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To: New York Independent System Operator, Inc. ("NYISO")

From: Matthew Schwall, Director of Market Policy & Regulatory Affairs

Date: July 1, 2019

Re: **IPPNY Comments on Draft Grid in Transition Whitepaper**

On May 31, the NYISO posted its draft whitepaper - *Reliability and Market Considerations for a Grid in Transition* - examining the reliability and market implications of New York State's then-existing plans to provide funding to renewable and energy storage resources to support its public policy to decarbonize the power sector. The whitepaper contemplates design enhancements to the energy and ancillary services ("E&AS") markets, the capacity market, and the buyer-side market power mitigation ("BSM") rules to address the impacts of the State's public policy goals and their concomitant expected significant increase in growing amounts of intermittent generation and resources with limited operational duration on the grid. The Independent Power Producers of New York, Inc. ("IPPNY") submits these comments in response to each of the contemplated areas of enhancement in the whitepaper.[1]

[1] IPPNY is a trade association representing companies involved in the development of electric generating facilities, the generation, sale, and marketing of electric power, and the development of natural gas facilities in the State of New York. IPPNY Member companies produce more than 60% of New York's electricity, utilizing almost every generation technology available today such as wind, solar, natural gas, oil, hydro, coal, biomass, and nuclear.

The future of the competitive wholesale electricity markets in New York has never been more affected by the impacts of out of market State action. At no time in the combined 20 years since the competitive markets were initiated have public policy actions created greater turbulence than in these past few years alone. In addition to previously enacted legislation and Executive Orders, the passage of the Climate Leadership and Community Protection Act ("CLCPA"), which Governor Andrew M. Cuomo is expected to sign, now codifies into law and accelerates what were previously very aggressive goals.[2] Under the new law, 70% of electricity must now be produced by renewable power generation by 2030, and the electric power sector must be 100% free of greenhouse gas ("GHG") emissions by 2040. In other words, over the next 10 years, the markets must attract and maintain 10 times the amount of wind and solar power generation than was produced in 2018, as well as attract and maintain technologies capable of meeting the State's reliability requirements. Then, during the following 10 years, reliability, resilience, and affordable electric service must all be achieved on a 100% carbon free basis – even as the transportation and home heating sectors electrify.[3]

The challenges posed by this expansion of renewable generation are significant, and the NYISO will play a critical role in helping the State address those challenges. The whitepaper readily acknowledges that the current market design and constructs do not adequately define reliability products or value the attributes of these necessary

[2] New York State Climate Leadership and Community Protection Act. S.6599/A.8429 (2019). Available at https://legislation.nysenate.gov/pdf/bills/2019/S6599

[3] NYISO Power Trends 2019: Reliability and a Greener Grid (May 2017) at 27. Available at https://www.nyiso.com/documents/20142/2223020/2019-Power-Trends-Report.pdf/0e8d65ee-820c-a718-452c-6c59b2d4818b

reliability products needed to address the duration limitations and variability of renewables to maintain reliability. Passage of the CLCPA exacerbates the shortcomings inherent in the current structure. Significant market changes will be needed to provide the investor certainty for resources needed to facilitate the transition to and implementation of the CLCPA. Without properly designed products and competitively priced services that reflect the actual cost of investments, the future of merchant investment through the competitive markets – as well as the competitive market itself – is substantially at risk.

During the NYISO's Joint Board of Directors/Management Committee meeting on June 3, the NYISO suggested it would take the final whitepaper into consideration in its 2020 Project Prioritization Process and Master Plan. The passage of the CLCPA has heightened the importance of effectively addressing the issues delineated in the whitepaper. Thus, as initially raised at the June 20 Business Issues Committee meeting, IPPNY urges the NYISO to focus its attention on the expeditious resolution of these issues. While the CLCPA encompasses mandates going out to 2050, implementation of new and enhanced market mechanisms and proper price signals in the short term will be critical to ensure the ongoing reliability of New York's system.

I. E&AS Markets

As the whitepaper correctly establishes, "Carbon pricing would invite a broader, more competitive range of solutions than targeted procurements," and thus, would "…consequently reduce the total economic cost of meeting New York's decarbonization goals." IPPNY continues to support implementation of the NYISO's market design to price carbon in the energy market as the most efficient mechanism to reduce carbon

emissions and believes that the Analysis Group supplemental analysis is providing additional important information with respect to the efficiencies inherent in pricing the value of carbon-free and low carbon emitting resources in the markets.[4]

The whitepaper also emphasizes that market design enhancements to the E&AS markets are necessary to provide price signals for resources needed to address the variability and unpredictability of intermittent renewables. Valuing resource flexibility through new and enhanced operating reserve requirements and real-time shortage pricing products, as well as through other market products that value resources that are available when they are needed by operators to maintain reliability, is critical. The NYISO has appropriately decided to focus on making sure its E&AS markets provide the right incentives for performance when the system needs it most. IPPNY supports the NYISO Market Monitoring Unit's ("MMU") recommendations, #2017-1, #2017-2, #2016-1, and #2016-2, in its 2018 State of the Market Report for increasing E&AS net revenues necessary for flexible resources to be available during periods of tight supply.[5] In light of the CLCPA, these enhancements should be designed and implemented as soon as possible.

However, increased E&AS revenues alone will not be sufficient to support necessary investments and overcome existing and growing long term market uncertainty. In today's political and regulatory climate, investors in resources needed to

[4] Potential New Carbon Pricing in NYISO Markets: Supplemental Analysis of Future Economic Impacts. Analysis Group (June 24, 2019). Available at https://www.nyiso.com/documents/20142/7220958/Analysis%20Group%20-%20Supplemental%20Analysis%20of%20NYISO%20Carbon%20Pricing%20Proposal%20-%206-24-2019%20FOR%20POSTING.pdf/51a1ecdf-418a-de0b-ebc6-3783146c09db

[5] 2018 State of the Market Report for the New York ISO Markets. Potomac Economics (May 2019) at 105-106. Available at https://www.nyiso.com/documents/20142/2223763/2018-State-of-the-Market-Report.pdf/b5bd2213-9fe2-b0e7-a422-d4071b3d014b

address the variability and unpredictability of intermittent renewables – which, at least for the foreseeable future, will need to include some new and existing fossil fuel facilities, particularly in the constrained areas of the State – cannot rely on the short term and inherently unpredictable nature of E&AS market revenues as the primary means of recovering the costs of investments. As history has repeatedly demonstrated, policymakers have been unwilling to stomach the level of price spikes that reflect the actual investments required to support the system need during constrained market conditions.[6] There is no reason to think this aversion will be stilled by the need to allow sensible market mechanics to set prices that attract the necessary investments to maintain reliability. This is especially true given that the needed investments to assure reliability will be by primarily fossil-fueled resources. Accounting for the general difficulty in investing and developing even the most efficient fossil fuel infrastructure, as noted above, adequate capacity revenues will continue to be critical to maintaining reliability without out of market reliability agreements.

Moreover, as State-supported zero-marginal cost resources increasingly displace needed fossil fuel resources by offering into the energy market at or below zero across a broader range of hours, there will be fewer and fewer hours in which Locational Based Marginal Prices will be set by merchant suppliers with competitive offers and in which adequate revenues will be available for these fossil fuel resources. If overall competitive market revenues are inadequate, it will require the development of new sources of

[6] If E&AS revenues are the primary means of recovering investments, energy offers will likely need to rise even above the recently adopted $2,000/MWh offer cap. In past instances where prices have increased significantly, such as during the Polar Vortex and other periods of gas system constraints, the wholesale markets have received extra scrutiny by the media and policymakers who are loath to allow prices to exceed a certain threshold.

revenue through market reforms or the use of reliability agreements to retain resources needed to ensure reliability. IPPNY's members have long supported market-based outcomes over regulated outcomes because markets produce the most efficient results, which is why the NYISO must focus its efforts on refining its capacity market constructs in addition to E&AS markets.

II. Capacity Market

Adequate price signals from the capacity market are more important now than ever before considering many facilities required to maintain system reliability have at most 20 years of operation remaining, and many have far fewer. Capacity market revenues that reflect the actual costs of required investments are critical to the continued viability of reliability services. Yet, the short-term nature of the capacity market unnecessarily hinders its effectiveness as a planning tool for long-term investments, regardless of whether such investments are in traditional or renewable resources.

To maintain reliability without out of market reliability agreements, the capacity market must value dispatchable resources in a manner that enables appropriate capital and certain long-term maintenance investments to be made in existing resources in the very near term (during the next 1-10 years). Valuing non-dispatchable and duration limited resources in a manner that relies on dispatchable resources remaining available to the system unnecessarily threatens necessary revenues for existing dispatchable resources. This will accelerate the retirement of dispatchable resources and increase the reliance on intermittent resources that will no longer be able to rely on the

dispatchable resources to fill reliability gaps.[7] E&AS market revenues, in and of themselves, are not sufficient to properly maintain existing resources or even attract investments in resources that are capable of providing the service. Accordingly, getting the capacity price signal correct over the next 1-10 years is critical for the markets to maintain reliability – as opposed to using out of market reliability agreements.

a. Demand Curve Reset ("DCR")

While IPPNY continues its well-documented support for the NYISO adopting a forward capacity market construct, the upcoming DCR process for Capability Year 2021-2022 through Capability Year 2024-2025 will also be very important in ensuring the market will continue to attract needed investment in reliability resources.

Given that there will be unprecedented levels of out of market new entry to meet the 70% renewables mandate by 2030 and no emitting generator will be permitted to operate beyond 2040 at the latest, the upcoming DCR will need to assume that net E&AS revenues decline precipitously and that the costs of the proxy peaking plant are amortized consistent with the electric sector emissions reduction requirements to be promulgated by the New York Department of Environmental Conservation ("DEC") to meet the 2040 goal.[8] The rapid phase out of fossil fuel generation that will be caused by

[7] Importantly, the current measures of the contribution of intermittent renewable resources to reliability relies directly on the continued operation of existing dispatchable resources. As dispatchable resources retire and leave the system, not only is the reliability of the retiring resource lost, but the contribution of intermittent renewable resources to reliability is diminished, thereby creating a "doubling" of impact.

[8] The CLCPA provides that DEC shall promulgate regulations "[n]o later than four years after the effective date of this article," which is January 1, 2020, meaning DEC would not have to promulgate its regulations until January 1, 2024. The lack of timely details concerning how investors must comply with the CLCPA's requirements creates tremendous uncertainty. It is hard to imagine a developer of a project needed to meet an electric reliability need deciding to invest in New York with so much uncertainty over whether their investment will be made worthless by DEC's pending regulations.

the CLCPA will make it impossible for investors to recover their costs in such generation – or any other resource investment – over the current 20-year amortization period. Without significant change, reliability resources will need to rely on out of market reliability agreements.

The anticipated promulgation of the DEC "Peaker Rule" further complicates this issue as it will force repowering or retirement decisions to be made with respect to the existing set of peaking units in New York City and Long Island in compliance plans that are expected to be due by March 2, 2020.[9] It simply cannot continue to be presumed in this reset cycle that an investment today to repower units that must retire under the Peaker Rule by no later than 2025 can be recouped over a 20-year lifespan when there is roughly 15 years between the last year that the Demand Curves set through this reset process will be in place and the CLCPA's 2040 carbon free deadline.

These concerns must be addressed through appropriate setting of the Demand Curve parameters and selection of proxy unit peaking technology, which the NYISO Market Services Tariff ("MST") defines as "the unit with technology that results in the lowest fixed costs and highest variable costs among all other units' technology that are economically viable."[10] Beyond 2040, and likely much earlier, the existing proxy unit, by definition, may no longer be economically viable. The NYISO, therefore, should select a peaking plant consistent with the resources that the state has legislated will continue to be permitted to operate in New York. Appropriate candidates would include offshore

[9] Proposed Part 227-3, Ozone Season Oxides of Nitrogen (NOx) Emission Limits for Simple Cycle and Regenerative Combustion Turbines. 227-3.3. New York DEC. Available at https://www.dec.ny.gov/regulations/116185.html

[10] MST 5.14.1.2.2. Available at https://nyisoviewer.etariff.biz/ViewerDocLibrary/MasterTariffs/9FullTariffNYISOMST.pdf

wind combined with energy storage for the downstate region and on-shore wind or solar combined with energy storage for the upstate region. Ultimately, investments in these combined resources along with the associated interconnection and delivery costs will be what the market needs to signal in order to ensure sufficient dispatchable capacity exists to maintain reliability and provide resilience during contingency events such as hurricanes, ice storms, and other weather anomalies.

All of these investment signals need to be sent sooner rather than later to ensure the appropriate lead time associated with various decision points such as the initial investment decision, raising of capital, initial and detailed designs, permitting and ultimately development and commercial operations. Investable signals need to exist long before the actual need.

IPPNY is also concerned that the setting of the Demand Curve needs to recognize the State's continued plans for subsidized new generation. As a result of the State's actions, even if the NYISO were to aggressively apply BSM to the subsidized entry, the result will still be that a new proxy unit would not have a reasonable expectation that it would ever see a capacity market clearing price that exceeds the 75% Mitigation Net Cost of New Entry ("CONE") that would be the default bid floor for all subsidized entry.[11] This needs to be considered in the DCR by adjusting the average expected excess level and by further reducing the proxy unit's amortization period to ensure appropriate investment signals via the competitive market that reflect actual

[11] Moreover, as discussed in more detail below, various policy makers and even stakeholders are calling for significant relaxation of BSM rules to allow even more subsidized resources to enter the competitive market unmitigated, artificially suppressing competitive capacity signals. The threat alone of these and other activities chills investors' willingness to put capital at risk.

costs. Failure to account for this factor is likely to result in the NYISO relying upon out of market regulated actions to procure the capacity that is needed to meet future reliability needs.

b. Other Capacity Market Projects

There is not enough information available for IPPNY to take a position at this time regarding the MMU's recommendation that the NYISO develop a mechanism for setting capacity prices in accordance with marginal reliability value ("C-LMP"). The MMU should return to stakeholders in the near term with a more detailed presentation on how a C-LMP construct would be implemented. Similarly, IPPNY would urge the NYISO to provide more detail on the whitepaper concept for setting different capacity requirements by season. It is unclear how capacity procured by season impacts compensation and revenue adequacy for generators who are needed in only one season but are available in both seasons; these are important details that must be provided.

IPPNY supports expediting the NYISO's efforts to develop a methodology for calculating more granular capacity ratings that better reflect the marginal reliability value of resources through its Tailored Availability Metric project. Conceptually, capacity resources should be valued based on the reliability benefit they offer system operators. Critical to that value is the dispatchable nature of the resource to respond at all the various times they are needed (e.g., base load needs, morning load pick up, shoulder periods and resource maintenance periods, summer/winter peak and other events).

III. Public Policy Resources & BSM Rules

The passage of the CLCPA into law confirms that the markets will see an even more substantial influx of State-supported resources than has occurred in the past or even was anticipated when the whitepaper was issued. The unmitigated entry of subsidized resources will artificially suppress competitive wholesale E&AS and capacity prices below the levels needed to attract merchant investment. The whitepaper contemplates investigation of a structure for the orderly retirement of excess capacity resources paired with the entry of such policy supported resources, similar to the CASPR construct in ISO-NE. The whitepaper further contemplates that such a structure could allow public policy resources to buy Capacity Resource Interconnection Services ("CRIS") from an existing resource with the obligation for the existing resource to retire before the CRIS rights are transferred. Under this proposal, the public policy resource would receive an exemption from BSM.

Acknowledging the fact that the State has yet to weigh in on the NYISO's completed carbon pricing market design,[12] exploration of the applicability of a CASPR like construct in New York is warranted. As an initial observation, CASPR remains unproven in New England. The benefit of the design is that entry of State-supported resources does not result in further suppression of capacity prices. However, its structure raises a significant concern; because CASPR replaces retiring MWs at a 1:1 ratio with new State-supported MWs, the CASPR mechanism, as implemented in ISO-

[12] Adoption of a carbon pricing program where the price of carbon is set commensurate with achievement of public policy would be far preferable to a CASPR like construct in New York, although some aspects of CRIS transferability will be important to efficiently transition fossil resources to renewable resources regardless of whether a CASPR construct is pursued.

NE, inhibits capacity prices returning to equilibrium as they should in a properly functioning market.[13] The New York capacity market is significantly long and must be permitted to move closer to equilibrium conditions as a quid pro quo to adopting this rule. Therefore, so long as the market remains above equilibrium conditions, consideration of a CASPR-like construct in New York must include applying a MW replacement ratio that is greater than 1:1.

The whitepaper also includes a lengthy explanation of the NYISO's existing BSM rules, processes, and related dockets pending FERC action. IPPNY would urge the NYISO to consider this issue in light of the even more aggressive mandates adopted by the CLCPA. In any event, any changes to the BSM rules must ultimately be approved by FERC. Given that the Commission is actively considering the applicability of BSM rules to public policy resources in more than one open docket, including consideration of capacity market construct proposals in a PJM proceeding that is expected to address the interaction between public policy programs and competitive wholesale markets,[14] the NYISO should await final decisions in those cases before considering fundamental changes to its existing BSM rules.

IPPNY appreciates the opportunity to comment on the draft Grid in Transition whitepaper and looks forward to working with the NYISO and all stakeholders to expeditiously address the concerns raised herein.

Respectfully submitted,

[13] *ISO New England Inc.* 162 FERC ¶ 61,205 (2018).
[14] *Calpine Corp. v. PJM Interconnection,* L.L.C., 163 FERC ¶ 61,236 (2018)

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