New York ISO
Independent System Operator

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Submitted Electronically

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, D.C. 20426

Re: *New York Independent System Operator, Inc.*'s Proposed Tariff Amendments to Enhance Operational Control of Solar Resources and Amend Applicable Settlement Rules;
Docket No. ER21-___-000.

Dear Ms. Bose:

The New York Independent System Operator, Inc. ("NYISO") submits this filing pursuant to Section 205 of the Federal Power Act,[1] and Part 35 of the regulations of the Federal Energy Regulatory Commission ("Commission"), to propose amendments to its Market Administration and Control Area Services Tariff ("Services Tariff") to enhance the NYISO's operational control of solar resources in order to increase the NYISO's ability to reliably and efficiently operate the New York Transmission System.[2] The proposed amendments will extend the market rules that NYISO introduced in 2009[3] for Intermittent Power Resources ("IPRs") that depend on wind as their fuel (referred to as "wind resources") to IPRs that depend on solar energy as their fuel (referred to as "solar resources").

The NYISO currently incorporates more than 1,700 MW of grid-scale, front of the meter wind resources into its Day-Ahead and Real-Time Dispatch each day. By contrast, there is just one 30 MW grid-scale solar resource operating in New York today. The NYISO has evolved its market rules to reliably and efficiently accommodate intermittent wind output. Because the NYISO expects the quantity of grid-scale solar resources to increase dramatically over the next several years,[4] it is prudent to be proactive and apply the rules it developed to dispatch wind resources to intermittent solar resources as well. This timing will also provide solar developers more clarity into the market rules under which they will operate.

[1] 16 U.S.C. §824d.

[2] Capitalized terms not otherwise defined herein shall have the meaning specified in the Services Tariff.

[3] *See New York Independent System Operator, Inc.*, 127 FERC ¶ 61,130 (2009).

[4] As of November 20, 2020, the NYISO Interconnection Queue included nearly 10,000 MW of proposed solar resource projects. In the past two years, solar resources in the Interconnection Queue have increased from less than 4,000 MW to nearly 10,000 MW. *See* Interconnection Queue Excel Files available at www.nyiso.com/interconnections.

Applying the wind resource market rules to solar resources will allow the NYISO's Real-Time Dispatch ("RTD") market software to adjust solar resources' basepoints when economically appropriate and will apply special market settlement rules when basepoint reductions need to be applied to protect system reliability. At times when wind output needs to be reduced, instead of operator-directed, manually applied output reductions, the NYISO relies on RTD to issue targeted basepoint reductions based on the economics of the affected wind resource offers. Using RTD to apply targeted reductions enhances market efficiency and incorporates the impact of the economically determined output reductions into the real time wholesale prices. Applying the market rules NYISO developed for wind to solar resources will build on NYISO's years of experience dispatching wind resources. The revisions proposed in this filing are expected to enhance the reliable operation of the New York Transmission System as significant amounts of new solar resources are added to the system over the next several years.

The NYISO Management Committee unanimously approved the proposed revisions on September 23, 2020.

I. List of Documents Submitted

The NYISO submits the following documents with this filing letter:

1. A clean version of the proposed revisions to the NYISO's Services Tariff ("Attachment I"); and

2. A backline version of the proposed revisions to the NYISO's Services Tariff ("Attachment II").

II. Correspondence

All communications and correspondence concerning this filing should be directed to:

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III. Background

The NYISO manages congestion and constraints with its security constrained dispatch software. In the Real-Time Market, this is executed within the RTD software. The RTD software considers grid conditions and economic offers from suppliers to determine the most efficient dispatch of the system and the corresponding locational prices. When faced with more energy than a constrained system can handle, the RTD software dispatches the most economic flexible resources that can resolve the constraint. When necessary, RTD issues targeted basepoint reductions to wind resources based on the economics of the affected wind resource offers.

Today, solar resources are not considered flexible resources in RTD and, as a result, RTD does not direct them to reduce their output even if such reductions could efficiently relieve a constraint. If no flexible resources are available to relieve the constraint, the NYISO may have to manually identify solar resources to relieve it. After NYISO identifies the solar resources that need to reduce their output, it would then notify the local Transmission Owner and the Transmission Owner would instruct the solar resources to reduce their output. These actions occur outside of the market. These manual out-of-market decisions may over- or underestimate the reduction necessary and may extend the reduction for a longer period than necessary. Inefficient, manual dispatch instructions would become more common and potentially more costly as the number of solar resources participating in the wholesale market increases over the next several years.

To improve the efficient integration of solar resources into the energy market and to improve its ability to manage system security and reliability, the NYISO proposes to apply the same market rules to solar resources as apply to wind resources today. The tariff revisions proposed in this filing leverage the set of existing rules and processes that have reliably incorporated IPRs that depend on wind as their fuel into the RTD market software since 2009.[5] Consistent with the treatment of wind resources, the NYISO is proposing to put solar resources on dispatch and to allow the RTD software to include them among the flexible resources that are eligible for a dispatch-down instruction when it will be efficient to resolve a constraint on the transmission system. The NYISO proposes to require that solar resources submit economic offers indicating the price at which they are willing to reduce their output in the same manner that wind resources offer and are evaluated today. RTD will identify units and megawatts that, in the face of a constrained system, are economically appropriate for basepoint reductions in order to maintain system reliability. RTD will only apply basepoint reductions in the quantity and for the duration that is necessary to resolve the constraint.

To provide incentive to follow NYISO's reduced basepoint instruction, the NYISO also proposes to apply the over-generation penalty that applies to wind resources to solar resources for over generating when RTD determines that basepoint reductions are necessary to maintain reliability. The result will be significantly more efficient than manually directed output reduction measures.

[5] *See New York Independent System Operator, Inc.*, 127 FERC ¶ 61,130 (2009).

IV. Description of Proposed Revisions to the Services Tariff

The NYISO proposes to revise Services Tariff Sections 2.3, 2.23, 4.2, 4.4, 15.3A, 17.1, and 25 to specify how the NYISO will schedule, dispatch and compensate Intermittent Power Resources that depend on solar energy as their fuel. Collectively, these Services Tariff Sections contain the special scheduling, dispatching, and settlement rules that currently apply to wind resources. The revisions proposed in this filing add references to IPRs that depend on solar energy as their fuel to all of the special rules that currently apply to wind resources, so that they will also apply to solar resources.

A. Services Tariff Section 2.3

The NYISO proposes to revise Services Tariff Section 2.3 such that the definition of Compensable Overgeneration will treat solar resources in the same manner as wind resources. Therefore, Compensable Overgeneration will include all Energy actually injected by an IPR that depends on solar energy as its fuel, ***unless*** RTD issues a Wind or Solar Output Limit flag to the resource with its Base Point Signal. When the NYISO applies an output limit, Compensable Overgeneration for affected solar resources will equal three percent of the solar resource's Normal Upper Operating Limit. Again, this is the rule that NYISO currently applies to wind resources.

B. Services Tariff Section 2.23

The NYISO proposes to revise Services Tariff Section 2.23 to expand the existing definitions of "Wind Energy Forecast" and "Wind Output Limit" to also include solar resources. The revised defined terms will be "Wind and Solar Energy Forecast" and "Wind and Solar Output Limit". The proposed revisions to the definition of "Wind and Solar Energy Forecast" indicate that the NYISO will forecast the Energy expected over a specified interval of time from solar resources. The proposed revisions to the definition of "Wind and Solar Output Limit" indicate that solar resources will be eligible to receive a flag indicating that the resource shall not exceed its Base Point Signal when a Wind and Solar Output Limit is imposed.

C. Services Tariff Sections 4.2 and 4.4

The NYISO proposes to revise Services Tariff Sections 4.2 and 4.4 to require IPRs that depend on solar energy as their fuel to submit ISO-Committed Flexible offers to provide Energy in the Day-Ahead Market and Real-Time Market, respectively. The solar resources must also submit a Minimum Generation Bid of zero MW and a Start-Up Bid cost of zero. Such flexible offers allow the NYISO commitment and dispatch software to evaluate the price at which these resources desire to reduce their output, consistent with the approach used today for wind resources.

D. Services Tariff Section 15.3A

The NYISO proposes to revise Services Tariff Section 15.3A such that the discussion of overgeneration charges applies to both IPRs that depend on wind and IPRs that depend on solar energy as their fuel when a Wind and Solar Output Limit is imposed. The language is also

revised to use the defined term "Wind and Solar Output Limit". In addition, the NYISO proposes to remove an obsolete exception that applied to small wind resources that were in commercial operation before 2006. This exception is no longer applicable and can be removed from the tariff to avoid confusion. Finally, the NYISO proposes ministerial clarifications throughout this Section.

E. Services Tariff Section 17.1

The NYISO proposes to revise Services Tariff Section 17.1 such that the tariff defines the Lower Dispatch Limit for solar resources as zero and the Upper Dispatch Limit as the level set by the Wind and Solar Energy Forecast, consistent with the approach used today for wind resources.

F. Services Tariff Section 25

The NYISO proposes to revise Services Tariff Section 25 to indicate that IPRs that depend on solar energy as their fuel will not be eligible for Day-Ahead Margin Assurance Payments. The proposed revision is in the same section that excludes wind resources from being eligible for Day-Ahead Margin Assurance Payments.

V. Effective Date

The NYISO respectfully requests that the Commission issue an order accepting the tariff revisions proposed in this filing by March 16, 2021 (*i.e.*, by the end of the statutory 60-day notice period) and allow a flexible effective date between June 1, 2021 and June 30, 2021. The NYISO cannot propose a more precise effective date until the software changes necessary to implement the proposed tariff revisions are finished, adequately tested, and the software deployment is scheduled. The NYISO proposes to submit a compliance filing at least two weeks prior to the proposed effective date that will specify the date on which the revisions will take effect. Consistent with Commission precedent, the compliance filing will provide adequate notice to the Commission and Market Participants of the implementation date for the solar resource market participation rules proposed in this filing.[6]

The NYISO also requests a waiver of the Commission's regulations to allow the NYISO to make this filing more than 120 days prior to the date on which the proposed tariff revisions are to become operational.[7] No Market Participant will be prejudiced by this request because the proposed implementation timeframe was presented to stakeholders during development of this proposal. As such, Market Participants have been aware of the intended implementation schedule for some time. Furthermore, the NYISO is filing these proposed revisions prior to the

[6] *See, e.g., New York Indep. Sys. Operator, Inc., 106* FERC ¶ 61,111 at P 10 (2004); Docket No. ER 11-2544-000, *New York Indep. Sys. Operator, Inc.*, Letter Order at 1 (February 10, 2011); Docket No. ER15-485-000, *New York Indep. Sys. Operator, Inc*., Letter Order at 2 (January 15, 2015); *New York Indep. Sys. Operator, Inc.*, 151 FERC ¶ 61,057 at P 20 (2015); *New York Indep. Sys. Operator, Inc., 170* FERC ¶ 61,033 at P 34 (2020).

[7] *See* 18 C.F.R. § 35.3(a)(1).

Co-located Storage Resources ("CSR") proposal that the NYISO plans to submit for the Commission's consideration in early February and make effective in the fourth quarter of this year because the CSR tariff revisions are, in part, dependent on Commission acceptance of the revisions proposed herein.

VI. Stakeholder Approval

The Management Committee unanimously approved the revisions to the Services Tariff on September 23, 2020. The NYISO Board of Directors approved the proposed tariff revisions on October 20, 2020.

VII. Service

The NYISO will send an electronic link to this filing to the official representative of each of its customers, each participant on its stakeholder committees, the New York State Public Service Commission, and the New Jersey Board of Public Utilities. The NYISO will also post the complete filing on its website at www.nyiso.com.

VIII. Conclusion

The NYISO respectfully requests that the Commission waive its regulations to allow the NYISO to make this filing more than 120 days prior to the date on which the proposed tariff revisions are to become operational, and issue an order by March 16, 2021 accepting the tariff revisions proposed in this filing without modification, with a flexible effective date in June 2021.

Respectfully submitted,

/s/ James H. Sweeney
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