New York Power Authority Response

to NYISO Solicitation of Transmission Needs Driven by Public Policy Requirements

1. Introduction

The New York Power Authority ("NYPA") submits this filing in response to the New York Independent System Operator's ("NYISO") August 1, 2018 solicitation of transmission needs driven by Public Policy Requirements ("PPRs").[1] NYPA identifies a number of PPRs driving the need for transmission upgrades ("Transmission Needs") and requests that NYISO forward to the New York State Public Service Commission ("PSC") the Transmission Needs identified below.

2. Executive Summary

Transmission Needs are being driven primarily by a combination of public policies, including: a) PSC initiatives established in the Clean Energy Standard ("CES") Order[2] and the Reforming the Energy Vision ("REV") Order;[3][4] b) the City of New York's 80 x 50 goal; c) the New York Department of Environmental Conservation's ("DEC") implementation of the Regional Greenhouse Gas Initiative ("RGGI"); and d) the DEC's draft regulations that will require a substantial reduction in NOx emissions from peaking electric generators ("Peaker Regulations"). All these PPRs and draft PPRs drive the Transmission Needs identified below. Furthermore, the Power Authority Act[5] is an additional driver for the Northern Transmission Need, as discussed below. The PSC's offshore wind ("OSW") Order[6] drives a need to build transmission

[1] Capitalized terms used and not otherwise defined herein shall have the meaning ascribed to those terms in NYISO's Open Access Transmission Tariff ("OATT") or NYISO's Market Administration and Control Area Services Tariff ("Services Tariff"), as context requires. The reference to "Transmission" in the context of this submission shall mean "Bulk Power Transmission Facilities" ("BPTF") as defined in the NYISO tariffs.

[2] Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard (issued August 1, 2016) ("CES Order").

[3] Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Instituting Proceeding (issued April 25, 2014)("REV Order")

[4] NYPA is not subject to the CES or REV Orders, but is voluntarily working in coordination with our customers to meet the requirements laid out by the Orders

[5] Chapter 772 Laws of New York Section 1, 1931

[6] Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (issued July 12, 2018)("OSW Order").

in southeast New York to efficiently interconnect and deliver the output from new offshore wind generation resources ("OSW Transmission Need").

The most immediate Transmission Need is in northern New York ("Northern Transmission Need"). Today, nearly 1,600 MW of local renewable generation, along with additional imports of Canadian hydropower, is bottled in NYISO Zone D and is frequently subject to negative pricing during periods of transmission congestion. Renewable generation continues to grow in the northern New York region as well, with over 2,100 MW of renewable projects currently in the queue to interconnect in northern New York.[7] Without upgrades to increase transmission capacity into and through northern New York, this renewable power growth may be at risk, and the renewable power that is built will be unable to fully serve downstate consumers. Upgrading the key transmission corridors to facilitate the deliverability of existing and future northern New York generation is essential to achieving the goals of the CES and REV. NYPA along with other stakeholders identified the Northern Transmission Need in 2016, and since then market experience has confirmed and sharpened this need.

NYPA also believes that as renewable growth accelerates across the State to meet CES and REV goals similar bottling and transmission constraints will arise in other areas of the State. Consistent with that expectation, NYISO has identified other areas of the State that will experience renewable generation bottling in a 2030 environment in which the CES renewable goals are achieved. NYPA believes that the PPRs identified in these comments drive additional Transmission Needs and should be addressed by the PSC and NYISO in the PPTN process.

The PSC should also consider that the NYISO stakeholders are developing a groundbreaking market enhancement to price carbon into the NYISO energy markets. This is a welcome improvement for market efficiency, but will only be fully effective if the transmission

[7] NYISO Interconnection queue, as of 9/19/2018, wind ("W") and solar ("S") resources located in the 7 counties located in Northern NY (within zones D and E): Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis and St. Lawrence counties.

system is operating efficiently. In order to allow competitive carbon pricing to work effectively to incentivize a shift of environmentally friendly generation, transmission constraints like those identified in these comments should be promptly addressed. In doing so, New York's electricity markets can serve as an example for the rest of the country.

Additionally, proactively addressing transmission constraints to meet the goals of the CES and REV will also help to address transmission limitations that may arise with the DEC's draft NOx limitations, which could impact a large number of peaking units in the State. In general, a more robust transmission system will help ensure an efficient shift in the generation mix and avoid inefficient market outcomes such as the need for reliability-must-run contracts and increasing occurrences of very high (or very highly negative) energy prices.

Given the time required to design, permit and construct transmission enhancements, and the aggressive schedule driven by the CES, it is important that the PSC move as expeditiously as possible in identifying Transmission Needs. Thus, NYPA encourages the PSC to establish or declare Transmission Needs driven by PPRs in specific region(s) of the State.

3. Public Policy Requirements

a. Clean Energy Standard

The CES mandates "that 50% of electricity consumed in New York by 2030 will be generated from renewable resources."[8] In addition, among other objectives, the CES Order endorses the following mechanism of relevance to Respondents' proffered Transmission Needs:

- Jurisdictional obligations on load serving entities to ensure the procurement of renewable credits generated in New York or delivered into New York;
- Jurisdictional maintenance obligations on distribution utilities to maintain the contributions of older, small, renewable facilities; and
- Continued participation and leadership in [RGGI].[9]

[8] CES Order at p.12.
[9] Id. at 13.

In particular, the CES Order requires all New York load-serving entities ("LSEs") "to serve their retail customers by procuring new renewable resources, evidenced by the procurement of qualifying [Renewable Energy Credits]."[10]

Staff of the New York State Department of Public Service ("DPS Staff") has determined that "slightly more than 33,700 GWh of incremental renewable generation must be added to the State's fuel mix" in order to achieve the CES goal of 50% renewable by 2030 ("50 x 30").[11] NYISO estimated that in order to meet this target, the CES will require: 1) approximately 25,000 MW of solar capacity, to meet the targets solely with solar resources; 2) approximately 15,000 MW of wind capacity, to meet the targets solely with wind resources; or 3) approximately 4,000 MW of hydroelectric capacity, to meet the targets solely with high availability hydroelectric resources.[12] This expected proliferation of renewable resources throughout the State is virtually certain to require increased transmission capacity throughout certain regions of the State. Those constraints have already been identified by the NYISO and other stakeholders in northern New York, western New York and the southern tier.

Historically, New York has relied on large-scale hydropower as the backbone of the State's renewable supply portfolio, with hydro representing over 86% of the State's renewable baseline.[13] In order to effectively leverage the use of this existing hydroelectric power in conjunction with incremental non-hydro renewable resources to meet these targets, new transmission connecting these resources (particularly those in northern New York) to load centers will be required.

[10] Id. at 14.
[11] Staff White Paper on Clean Energy Standard, Department of Public Service, Case 15-E-0302, Jan. 25, 2016 ("CES White Paper"), p. 7.
[12] These estimates of new renewable megawatts in New York are calculated based on the historic demonstrated capacity factors for these categories of generators. From NYISO Comments on Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, April 22, 2016.
[13] CES White Paper, Appendix B.

The targets outlined in the CES Order will require significant quantities of incremental renewable energy to be delivered to all the load centers in New York, supplied from resources within the State and imported from external control areas. While near-term goals may be met with existing infrastructure, existing intrastate transmission and interties between New York and adjacent regions likely will not be sufficient to physically deliver cost competitive renewable energy supplies at the levels needed to meet more aggressive goals in future years. Indeed, the PSC has directed DPS Staff to work with stakeholders "to ensure that the bulk transmission system is sufficiently modernized such that it can fully support the State's renewable goals."[14]

b. Reforming the Energy Vision

The PSC has identified six policy objectives for REV: 1) fuel and resource diversity, 2) system reliability and resiliency, 3) reduction of carbon emissions, 4) system wide efficiency, 5) enhanced customer engagement, and 6) market animation.[15] Transmission expansion in Northern New York and other parts of the State will result in increased bulk electric system flexibility and reliability, and will enable a more efficient dispatch of bulk electric system renewable resources. These outcomes complement the PSC's efforts under the CES and at the distribution level, and support achieving the REV objectives of carbon emission reduction, fuel diversity, system reliability and system efficiency.

c. New York City's 80 x 50 Goal

The City of New York has committed to an environmental goal of reducing greenhouse gas emissions by at least 80 percent by 2050 ("80 x 50"), with an interim goal of reducing emissions 40 percent by 2030.[16] The City has taken a number of steps in support of the goal, although the 80 x 50 goal has not yet been codified. It is expected that the 80 x 50 goal will

[14] CES Order at p.75.
[15] REV Order at p. 2.
[16] https://www1.nyc.gov/site/sustainability/codes/80x50.page

drive development of renewable resources throughout the State, leading to the need for transmission to move the power to downstate load centers.

d. Regional Greenhouse Gas Initiative

RGGI is a cooperative effort among nine states – Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont – which seeks to "stabilize and then reduce anthropogenic emissions of CO_2, a greenhouse gas, from CO_2 budget sources in an economically efficient manner."[17] When renewable assets such as NYPA's St. Lawrence Facility, upstate wind, or Canadian hydropower are constrained and their output is limited, fossil fuel generation must be dispatched, which not only increases carbon and other air emissions, but also drives up the price of RGGI allowances and consumer costs.

e. DEC Draft "Peaker Rule"

The DEC has begun discussing with stakeholders a rule to apply new, more stringent limits to NOx emissions on Simple Cycle Combustion Turbines, typically peaking units. The rule is proposed to be phased in between 2023 and 2025 and may impact a large amount of peaking generation in the State. The DEC is expected to move its draft regulation through its stakeholder process later this year.

f. Power Authority Act

Relieving transmission constraints in Northern New York will effectuate the objective of the Power Authority Act.[18] The Power Authority Act directs NYPA, among other things, to develop, maintain, manage and operate the St. Lawrence Facility "for the creation and development of hydroelectric power in the interest of the people of this state."[19] Expanded transmission in Northern New York will allow NYPA to more fully utilize the St. Lawrence Facility to generate clean and low cost power in the interest of the people of New York.

[17] 6 NYCRR § 242-1.1.
[18] Chapter 772 Laws of New York Section 1, 1931
[19] N.Y. Public Authorities Law, Article 5, Section 1001.

g. OSW Order

In its recently issued OSW Order, the PSC adopted an offshore wind requirement ("OSW Standard") with a goal of obtaining 2.4 GW of OSW generation delivering power to New York by 2030, to help achieve the 50 x 30 CES goal. It is likely that the continued build out of OSW generation will necessitate transmission enhancements onshore and offshore to support a robust, competitive offshore wind market and to ensure the renewable power is deliverable to load centers.

4. Transmission Needs

a. Northern Transmission Need

The bulk-power transmission system in northern New York is currently constrained under certain system configurations and cannot support the simultaneous deliverability of the full output of NYPA's St. Lawrence Facility, local wind resources and renewable imports from Canada, much less future wind and solar generation from projects across the St. Lawrence valley. This situation has been and may continue to be exacerbated by a reduction in industrial load in the region and increased penetration of renewable resources, including renewable imports, needed to satisfy the CES and other PPRs. Expanding the transmission system will be essential to increasing the deliverability of new and existing renewable resources, both within and outside of New York State, and will ensure that all regions of the State receive the benefits of cleaner generation and reduced air pollution resulting from the CES and the REV initiatives. If transmission upgrades remain unaddressed, renewable development in the region may be inhibited, threatening progress on the CES, NYC's 80 x 50 goal, and other PPRs.

In response to a DPS request, NYISO recently conducted a study, called the Renewable Constraints Assessment, to identify areas in which transmission constraints currently exist or are likely to occur as a result of new or existing bottled renewable resources.[20]

[20] See, Public Policy Transmission Needs Study: Transmission Constrained Renewable Generation Pockets, ESPWG/TPAS meeting material, July 27, 2018:

The Renewable Constraints Assessment confirmed the Northern Transmission Need, finding that in both the Summer peak and Summer light load scenarios with baseline renewable additions transmission overloads occurred on the 230 kV system in zone D and in some cases zone E, which "is consistent with NYISO's current operating experience."[21] In this study, the NYISO found that in 2030 with a full build-out of renewables to achieve the 2030 CES goal, over 1,000 MW of renewable generation will be bottled in the northern New York region.

Even the current level of renewable penetration in the region has created inefficiencies and system conditions that limit renewable output. At times the constrained transmission system in the region necessitates the spilling of water at the St. Lawrence Facility and other inefficiencies, including market prices that have frequently reached negative values at an increasing rate over the past few years. In 2017 (continuing through August of 2018), negative energy pricing occurred in around 7% of real-time intervals and reached extreme levels below negative $500/MWh (see *Figure 1*).[22] In 2017, negative pricing was present even in the day-ahead market. Curtailment of wind generation in the North region is the highest of any region in the State (see *Figure 2*). Negative pricing and ultimately curtailments are detrimental to renewable projects and if left unaddressed may persuade renewable developers to not build their projects in New York.

http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_espwg/meeting_materials/2018-07-27/PPTN_genpockets_ESPWG_20180727.pdf ("Renewable Constraints Study").

[21] Id. at 20.

[22] Based on real-time pricing at the St Lawrence generator bus for 2017 (Source: NYISO)

Figure 1: *Frequency of negative energy prices at the St. Lawrence generator bus*[23]

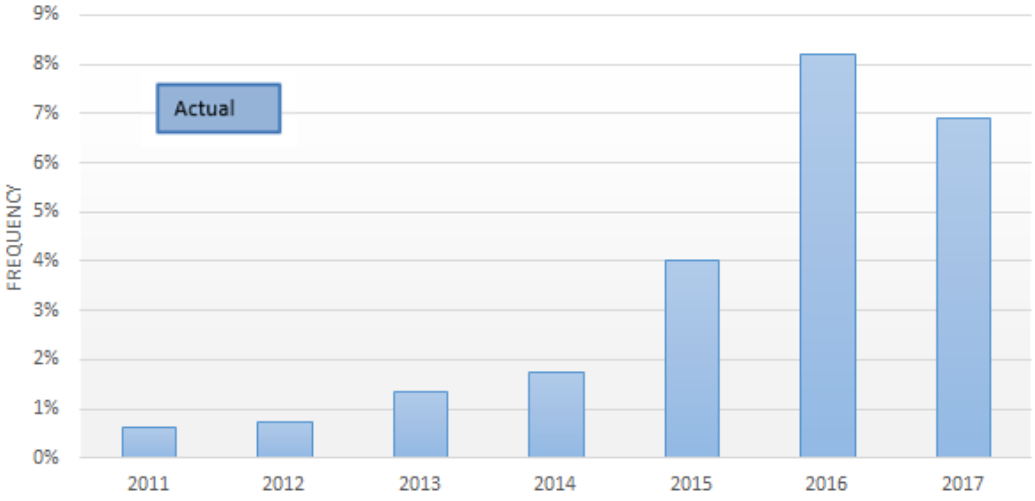
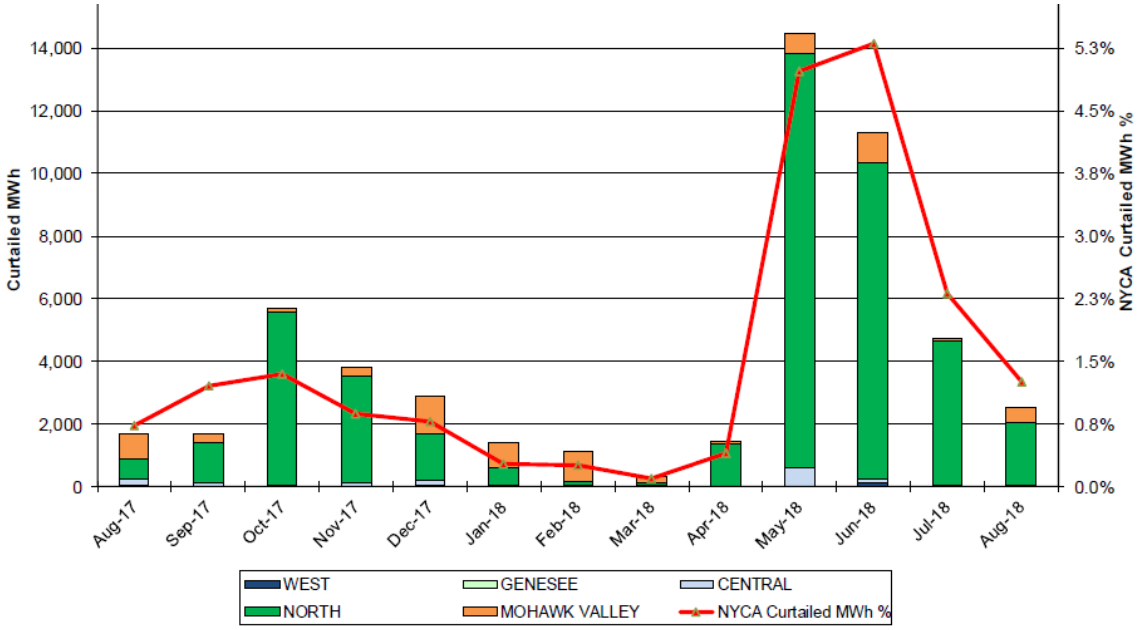


Figure 2: *Wind performance: Monthly energy curtailment (wind capacity 1809MW)*[24]



The NYISO Independent Market Monitor ("IMM") has also pointed out these inefficiencies in multiple reports. Most recently, the IMM's Quarterly Report from Q2 2018,

[23] Based on real-time pricing at the St Lawrence generator bus between 2011 and 2017 (Source: NYISO)

[24] Operations Performance Metrics, Monthly Report, August 2018, Operations & Reliability Department, NYISO, p. 10: http://www.nyiso.com/public/webdocs/markets_operations/committees/mc/meeting_materials/2018-09-26/03%20Operations_Report.pdf

negative price spikes in the North Zone".[25] The IMM Q2 2017 report also notes that "Flows from the North Zone accounted for 21 percent of real-time congestion as transmission outages and derates and hydroelectric output both increased, and led to several extreme negative pricing events."[26] Additionally, the IMM 2017 State of the Market Report notes that: "Load was under-scheduled most in the North Zone where real-time prices can fall to very low (negative) levels when transmission bottlenecks limit the amount of renewable generation and imports from Ontario and Quebec that can be delivered south towards central New York."[27] The market signal that these negative pricing events sends runs counter to the State's renewable goals and discourages renewable energy development in the region. The possible addition of over 2,100 MW of new wind and solar projects in northern New York, as reflected in the NYISO interconnection queue,[28] potential increased renewable imports from Canada, and possible additional load reductions upstate could exacerbate transmission constraints and further inhibit the delivery of clean, renewable energy and its environmental benefits to the State's consumers.

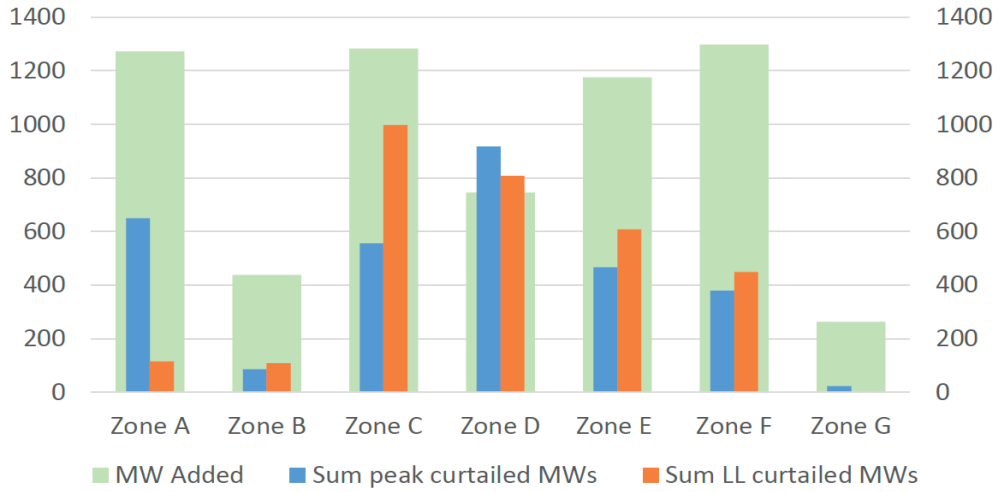
A transmission need to the increase the interface capacity between New York and adjacent control areas will improve system reliability in both regions, by allowing more energy to flow across the borders when needed and enabling increased emergency assistance between the neighboring systems. In the case of Quebec, there is a natural complement between the two markets, since the Hydro Quebec ("HQ") system is winter peaking and New York's system is summer peaking. When renewable assets such as HQ hydropower are constrained and their

[25] Quarterly Report on the New York ISO Electricity Markets Second Quarter of 2018, August 2018. https://www.potomaceconomics.com/wp-content/uploads/2018/08/NYISO_Quarterly-Report_2018-Q2.pdf
[26] Quarterly Report on the New York ISO Electricity Markets Third Quarter of 2017, November 2017. https://www.potomaceconomics.com/wp-content/uploads/2018/03/NYISO-Quarterly-Report_2017-Q3__11-22-2017_Final.pdf
[27] 2017 State of the Market Report for the New York ISO Markets, Potomac Economics, May 2018. https://www.potomaceconomics.com/wp-content/uploads/2018/06/NYISO-2017-SOM-Report-5-07-2018_final.pdf
[28] NYISO Interconnection queue, as of 9/19/2018, wind ("W") and solar ("S") resources located in the 7 counties located in Northern NY (within zones D and E): Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis and St. Lawrence counties.

output is limited, fossil fuel generation must be dispatched, which not only increases carbon and other air emissions, but also drives up the price of RGGI allowances and consumer costs. Allowing additional imports from Canada would help support New York's renewable growth by balancing intermittency and providing diversity of supply.

The importance of addressing the Northern Transmission Need expeditiously is graphically evidenced in *Figure 3* below, from the Renewable Constraints Assessment, showing the impact of renewable additions on the level of required curtailment under the current transmission system.

Figure 3: *Renewables – MW added vs. MW curtailed*[29]



b. Transmission Need(s) in Potentially Constrained Regions

The circumstances facing new and existing renewable resources in certain other parts of the State ("Potentially Constrained Regions") are likely to develop into similar conditions to those found today in northern New York. The Renewable Constraints Assessment showed that in addition to the Northern Transmission Need, Potentially Constrained Regions include the Southern Tier, Western and Capital regions of New York.

[29] Public Policy Transmission Needs Study: Transmission Constrained Renewable Generation Pockets, Prepared by the NYISO, Presented by Yachi Lin at the July 27, 2018 ESPWG/TPAS working group meeting, p. 28

The NYISO interconnection queue reflects nearly 1,150 MW[30] of planned renewable resource (wind and solar) additions slated for the southern tier, over 1,400 MW[31] in western New York, and over 500 MW[32] in central New York. Wind and solar generation may face curtailment due to transmission constraints in these Potentially Constrained Regions as additional renewable resources are developed. Limited capacity to accommodate incremental wind and solar power additions represents a possible impediment to future renewable generation development in these Potentially Constrained Regions.

The deliverability of renewable power from these Potentially Constrained Regions throughout New York State, but especially to southeastern New York, in support of the City's 80 x 50 goal, will be important to ensure that all regions of the State receive the benefits of cleaner generation and reduced air pollution resulting from the CES and REV initiatives.[33] Expanding the transmission system will be essential to increasing the deliverability of new and existing renewable resources in one or more of these Potentially Constrained Regions.

Given the immediacy of the Northern Transmission Need, NYPA recommends that the NYISO prioritize it in this public policy planning cycle. The Southern Tier and other Potentially Constrained Regions should be monitored and addressed as a secondary priority, in a subsequent planning cycle.

c. <u>OSW Transmission Need</u>

The OSW Order clearly establishes a Transmission Need to build out the downstate (Long Island and NYC) transmission system to achieve the goals of the OSW Standard. Phase 1 of the OSW Standard calls for each developer to arrange its own interconnection to the

[30] NYISO Interconnection queue, as of 9/19/2018, wind ("W") and solar ("S") resources within the 8 counties located in the Southern Tier (within zones C and E): Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga, and Tompkins counties.
[31] NYISO Interconnection queue, as of 9/19/2018, wind ("W") and solar ("S") resources located in the 5 counties located in Western NY (zone A): Allegany, Chautauqua, Cattaraugus, Erie, and Niagara counties.
[32] NYISO Interconnection queue, as of 9/19/2018, wind ("W") and solar ("S") resources located in the 5 counties located in Central NY (within zones C and E): Cayuga, Cortland, Madison, Oswego and Onondaga counties.
[33] See, City of New York comments, Case 15-E-0302 (April 22, 2016) p. 13-16.

transmission system. However for future phases, it will likely be more cost effective for consumers if an offshore network is constructed, to which the various OSW projects may interconnect, rather than having each developer make its own interconnection arrangement. Such a comprehensive approach would avoid the potential that an early stage OSW project "locks-up" an advantageous interconnection point thereby increasing the costs, or in the worst case foreclosing feasible interconnection opportunities, of other, potentially lower cost, later arriving resources. A comprehensive and integrated approach to interconnecting the potentially numerous OSW resources to the transmission grid can provide significant efficiencies that will benefit loads and LSEs and will support a competitive wholesale market which consumers will benefit from.

5. Benefits

In its Western PPR Order, the PSC found that relieving persistent transmission constraints and increasing transmission capacity in the vicinity of NYPA's Niagara Power Plant would increase the availability of generation from that facility as well as access to renewable generation via imports from Ontario, and explained that:

> Increased dispatch of these renewable and economical resources could produce significant benefits to the State in terms of reduced air emissions and energy costs. Congestion relief may also have significant system reliability benefits, including increased operational flexibility, efficiency, and avoiding the need to maintain generation that would otherwise retire.[34]

Most of the benefits that the PSC found would inure to New Yorkers from increased access to renewable resources in the western part of the State are equally available via increasing access to the St. Lawrence facility and other renewable resources located in northern New York and the Potentially Constrained Regions. Transmission upgrades in northern New York, the Potentially

[34] Case 14-E-0454, In the Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs Consideration, Order Addressing Public Policy Requirements for Transmission Planning Purposes (issued July 20, 2015)(the "Western PPR Order"), p. 26.

Constrained Regions and for OSW would provide many additional benefits, including the following:

a. Environmental Benefits

Emissions would fall with the introduction of additional wind and hydro resources, decreasing further as more renewable energy is able to flow downstate. As additional renewable generation is able to flow out of northern New York and the Potentially Constrained Regions, demand across the State can be met with fewer fossil fuel generators. NYISO modeling has shown that the inclusion of additional transmission in northern New York will decrease total carbon emissions statewide by approximately one million tons per year.[35] Transmission to enable OSW development will provide downstate load centers with direct access to renewable resources which will balance the build out of renewables across the state and help the State reach its environmental goals in an efficient and cost effective manner.

b. Production Cost Savings

Additional transmission capacity would enable renewable generators to run without threat of curtailment, avoiding the need to run costlier and less efficient fossil fuel plants. Savings are also realized through reduced cycling of plants and avoidance of reliability-must-run conditions. Production Cost Savings benefits should capture the benefits of wholesale market competition and the benefits from relieving congestion.

c. Fuel Diversity

New York State obtains electricity from a variety of sources including fossil fuel plants, nuclear, and renewable sources such as hydro, wind, and solar. Transmission expansion can provide increased access to power from this diverse portfolio of fuel sources, yielding increased reliability, reduced price volatility and enhanced market efficiency. As New York has become

[35] NYISO modeling as part of NYPA's Power Flow Improvement study: scenario 1) modeling an additional 230 kV Moses-Adirondack-Porter line and 700MW injection of hydro from HQ at Dennison, and the scenario 2) modeling an additional 230 kV Moses-Adirondack-Porter line and the AC Proceedings

increasingly dependent upon natural gas (in 2015 natural gas represented over 41% of the State's generation mix[36]), the State is investing in renewables as a way to mitigate the potential risks of over-dependence on natural gas generation. Ensuring complete access to the State's hydroelectric resources, such as the St. Lawrence facility, can play an integral role in improving fuel diversity in New York. By maximizing the hydro supply available to New York, the State can also leverage resources capable of providing the reliable and flexible characteristics that the New York power system currently depends on.

d. Infrastructure Investment Savings

Certain transmission facilities in northern New York and the Potentially Constrained Regions are at or near the end of their useful lives and will require life extension investments. The New York State Transmission Assessment and Reliability Study ("STARS"), Phase II Study Report identified a potential need to replace nearly 4,700 miles of transmission over the next 30 years.[37] Savings can be realized if these investments can be done as part of a comprehensive program that considers future growth of renewables in determining the most efficient approach to transmission system life extensions.

6. Evaluation Criteria

NYPA proposes the following criteria to be used in evaluating projects proffered to satisfy each of the proposed Transmission Needs:

- Ability to provide increased development of renewable resources and decreased renewable curtailment and negative pricing;
- Ability to enable complete utilization of existing and expected future renewable and carbon-free generation resources, including the St. Lawrence Facility, under an array of potential future system conditions (including possible regional industrial load reductions);
- Contribution toward enhancing and refurbishing transmission facilities that are nearing the end of their useful lives;
- Economic benefits, including reduction in Demand$Congestion and system-wide production costs;
- The solution's contribution to meeting resource adequacy requirements with the lowest possible Installed Reserve Margin;

[36] 2016 Load & Capacity Data Report ("Goldbook"), NYISO, p. 61.
[37] New York State Transmission Assessment and Reliability Study ("STARS"), Phase II Study Report, April 30, 2012

- Especially for OSW, the ability to support open access to bulk-power transmission and facilitate wholesale market competition;
- Include allowance and possible preference for transmission solutions that incorporate energy storage applications that will provide wider benefits for the reliability and economics of the system with increased renewables.

7. Conclusion

For the reasons set forth above, NYPA requests that NYISO submit to the PSC its proposal that the PSC establish the Northern Transmission Need, the OSW Transmission Need and one or more Transmission Needs addressing the Potentially Constrained Regions.

Respectfully submitted,

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