support[s] the conclusion that additional transmission expansion, at both bulk and local levels, will be necessary to efficiently deliver renewable power to New York consumers."[20]

The NYISO is also conducting a phased Climate Change Study.[21] In Phase II, the NYISO retained the Analysis Group ("AG") to develop/analyze resource mixes to serve load under the CLCPA 100x40 mandate, and then to layer on top of this analysis various implementation

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[13] *See* Reliability and Market Considerations for a Grid in Transition (issued December 2019), *available at*: https://www.nyiso.com/documents/20142/2224547/Reliability-and-Market-Considerations-for-a-Grid-in-Transition-20191220%20Final.pdf/61a69b2e-0ca3-f18c-cc39-88a793469d50 ("Grid in Transition Report").

[14] *See id*. at 29.

[15] *Id*.

[16] *See id*.

[17] The NYISO released the 2019 CARIS Report in July 2020. *See* https://www.nyiso.com/documents/20142/2226108/2019-CARIS-Phase1-Report-Final.pdf/bcf0ab1a-eac2-0cc3-a2d6-6f374309e961.

[18] *See* 2019 CARIS Report, pp. 65-110.

[19] *See id*, p. 109.

[20] *See id*. The focus of the NYISO study was BPTF. The study does not purport to identify all of the non-BPTF and distribution upgrades necessary to achieve CLCPA requirements.

[21] Phase 1 of the Climate Change Study is available here: https://www.nyiso.com/documents/20142/10773574/NYISO-Climate-Impact-Study-Phase1-Report.pdf.

scenarios that will drive change on the electric system.[22] The Analysis Group determined that substantial transmission investment will be required to assure firm deliverability of zero-emission supply.[23]

III. NYTO Recommendations on Public Policy Transmission Needs

The NYTOs urge close coordination between the NYPSC and NYISO to optimize needed transmission investment in a cost-effective manner and to incorporate studies lead by both organizations, their consultants and other agencies, including notably NYSERDA, the utilities, and the Long Island Power Authority ("LIPA"). A dedicated and coordinated group effort is essential.

A. NYTO Process Recommendations

The requirements specified in the State Policies necessitate major infrastructure improvements requiring substantial capital commitments – of both public and private funds. Without transmission and distribution projects, the requirements of CLCPA cannot be met and the costs of partially satisfying these requirements would be much greater because the electric grid will not be able to reliably utilize the energy or deliver it to New York consumers who are paying for the renewable projects.

The Act makes clear that the State itself has determined that there are Transmission Needs that must be addressed in order to meet CLCPA requirements. The NYISO's several studies, as well as studies undertaken by the DPS and NYSERDA, reinforce this determination.

The NYPSC should identify and authorize the transmission needed to achieve CLCPA requirements through the applicable processes and guided by the completed and evolving studies discussed above. Pursuant to the Act, the NYPSC has separately initiated a proceeding to address Transmission Needs on the local system,[24] while Public Policy Transmission Projects on the BPTF are handled through the NYISO tariff and the NYPSC's identification of Transmission Needs with the added tool of projects designated as Priority Projects under the Act. Collectively, all of the projects should contribute to satisfying CLCPA and limiting curtailment of renewable energy and storage projects.

The studies by the NYISO and its consultants, the NYPSC, the Transmission Planning Working Group, NYSERDA and others inform each other on the combined goal of implementing

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[22] *See* Analysis Group, Climate Change Impact Phase II, An Assessment of Climate Change Impacts on Power System Reliability in New York State (Draft Report, Sept. 2, 2020), *available at:* https://www.nyiso.com/documents/20142/15125528/02%20Climate%20Change%20Impact%20and%20Resilience%20Study%20Phase%202.pdf/89647ae3-6005-70f5-03c0-d4ed33623ce4.

[23] *See id.* at 8-16; p. 28 and Table 8. Table 8 demonstrates that even with substantial increases in interzonal transfer capability, constraints would persist in many hours.

[24] The NYPSC has defined "local transmission" as "transmission line(s) and substation(s) that generally serve local load, and transmission lines which transfer power to other service territories and operate at less than 200 kV." *See* Case 20-E-0197, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, n. 4 (May 14, 2020).

CLCPA and other public policies. One key example of this is the NYISO CARIS 70x30 scenario that contains important analysis relevant to local utility plans on the non-BPTF system.

Given the number of ongoing processes and studies, however, it is imperative that NYISO work with the State and NYTOs to coordinate on the ongoing studies, identification of Transmission Needs, and implementation of projects. The NYTOs strongly urge the NYPSC, NYSERDA and NYISO to work together to develop an organized process for reviewing the bulk and local study results and identifying the Transmission Needs to be addressed by NYPA, the NYTOs, or through the NYISO Public Policy Transmission Planning Process.

Moreover, a lesson learned from the previous two NYISO Public Policy Transmission Planning Process solicitations is the need for NYISO timely to coordinate with each Transmission Owner to the extent that any proposed bulk project may impact the local (non-BPTF) transmission or distribution system. If such impacts exist, they must be addressed. Delay in reaching this conclusion can result in erroneous project selection or slow the pace of needed transmission development.

B. Identifying Public Policy Transmission Needs

There are several key areas of needed transmission investments and distribution in order to meet CLCPA's requirements.

1. Avoid Curtailment and Bottling of Renewable Energy

Much of New York's existing and proposed renewable energy capability is or will be upstate. As the State and power industry as a whole move to achieve the mandates set forth in the State Policies described above, the resource mix and geographic distribution of new renewable resources are expected to dramatically change power flows. As renewable energy production in the upstate regions exceeds the load in those regions, additional energy transfers across the bulk electric grid from renewable resources to load centers statewide may be necessary to avoid substantial curtailment of onshore renewable energy. In addition, the injection of offshore wind downstate may, at times, reverse traditional power flows and result in the export of offshore wind from New York City and Long Island to the rest of the state.[25] As noted specifically in the NYISO's 2020 CARIS 70 x 30 Scenario, the Central East Interface will continue to be the most congested interface in the New York Control Area. Transfers of power from upstate nuclear power plants, NYPA's large hydro plants in Niagara and St. Lawrence, and the significant amount of land-based wind interconnecting in the many remote regions upstate must cross the Central East interface in order to access the load centers between Albany and New York City, and offshore wind may need to flow in the reverse direction. While the AC Transmission solutions will enable greater flows across the upstate to downstate constrained interfaces, much of the newly created headroom will be utilized by renewables already under development. Upgrades to Central East and possibly other upstate-downstate interfaces would likely reduce renewable energy curtailments and facilitate

[25] *See* The Brattle Group, New York's Evolution to a Zero Emission Power System, Modeling Operations and Investment Through 2040, at p. 24 (May 18, 2020), *available at*: https://www.nyiso.com/documents/20142/12610513/Brattle%20New%20York%20Electric%20Grid%20Evolution%20Study.pdf/6a93a215-9db3-d5a0-6543-27b664229d3e.

achieving CLCPA mandates, thereby increasing the value to the customers of the renewable resources which they are funding.

2. Transmission Needed to Accept 9 GW of Offshore Wind

CLCPA mandates 9,000 MW of offshore wind generation by 2035. NYSERDA has contracts or solicitations for up to 4,200 MW already completed or under way.[26] The NYTOs recommend that the NYPSC act quickly to identify and authorize the development of transmission needed to integrate this new offshore wind generation into New York City and Long Island in a timely manner and to potentially be able to export some of this capacity to the mid-Hudson and even upstate regions. While the projects in NYSERDA's 2019 offshore wind solicitation identified available points of interconnection in New York City and Long Island, the availability of additional cost-effective points of interconnection is limited. Subsequent projects will confront system limitations in the NYISO interconnection process that will challenge the economics of new zero-emission supply projects and/or present important trade-offs between deliverability assurance and capital investment (i.e., "as available" transmission in lieu of firm transmission deliverability). These impacts may be seen in the second round of offshore wind solicitations and could impact the economic viability of future projects. Transmission solutions must be authorized now so as not to delay or increase the costs of NYSERDA solicitations. A coordinated transmission approach is necessary to facilitate the feasible and cost-effective interconnection of 9,000 MW of offshore wind.

LIPA recently submitted a request to the NYPSC to certify Public Policy Transmission Needs associated with receiving and delivering offshore wind.[27] The filing was predicated on the prior offshore target of 2,400 MW predating CLCPA. LIPA cites environmental benefits, reduction in carbon emissions, NOx reductions, production cost savings and fuel diversity, among other benefits.[28] The NYTOs support serious consideration of this proposal as a first step towards developing the transmission necessary to integrate 9,000 MW of offshore wind into New York.

Looking beyond the LIPA Request, development of underwater transmission to bring offshore wind from the ocean to the onshore grid may also be suitable for a Transmission Need. This process could facilitate either additional project-specific transmission lines or a common transmission network for the underwater transmission required to bring offshore wind to shore. A coordinated approach to underwater transmission could reduce costs and allow for better management of the challenges of transmission routing and interconnection into New York City and Long Island. A Transmission Need for underwater transmission should be coordinated with utility local upgrades to prepare the system to receive offshore wind. If properly planned, "pre-building" underwater transmission and local system upgrades needed to integrate and efficiently

[26] NYSERDA entered two contracts for offshore wind projects with 1,700 MW of capacity and is in process to solicit up to 2,500 MW of offshore wind capacity as authorized by the NYPSC. Case 18-E-0071, *In the Matter of Offshore Wind Energy*, Order Authorizing Offshore Wind Solicitation in 2020 (issued Apr. 23, 2020, errata issued May 6, 2020 and May 19, 2020).

[27] Case 18-E-0623, *In the Matter of New York Indep. Sys. Operator, Inc.'s Proposed Public Policy Transmission Needs Consideration for 2018* (July 30, 2020), Long Island Power Authority Transmission Need Referral ("LIPA Request").

[28] *Id*. at 2-3.

deliver to load offshore wind generation may result in higher quality responses to future NYSERDA solicitations, ensuring coordination among processes for development of BPTF, local transmission and NYSERDA solicitations and the most efficient solution(s).

Moreover, several of the NYISO's grid studies discussed above, including the NYISO Climate Study and the Grid in Transition Report, suggest that more than 9,000 MW of offshore wind ultimately will be needed to meet 100x40. As such, pursuing the full suite of projects needed to integrate 9,000 MW has limited downside and considerable upside potential. The needed transmission solutions must be authorized now so as not to delay or increase the costs of NYSERDA solicitations. In addition to bulk projects, utility local projects may also be needed to cost-effectively integrate offshore wind so that it is fully deliverable to customers and not subject to curtailment.

IV. Conclusion

Regardless of the pathway the NYPSC uses to procure the needed transmission (NYISO Public Policy Transmission Needs, NYPA Priority Project, or utility local project), informed, coordinated and timely action is needed in identifying Transmission Needs and local transmission and distribution projects in parallel. This cannot wait for another biennial Public Policy Planning Process cycle.

The non-BPTF and distribution system projects to facilitate CLCPA are beyond the scope of the NYISO's PPT process. Bulk projects, however, will implicate local needs which must be addressed in tandem with consideration of Bulk projects. Additionally, studies at each level may inform consideration of projects at other levels. Accordingly, through strong coordination among the processes and participants New York will be able to more efficiently achieve the promise of CLCPA.

The NYTOs request that the NYISO consider this submission and forward it to the NYPSC for its consideration as part of the NYISO's Public Policy Planning Process.