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VIA EMAIL – PublicPolicyPlanningMailbox@nyiso.com

Mr. Zachary Smith
Vice President, System & Resource Planning
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, New York 12144

Re: NYISO 2018-2019 Transmission Planning Cycle
Transource New York Response to NYISO August 1, 2018 Request for Proposed Transmission Needs Driven by Public Policy Requirements

Dear Mr. Smith:

The NYISO's public policy planning process is composed of three stages – (i) the solicitation of public policy requirements ("PPRs"), (ii) the solicitation and evaluation of viable and sufficient transmission solutions if the New York Public Service Commission ("NYPSC") designates a PPR, and (iii) NYISO selection of the more efficient or cost effective solution if the NYPSC elects to continue the PPR following the NYISO's evaluation of project viability and sufficiency.[1] In accordance with NYISO's OATT, Attachment Y, Section 31.4.2, the NYISO began the first step of the public policy planning component of its 2018-2019 transmission planning cycle by issuing a notice on August 1, 2018 requesting that stakeholders or interested parties "...submit proposed transmission needs that it believes are being driven by Public Policy Requirements and for which the NYISO should solicit and evaluate transmission solutions."[2] Per the NYISO, submissions must: (i) identify a PPR that drives the need for transmission; (ii) propose evaluation criteria for transmission solutions to address the identified need; and (iii) describe how the construction of transmission will fulfill the identified PPR.[3] In accordance with the PPR Notice, Transource New York ("Transource") hereby submits

[1] *See* NYISO Open Access Transmission Tariff ("OATT"), Attachment Y, Section 31.4.1.

[2] *See* New York Independent System Operator, Inc., "Notice – Request for Proposed Transmission Needs Being Driven by Public Policy Requirements for the 2018-2019 Transmission Planning Cycle" (dated August 1, 2018) (hereinafter, "PPR Notice").

[3] *Id.* at 1.

this response demonstrating that the NYPSC's recently implemented Clean Energy Standard ("CES") is a PPR that drives the need for transmission in New York.[4]

1. The CES Should Be Identified as a PPR in the NYISO's 2018-2019 Transmission Planning Cycle

To comply with FERC Order 1000, the NYISO incorporated public policy planning definitions and added Section 31.4 to Attachment Y of its OATT to implement the public policy planning process as the third leg of its comprehensive planning process. Attachment Y, Section 31.1 of the NYISO OATT defines a PPR, in pertinent part, as "A federal or New York State statute or regulation, including a NYPSC order adopting a rule or regulation subject to and in accordance with the State Administrative Procedure Act..." Likewise, a Public Policy Transmission Need is defined as "[a] transmission need identified by the NYPSC that is driven by a [PPR]." On August 1, 2016, the NYPSC issued an order implementing the CES program.[5] As demonstrated herein, the NYISO has issued a number of reports establishing that insufficient transfer capability under certain existing system conditions currently causes wind power curtailments. The NYISO also has recently issued a thermal study establishing the need for significant transmission capability to unbottle existing and new renewable resources added to the system pursuant to the CES program. Thus, the NYPSC has sufficient information to designate the CES as a PPR thereby allowing the NYISO to advance the CES PPR to the next stage of its 2018 PPR process.

The CES program mandates, *inter alia*, that 50% of the energy consumed in New York State by the year 2030 must be generated by renewable resources to combat climate change by "... transform[ing] the way energy is produced, delivered and consumed" in New York State ("50x30 Mandate").[6] Meeting the 50x30 Mandate indisputably will require the construction of a significant amount of incremental renewable generation over the next decade, a substantial majority of which is expected to be built in areas remote from the major load centers in Southeastern New York. Indeed, establishing the CES was "...painstakingly designed to produce needed reforms and carbon reductions while protecting utility customers and maintaining an effective wholesale market and ensuring

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[4] Transource is a partnership between American Electric Power (AEP) (86.5%) and Evergy, Inc. (parent company of Kansas City Power & Light Company and Westar Energy, Inc.) (13.5%) focused on the development and investment in competitive electric transmission projects across the United States. Transource directly owns transmission facilities in Missouri and is developing PJM-approved projects in West Virginia, Pennsylvania and Maryland. Transource's parent companies combine more than 100 years of expertise in the planning, design, engineering, construction and operation of transmission systems and collectively own and operate nearly 50,000 miles of transmission lines.

[5] *See* NYPSC 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 and effective August 1, 2016) (hereinafter, "CES Order").

[6] *Id.* at 4, 78 (identifying the need to take steps to combat climate change as "immediate" in the face of New York's vulnerability to extreme weather events and threats of "massive economic and lifestyle disruption from damage to agriculture, water resources, public health, energy and communication systems and the natural ecosystems that define and support communities.") (citation omitted).

the continued bulk electric system reliability that New Yorkers expect and require," the NYPSC acknowledged that the CES program had the potential to produce bottlenecks or the need for additional transmission lines and emphasized, "...it is important that the design and operation of the bulk electric system and wholesale markets be modernized, much like is being done at the distribution level."[7]

While the CES Order established the policies and general parameters that would govern the new Renewable Energy Standard ("RES") and the Zero Emissions Credit ("ZEC") components of the CES program, the Commission acknowledged that implementation details remained to be developed.[8] The Commission thus called for full implementation through "various phases going forward" conducted in a "planned and deliberate manner to ensure that market participants receive timely guidance on matters that affect them."[9] Critical to the issues being addressed by the PPR Notice, the NYPSC expressly directed DPS Staff to continue 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."[10]

In response to the SAPA notice issued by the NYPSC to address the NYISO's solicitation of PPRs in its 2016-2017 transmission planning cycle, a number of parties, including the NYISO, proposed to designate the CES as a PPR. For example, highlighting the fact that most renewable generation is located Upstate, the NYISO demonstrated, "[t]he resource mix and geographic distribution of the new renewable resources *will dramatically change power flows across the [bulk power transmission facilities]"* because "significant additional volumes of renewable energy will have to move east and south across the State to serve load."[11]The NYISO established significant additional transmission capability must be developed to implement the CES program beyond the levels expected to be authorized in its two pending PPR efforts, the Western New York PPR process ("WNY PPR") and the AC Transmission PPR process ("AC PPR").[12] The NYISO's concerns were echoed by New York transmission owners and

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[7] *Id.* at 75 (noting that a working group had been formed in response to a request from the Staff of the Department of Public Service ("DPS Staff") and the NYISO and transmission owners had been asked to identify and propose solutions for potential reliability concerns arising from the development of renewable resources).

[8] *Id.* at 13, 152.

[9] *Id.* at 152-53.

[10] *Id.* at 75-76 (further establishing its triennial review process would be used, *inter alia*, to review the "system impacts of the ever changing system topology" and consider actions "to protect the public interest in secure and cost effective electric service.").

[11] *See* NYPSC Case 16-E-0558, In the Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration for 2016, "Comments of the New York Independent System Operator, Inc." (dated December 5, 2016) at 7 (emphasis added).

[12] *Id.* at 8 (further noting curtailment of renewable generation due to limitations on the transmission system "... would jeopardize achievement of 50% by [20]30 because energy will not be deliverable from renewable resources to downstate load centers.").

Downstate consumers alike.[13] A number of parties also cautioned that, due to the long lead time generally required for the siting and construction of transmission facilities, the NYPSC should designate the CES as a PPR in the 2016 PPR process notwithstanding the relatively long time table for the entry of new facilities under the program.[14]

Notwithstanding the fact that a number of parties, including the NYISO, established the CES was a PPR that would drive the need for significant additional transmission capability, timing considerations proved insurmountable. Problematically, the NYISO's 2016 PPR process roughly coincided with the issuance of the CES Order and the first few months of the program's implementation.[15] In its 2016 PPR Process Order, issued in March, 2018, the NYPSC noted the NYISO would soon be commencing its next PPR process which would give the NYPSC the opportunity to assess the latest information on transmission congestion in certain regions and identify the system benefits provided by the WNY PPR and AC PPR processes.[16] Finding further work was needed before any additional PPRs could be designated and conducting such groundwork before the next solicitation process would not unduly delay transmission needs, the NYPSC directed DPS Staff to work with the NYISO and the New York transmission owners to identify "the extent and magnitude of additional transmission needs" which the NYPSC found "require[d] ...a more holistic approach."[17] The NYPSC concluded, "This information should inform the Commission's subsequent review and determination as to

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[13] *See, e.g.,* NYPSC Case 16-E-0558, *supra*, "New York Power Authority, Niagara Mohawk Power Corporation d/b/a National Grid and Central Hudson Gas and Electric Corporation Response to NYISO Solicitation of Transmission Needs Driven by Public Policy Requirements" (dated September 30, 2018) at 6-8 (noting water is being spilled at the St. Lawrence Facility, wind energy is being curtailed in the North Country and the time required to design, permit and construct transmission enhancements warrants the NYPSC moving forward as expeditiously as possible); NYPSC Case 16-E-0558, *supra*, "New York Transco LLC Response to NYISO Solicitation of Transmission Needs Driven by Public Policy Requirements for the 2016-2017 Transmission Planning Cycle" (dated September 30, 2016) (hereinafter "Transco 2016 PPR Comments") at 2 (establishing, "Since the bulk of electricity generated by renewable resources, such as wind, solar, hydro and biomass resources will be generated in the western and northern regions of New York, and the major load centers are located in the southeastern region of the state, new bulk and non-bulk transmission facilities will be necessary to accomplish the state's goal."); NYPSC Case 16-E-0558, *supra*, "City of New York Response to NYISO Solicitation of Transmission Needs Driven by Public Policy Requirements" (dated September 30, 2016) (hereinafter, "NYC 2016 PPR Comments") at 2-3 (establishing some transmission enhancements are needed immediately and even those that have a five-year lead time require the planning process to begin now given the time needed to site and construct new transmission facilities).

[14] *See, e.g.,* Transco 2016 PPR Comments at 2; NYC 2016 PPR Comments at 2.

[15] At the time responses were due to the SAPA notice for the solicitation of PPRs pursuant to the 2016 PPR process, DPS Staff had just issued its proposed Phase I Implementation Plan for the CES program which was under review by stakeholders with comments due a month later at the beginning of 2017. (*See* NYPSC Case 15-E-0302, *supra* "Notice Extending Comment Period" (issued December 29, 2016).)

[16] *See* NYPSC Case 16-E-0558, *supra*, "Order Addressing Public Policy Requirements For Transmission Planning Purposes" (issued and effective March 16, 2018) at 24 (hereinafter, "2016 PPR Process Order").

[17] *Id.* at 24-25 (further directing "[t]his effort should consider all relevant possible changes in resources, including centralized generation and local resources, and load" because the size and location of resources will affect the need for additional transmission facilities).

whether the public policies discussed herein, or others, may warrant designation as a Public Policy Requirement."[18]

In the intervening period since the NYISO's last PPR effort, the NYISO has issued a number of operations reports identifying significant wind power curtailments in the North Country under certain system conditions.[19] In addition, on July 27, 2018, the NYISO presented the findings of its thermal study assessing the impacts of the CES program to the Electric System Planning ("ESP") Working Group.[20] As addressed in more detail, *infra*, in its CES Transmission Study Presentation, the NYISO, *inter alia*, revealed existing constraints on the transmission system and identified substantial additional generation bottling when new renewable resources are added to the system under the CES program unless major transmission upgrades are also made.[21] As the NYPSC correctly anticipated in the 2016 PPR Process Order,[22] this information, taken together, provides substantial further evidence confirming the fact that additional transmission will be required for the State to successfully achieve the 50x30 Mandate and satisfy the CES directives. No further delay is warranted. In fact, given the long lead time for transmission projects, further delay at this juncture would likely adversely impact the State's progress in achieving its CES milestones.

At this juncture, PPRs that drive the need for transmission must be identified. The NYPSC now has substantial information demonstrating the need for significant transmission upgrades to implement the CES program. Thus, the NYPSC should designate the CES as a PPR thereby triggering the next step in the process pursuant to which the NYISO will solicit and evaluate the viability and sufficiency of solutions designed to ensure that the CES PPR will effectively be addressed.

II. The Criteria Used To Evaluate Transmission Solutions Should Be Consistent With the CES Program Parameters and Should Include the Use of Advanced Technologies as a Selection Metric

Under Section 31.4.2.1 of Attachment Y to the NYISO OATT, the NYPSC is authorized to identify criteria that the NYISO must use to conduct its viability and sufficiency evaluation. To effectively develop the criteria for the evaluation of

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[18] *Id.* at 26.

[19] *See, e.g.,* New York Independent System Operator, Inc., "Operations Performance Metrics Monthly Report – August 2018" (issued September 11, 2018) (hereinafter, "August 2018 Operations Report") at 10; New York Independent System Operator, Inc., "Operations Performance Metrics Monthly Report – December 2017" (issued January 10, 2018) (hereinafter, "December 2017 Operations Report") at 10.

[20] *See* New York Independent System Operator, Inc., "Public Policy Transmission Needs Study: Transmission Constrained Renewable Generation Pockets" (dated July 27, 2018) (hereinafter, "CES Transmission Study Presentation").

[21] *Id.* at 21, 23.

[22] *See* 2016 PPR Process Order at 26.

transmission solutions to accommodate the CES PPR, the nature of the CES program must be taken into account. Specifically, the CES program anticipates certain levels of renewable energy will be added to the system on a year-by-year basis to achieve the 50x30 Mandate. To ensure adequate transmission has been built to effectively implement the program, the NYISO should be directed to develop a base case for its evaluation process that tracks the development of the MW levels by year delineated in the DPS Staff study underlying the CES program. To identify the location for new renewable resources, the NYISO should be directed to take the status of projects on its interconnection queue into account, obtain feedback from DPS Staff and NYSERDA, as the administrator of the RES component of the program, and discuss its assumptions with Market Participants at ESP Working Group meetings prior to finalizing its base case assumptions.[23] In addition, as the NYPSC established in the 2016 PPR Process Order,[24] the transmission solutions that are chosen must take into account the fact that the size and location of new renewable projects will dictate the nature and extent of system upgrades required to ensure renewable generation is not curtailed. Due to the dynamic nature of the system build-out called for under the CES program, evaluation criteria should account for the potential to stage the development of CES PPR projects to provide sufficient transfer capability for the dispatch of new generation facilities that complete construction and enter commercial operations.

Moreover, in its AC PPR Order, the NYPSC delineated specific evaluation criteria, *e.g.*, explicit proscriptions against the acquisition of new permanent transmission rights of way, credit for limiting new rights of way for substations and credit for upgrading aging infrastructure.[25] To most effectively determine the more efficient or cost effective solution for the CES PPR, the NYISO should be directed to identify the technology used to implement the transmission solution a selection metric when it is issues its solicitation for solutions. As reflected in the resolutions adopted by a number of national and regional policymakers, advanced technologies can play a critical role in most effectively addressing the system issues that are likely to be in the forefront as the CES program proceeds, such as aged circuit rebuilds and the integration of new generation resources.[26] This selection metric should be designed to take into account a number of specific objectives, including:

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[23] For the WNY PPR process, the development of the base case to conduct the evaluation took roughly three months. Transource supports NYISO efforts to make short term, PPR process improvements to its OATT for this PPR cycle and respectfully urges the NYISO to continue to finalize base case assumptions in a timely manner so that it may effectively proceed with its evaluation and complete the 2018 PPR process.

[24] *See* 2016 PPR Process Order at 25.

[25] *See* NYPSC Case 12-T-0502, *et al.*, Proceeding on Motion of the Commission to Examine Alternating Current Transmission Upgrades, "Order Finding Transmission Needs Driven By Public Policy Requirements" (issued and effective December 17, 2015) (hereinafter, "AC PPR Order") at Appendix B.

[26] *See, e.g.,* National Association of Regulatory Utility Commissioners, Resolution Supporting Advanced Electric Transmission Technology (adopted by NARUC Board of Directors, February 17, 2016) (noting, *inter alia*, the aging transmission system, the need to replace it and the development of significant amounts of additional renewable resources in different areas on the system, and supporting the development of new,

- Significantly streamlining siting and construction activities.
- Substantially increasing system efficiency by reducing transmission line losses.
- Substantially reducing visual impacts by utilizing significantly shorter towers and ameliorating environmental impacts by providing avian-friendly transmission lines and structures.
- Substantially reducing electromagnetic field impacts.
- Avoiding costly series compensation equipment.
- Substantially reducing the turn-around time needed in the future for placing new and replacement circuits into service.

To most effectively quantify the value of utilizing advanced technologies, the NYISO should compare the incremental benefits afforded by these technologies with those of traditional technology solutions.

Additional specific evaluation criteria also should be considered. The NYISO should be directed to favor projects that greatly increase transfer capability or utilize higher voltage upgrades using existing rights of way. The NYISO also should be directed to quantify the cost effectiveness of projects on a per energy unit delivered ($/MWh) basis. In addition, the NYISO should be required to confirm that selected transmission solutions capture all costs associated with the interconnection of renewable generation facilities. For example, the costs of complex transmission line reactive power compensation are often underestimated and can significantly increase the total cost of a renewable energy transmission solution as evidenced by the Electric Reliability Council of Texas (ERCOT) Competitive Renewable Energy Zone (CREZ) project.[27]

However, based on the lessons learned from the AC PPR process, Transource would urge the NYPSC to forego specifically prescribing how transmission should be built to accommodate new renewable facilities built pursuant to the CES program. As evidenced by the NYISO's first two PPR initiatives, entities responding to the NYISO's PPR solicitation process are sophisticated and technically savvy. By defining the specific

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innovative, cost effective advanced transmission technologies to "increase grid capacity, improve energy transfers, promote greater stability and resiliency, make more efficient use of rights-of-way, reduce transmission line losses, and help to streamline siting and construction activities."); Council of State Governments, Resolution Supporting State Policies for Advanced Transmission Lines (adopted by Council Executive Committee, December 11, 2016) (noting, *inter alia*, new, innovative, advanced transmission technologies are commercially available "with revolutionary, extraordinarily high performance levels compared to other technologies to address aged circuits and new generation issues" and urging State legislatures and public service commissions to adopt transmission policies "that promote revolutionary, rather than incremental, performance and the benefits of the appropriate use of cost-effective advanced electric transmission technologies in support of their interest in the continued, timely provision of affordable, reliable electricity to consumers.").

[27] Competitive Renewable Energy Zone Program Oversight, CREZ Progress Report No. 4 (July Update), prepared by RS&H for Public Utility Commission of Texas (dated July 2011) at 4-5).

paths to upgrade the transmission system in the AC PPR Order,[28] it is likely that the NYPSC may inadvertently have stymied development of more efficient or less costly proposals. Competition breeds innovation. Transmission developers should thus be given the opportunity to assess specific system needs and define innovative transmission solutions to unbottle existing and new renewable resources in accordance with the selection metrics developed for the CES PPR.

III. Increased Transfer Capability Will Provide the System Upgrades Necessary To Achieve the 50x30 Mandate Reliably and Cost Effectively

As established *supra*, the need to "combat climate change and modernize the electric system to improve the efficiency, affordability, resiliency and sustainability of the system" were major factors driving the implementation of the CES program.[29] To achieve this result, the Commission adopted the 50x30 Mandate and delineated certain anticipated and minimum procurement targets.[30] To fulfill the CES PPR, existing system deficiencies that have already been revealed in day-to-day operations and the projected bottlenecks identified in NYISO planning studies must both be resolved. Increased transfer capability will address energy curtailments and result in lower losses, and thus, will allow the State to achieve the 50x30 Mandate in a cost effective and reliable manner.

The NYISO and the independent market monitoring unit, Potomac Economics ("MMU"), have issued reports revealing the output of wind facilities is currently being significantly curtailed, predominantly in the North Country, under certain system conditions. For example, as part of its operations report provided to the Operating Committee each month, the NYISO tracks both wind production and curtailment levels. As reflected in these reports, under certain conditions on the transmission system, there have been significant wind curtailments in the North Country reaching levels as high as over 14,000 MWh in May, 2018 when, among other factors, the Adirondack-Moses line was out of service.[31] The NYISO's CES Transmission Study Presentation also confirmed the current system issues in the North Country under peak summer operating conditions, finding, "Certain 230 kV lines in Zone D (North zone) were found to be overloaded in the vicinity of high wind generation" when baseline renewable resources are modeled at full output and no curtailments are permitted.[32] Likewise, the MMU has highlighted

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[28] *See* AC PPR Order at Appendix A (defining specific transmission routes for Segment A and Segment B).

[29] *See* CES Order at 3.

[30] *Id.* at 13-20. These targets continue to be refined through the implementation phases as the program proceeds.

[31] *See* August 2018 Operations Report at 9-10. The level for June, 2018 was nearly as high at over 11,000 MWh. (*Id.*) The same issues arose in 2017 as well with wind curtailments reaching as high as over 8,000 MWh when the Adirondack-Moses line was out of service. (*See* December 2017 Operations Report at 9-10.)

[32] *See* NYISO CES Transmission Study Presentation at 20.

wind curtailments in its quarterly market reports.[33] A substantial number of renewable projects on the interconnection queue are proposing to interconnect to the transmission system in the North Country.[34] Given that the transmission system in this area is not sufficient to accommodate existing generation under certain system conditions, bringing new renewable resources on line in this area pursuant to the CES program will result in additional curtailments unless the transfer capability on this part of the bulk transmission system is augmented. The NYISO's CES Transmission Study Presentation confirms that fact.[35] These curtailments will senselessly erode progress in achieving the State's 50x30 Mandate to combat climate change.

The NYISO's CES Transmission Study Presentation also establishes that there will be substantial additional wind curtailments in a number of other locations throughout the State under both summer peak and light load conditions when new renewable resources are added to the system pursuant to the RES.[36] Specifically, in addition to exacerbated transmission deficiencies in the North Country, the NYISO identified significant wind curtailments in three other pockets across the State on both the bulk transmission and local systems – Pocket W (Western New York overloads on the Niagara-Rochester 115 kV line, the PJM-NY 115 kV ties and the Niagara-Gardenville-Stolle Road 115 kV line), Pocket Y (Eastern New York overloads in the Mohawk Valley Corridor and the Hudson Valley Corridor) and Pocket Z (Southern Tier overloads in the Finger Lakes region and the Southern Tier Transmission Corridor).[37] Taken together, the NYISO projects wind curtailment levels in these pockets could reach as high as nearly 2,400 MW under summer light load conditions and 2,700 MW under summer peak conditions.[38] Thousands of MWs of wind and solar facilities are proposed on the NYISO interconnection queue to be constructed in these four pockets. Based on its analysis, the NYISO expressly found there is "a need for transmission upgrades in order to transmit

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[33] *See, e.g.*, Potomac Economics, Quarterly Report on the New York ISO Electricity Markets – Second Quarter of 2017 (dated August, 2017) at 23 (addressing the real-time pricing event that took place on April 6, 2017 and reporting, "The Moses South transmission constraint limit was reduced at [sic] following the contingency, leading significant amounts of hydro and wind to be scheduled down.").

[34] There are currently over 15 renewable projects in Zone D and the North Country portion of Zone E comprised primarily of wind facilities and a smaller number of solar facilities. (*See* NYISO Interconnection Requests and Transmission Projects (updated August 31, 2018) (hereinafter, "NYISO Queue"), *passim*.)

[35] *See* NYISO CES Transmission Study Presentation at 25-27. The NYISO found the North Country area, designated as Pocket X, will experience overloads in the Zone D wind generation corridor, the north to south Moses South transfer path and Jefferson and Lewis Counties.

[36] *Id.* at 23.

[37] *Id.* at 25. A substantial number of proposed wind and solar projects are seeking to be constructed in Western New York (Zone A) and in the Southern Tier (Zone C). (*See* NYISO Queue, *passim*.)

[38] *Id.* at 27.

the full power from the renewable generation pockets to NYCA load to achieve the CES."[39]

Transource reached similar conclusions. Following the issuance of the CES Order, Transource conducted an analysis to identify transmission needs to achieve the 50x30 Mandate. Transource modeled the WNY PPR and AC PPR in service and, taking the NYISO interconnection queue into account, selected renewable resources to reach the CES prescribed MW levels by zone and based on projected facility economics. Consistent with the NYISO's findings, Transource determined there were significant levels of bottled generation in Northern New York and Eastern New York that would be cut off from reaching the load centers in southeastern New York absent the construction of significant new backbone transmission facilities.

Since parties responded to the NYISO's request for PPRs in its 2016 PPR process, the NYISO has tracked the level of wind curtailments on the existing system and has completed a transmission study focused specifically on whether the implementation of the CES program would require significant transmission upgrades. Its findings are clear. After taking into account the WNY and AC PPR transmission upgrades, the NYISO determined there will be substantial levels of renewable resource curtailments when additional renewable resources are added to the system under the CES program. Unless new transmission facilities are built, the State cannot and will not achieve its 50x30 Mandate to effectively combat climate change. Thus, transmission solutions in the four pockets identified by the NYISO are required to fulfill the CES PPR.

[39] *Id.* at 29 (establishing "...the addition of significant amounts of renewable generation causes stresses and certain violations on the [New York] transmission system at both the backbone (> 200 kV) as well as the underlying (100 – 200 kV) system.").

IV. Conclusion

For the foregoing reasons, the NYPSC now has sufficient information in hand demonstrating the 50x30 Mandate cannot be reached absent the construction of significant additional transmission capability in New York State, and thus, the NYPSC should designate the CES as a PPR in the NYISO's 2018-2019 transmission planning cycle.

Very truly yours,

Joshua Burkholder
Director of Transmission Business Development
Transource New York, LLC