

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

New York Independent System Operator, Inc.) Docket No. ER21-2460-000

**REQUEST FOR LEAVE TO ANSWER AND ANSWER OF
NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.**

Pursuant to Rule 213 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“Commission”),¹ the New York Independent System Operator, Inc. (“NYISO”)² respectfully submits this request for leave to answer and answer (“Answer”). The Answer responds to certain issues raised in comments and protests³ submitted in response to the NYISO’s compliance filing in this proceeding submitted July 19, 2021 (“Compliance Filing”)⁴ in response to Order No. 2222.⁵ With the limited exceptions described in this Answer, the Commission should accept the Compliance Filing without modification and find that the NYISO

¹ 18 C.F.R. § 385.213 (2021).

² Capitalized terms not defined in this Answer shall have the meaning set forth in the NYISO Open Access Transmission Tariff (“OATT”) and Market Administration and Control Area Services Tariffs (“Services Tariff”).

³ The following parties submitted protests or comments to the Compliance Filing: (i) Advanced Energy Management Alliance (“AEMA”) submitted a protest (“AEMA Protest”); (ii) New York State Public Service Commission, New York State Energy Research and Development Authority, New York Power Authority, City of New York, and New York Battery and Energy Storage Technology Consortium (collectively, the “Clean Energy Coalition”) submitted a protest and comment (“Clean Energy Coalition Protest/Comment”); (iii) the New York Association of Public Power (“NYAPP”) submitted comments (“NYAPP Comments”); (iv) Advanced Energy Economy (“AEE”), Natural Resources Defense Council (“NRDC”), and the Sustainable FERC Project (“SFP”) (collectively, “AEE”) submitted comments and protest (“AEE Comments/Protest”); (v) the Indicated New York Transmission Owners, which include Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., Niagara Mohawk Power Corporation d/b/a National Grid, New York State Electric & Gas Corporation, Orange and Rockland Utilities, Inc., Long Island Power Authority, and Rochester Gas and Electric Corporation (collectively, “Indicated TOs”) submitted comments (“Indicated TOs Comments”); and (vi) AEE, NRDC, SFP, and City of New York (collectively, “Clean Energy and Consumer Advocates”) submitted a protest (“Clean Energy and Consumer Advocates Protest”).

⁴ *New York Indep. Sys. Operator Inc.*, Compliance Filing and Request for Flexible Effective Date, Docket No. ER21-2460-000 (July 19, 2021) (“Compliance Filing”).

⁵ *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 2222, 172 FERC 61,247 (Sep. 17, 2020), 85 Fed. Reg. 70,143 (Nov. 4, 2020) (“Order No. 2222”); Order No. 2222-A, 174 FERC ¶ 61,197 (Mar. 18, 2021); Order No. 2222-B, 175 FERC ¶ 61,227 (Jun. 17, 2021).

has complied with the requirements in Order No. 2222. The Commission should also direct the NYISO to submit a further compliance filing to make the discrete tariff revisions proposed in this Answer to address issues raised in the comments and protests.

I. REQUEST FOR LEAVE TO ANSWER

The NYISO respectfully requests that the Commission exercise its discretion to accept its Answer to the comments and protests that were submitted in the above-captioned Docket. The NYISO may answer pleadings that are styled as comments as a matter of right.⁶ However, the NYISO was not able to submit its Answer within the usual 15-day period due to the volume of comments and protests submitted, and the broad range of issues raised in those comments and protests. The Commission granted an additional two weeks for comments on the NYISO's Order No. 2222 compliance filing to be submitted.⁷ To the extent that the Commission considers the 15-day deadline for responding to motions to apply to this Answer, the NYISO requests that the Commission accept this Answer even if it is deemed to be submitted seven days out-of-time. Given the complexity of the issues, the size of the record, and the fact that commenters and protesters had extra time to prepare their pleadings accepting this answer seven days after the end of the 15-day period will not prejudice the interests of any party.

The Commission also has discretion to accept, and routinely accepts, answers to protests where they help clarify complex issues, provide additional information, are helpful in the development of the record in a proceeding, or otherwise assist in the decision-making process.⁸

⁶ See 18 C.F.R. § 385.213(a)(3) (2021).

⁷ See *New York Indep. Sys. Operator Inc.*, Notice Extending Comment Period, Docket No. ER21-2460 (issued August 3, 2021).

⁸ See, e.g., *Southern California Edison Co.*, 135 FERC ¶ 61,093, at P 16 (2011) (accepting answers to protests “because those answers provided information that assisted [the Commission] in [its] decision-making process”); *New York Indep. Sys. Operator, Inc.*, 134 FERC ¶ 61,058, at P 24 (2011) (accepting the answers to protests and answers because they provided information that aided the Commission in better understanding the matters at issue in the proceeding); *New York Indep. Sys. Operator, Inc.*, 140 FERC ¶ 61,160, at P 13 (2012); and *PJM*

The NYISO's Answer to the protests in this proceeding satisfies those standards and should be accepted because it addresses inaccurate and misleading statements, and provides additional information that will help the Commission fully evaluate the arguments in this proceeding. For the foregoing reasons, the NYISO respectfully requests that the Commission accept this Answer.⁹

II. ANSWER

A. The NYISO's Distributed Energy Resource and Aggregation Participation Model and Related Tariff Requirements Comply with Order No. 2222 and Are Just and Reasonable

Order No. 2222 directed Regional Transmission Organizations ("RTOs") and Independent System Operators ("ISOs") to revise their tariffs to facilitate the participation of distributed energy resources ("DER") in the competitive markets. The Order stated that the new rules will allow DER, in aggregate, to meet minimum size and performance requirements, help address commercial and transactional barriers to DER aggregations, and assist RTOs and ISOs to respond to near-term generation or transmission reliability-related requirements.¹⁰ To facilitate compliance with the Commission's DER rules, Order No. 2222 requires "each RTO/ISO to revise its tariff to establish distributed energy resource aggregators as a type of market participant that can register distributed energy resource aggregations under one or more participation models in the RTO/ISO tariff that accommodate the physical and operational characteristics of each distributed energy resource aggregation."¹¹ Order No. 2222 provided

Interconnection, LLC, 132 FERC ¶ 61,217, at P 9 (2010) (accepting answers to answers and protests because they assisted in the Commission's decision-making process).

⁹ In the interest of limiting the scope of this Answer, the NYISO does not address all issues raised in comments and protests submitted in response to the Compliance Filing. The fact that the NYISO is not responding to all issues raised by parties should not be construed as agreement therewith.

¹⁰ Order No. 2222 at P 4-5.

¹¹ *Id.* at P 6.

RTOs/ISOs with the flexibility to satisfy these requirements in a manner that best suits its individual market design. The NYISO respectfully submits that its DER and Aggregation participation model, in combination with the limited tariff revisions proposed in the Compliance Filing, comply with the Commission’s directives in Order No. 2222.

The Compliance Filing described how its DER and Aggregation participation model, proposed in June 2019 (the “2019 DER Filing”)¹² and for which tariff revisions were accepted by the Commission in January 2020 (the “DER Order”),¹³ largely comply with Order No. 2222. The Compliance Filing proposed several additional tariff modifications to address those issues not included in its 2019 DER Filing related to (i) relevant electric retail regulatory authority (“RERRA”) “opt-in” to wholesale market participation for customers of utilities delivering 4 million megawatt-hours (“MWh”) or less per year, (ii) interconnection of DER for the exclusive purpose of participating in an Aggregation, (iii) prevention of double counting of services provided by a DER, (iv) single resource aggregations, (v) coordination among the NYISO, Aggregators, and Distribution Utilities, and (vi) market participation agreements.

The market rules accepted by the Commission in Docket No. ER19-2276-000, *et al.* and proposed in this docket address the directives of Order No. 2222 in a manner that aligns with the NYISO’s unique market design, system characteristics, and operating requirements. The NYISO’s proposals establish just and reasonable requirements that seek to remove barriers to entry and facilitate the participation of Distributed Energy Resources and Aggregations in the NYISO-administered Energy, Ancillary Services, and Installed Capacity markets, recognizing the physical and operational characteristics of those resources and Aggregations.

¹² New York Indep. Sys. Operator, Inc., Proposed Tariff Revisions Regarding Establishment of Participation Model for Aggregations of Resources, Including Distributed Energy Resources, and Proposed Effective Dates, Docket No. ER19-2276 (June 27, 2019).

¹³ *New York Indep. Sys. Operator, Inc.*, 170 FERC ¶ 61,033 (2020).

Commenters and protestors take issue with how the NYISO has addressed certain discrete elements of the directives in Order No. 2222 and request that the Commission direct the NYISO to adopt alternative approaches. The Commission should reject these proffered modifications. The NYISO's DER and Aggregation market rules implement the Commission's directives within the context of, and across interrelated aspects of, the NYISO's overall market design. The participation model for Distributed Energy Resources and Aggregations, and the related tariff requirements, were developed to be comparable to the qualification and technical requirements applicable to other types of resources participating in the NYISO-administered markets, while also accounting for the physical and operating characteristics that warrant distinctive treatment based on their impact on the administration of the wholesale markets in New York and the reliable operation of the electric grid. As noted by Indicated New York Transmission Owners ("Indicated TOs"), the NYISO continues to develop the detailed technical requirements required for Distributed Energy Resource and Aggregation participation in the wholesale markets it administers.¹⁴ The NYISO commits to discussing those detailed technical requirements (as contained in its business practice manuals) through its normal stakeholder process. The NYISO respectfully submits that no additional "periodic updates" are necessary on top of the NYISO's established shared governance process.

The NYISO's proposal also represents an approach that can be implemented by the NYISO's market software without adversely impacting other Market Participants and the efficient operation of the NYISO-administered markets. Certain comments and protests propose modifications to the NYISO's proposed tariff language that are helpful, and the NYISO agrees to make requested changes as described in Part B of this Answer. With respect to all of the

¹⁴ Indicated TOs Comments at 4.

remaining comments and protests, the Commission should reject those comments and protests and accept the Compliance Filing without further modification.

B. NYISO Responses to Protests and Comments Concerning Particular Features of the NYISO's Compliance Filing

1. Small Utility Opt-In Rules

Order No. 2222 included an opt-in mechanism for customers of small utilities.¹⁵

Pursuant to the final rule, an RTO/ISO is prohibited from accepting bids from a distributed energy resource aggregator if its aggregation includes distributed energy resources that are customers of utilities that distributed 4 million MWh or less in the previous fiscal year, unless the applicable Relevant Electric Retail Regulatory Authority ("RERRA") affirmatively allows customers of that small utility to participate in the wholesale markets through an aggregation.¹⁶ The NYISO proposed to comply with the Commission's directive by prohibiting enrollment of an individual DER when (i) the DER is a customer of a small utility, and (ii) the RERRA has not affirmatively authorized that small utility's customers to participate in the wholesale markets in an Aggregation.¹⁷ The proposed modifications to Services Tariff Section 4.1.10 identify Load Serving Entities ("LSE") as the "small utility" for which the Load 4 million MWh measurement would be calculated, and required each Aggregator to determine whether each individual DER is a customer of a small utility, and, if so, to attest that the RERRA has authorized the customers of that small utility to participate in the wholesale markets as part of an Aggregation.¹⁸

i. Identification of Small Utilities

¹⁵ Order No. 2222 at P 56.

¹⁶ *Id.*

¹⁷ Compliance Filing at 37; proposed modifications to Services Tariff Sec. 4.1.10.

¹⁸ Compliance Filing at 37-38.

A number of protests argue that the 4 million MWh cutoff to identify “small utilities” that must be opted-in by their Relevant Electric Retail Regulatory Authority (“RERRA”) should be calculated by Distribution Utility, rather than by LSE as NYISO proposed in the Compliance Filing. The NYISO does not object to identifying “small utilities” by Distribution Utility rather than LSE, so long as the Commission accepts its proposal that the Aggregator be responsible for attesting that the RERRA has authorized the customers of that small utility to participate in the wholesale markets as part of an Aggregation. The NYISO’s metering and settlement systems are not designed to measure and calculate Energy deliveries by Distribution Utility and would require time-consuming and expensive upgrades to do so. Revising the NYISO’s Tariff to state that the 4 million MWh cut-off applies to each Distribution Utility (rather than to each LSE), therefore, (i) would be inconsistent with how the NYISO meters and calculates system Load, (ii) would require new physical metering infrastructure to determine the annual load of some Distribution Utilities, and (iii) would require the NYISO to develop new software capabilities solely to perform an administrative calculation that will provide little system operation or market settlement value. A more efficient solution is to have the Aggregator obtain the required information from the Distribution Utility and report it to the NYISO.

The NYISO measures New York Control Area (“NYCA”) Load by sub-zone. In some cases, a single Distribution Utility serves all of the sub-zone Load. In other cases, sub-zonal Load is served by more than one Distribution Utility. This occurs when, for example, a municipal electric utility and/or an electric cooperative is located in a sub-zone in addition to the Transmission Owner. The NYISO has not created distinct sub-zones for each municipal electric utility or electric cooperative. When a municipal electric utility or electric cooperative is in a sub-zone, the Load for the municipal utility or cooperative is combined with the Load of the

other Distribution Utility(ies) located in the same sub-zone for the purpose of calculating sub-zonal Load. Which Distribution Utility serves each LSE within a sub-zone does is not a factor in NYISO settlements.

The NYISO proposed to calculate Energy deliveries by LSE (rather than by Distribution Utility) in its compliance filing because its settlement systems calculate Energy deliveries by LSE. Each Load bus on the NYISO's system is associated with a particular LSE. Therefore, the NYISO would be better able to determine the volume of Load each LSE procures through the wholesale market (including bilateral transactions scheduled through the NYISO) over the course of a fiscal year if required to do so by the Commission.

NYISO measurement of Energy deliveries by Distribution Utility would require significant up-front investment of time and resources that would likely delay the NYISO's implementation of its DER and Aggregation participation model. In order for the NYISO to be able to independently verify Distribution Utility Energy deliveries, the NYISO would need to identify those sub-zones in which more than one Distribution Utility serves customers, and then determine what new physical metering infrastructure is required to disaggregate the Load data in a way that allows the NYISO to determine the Energy deliveries by Distribution Utility. The NYISO would also have to develop new software and database systems necessary to collect and analyze the data. The new metering and software enhancements would be developed solely for the purpose of calculating Distribution Utility Energy deliveries, as the NYISO has no other reason to collect or utilize this data.

Alternatively, Commission acceptance of the NYISO's proposed Aggregator attestation requirement would alleviate the immediate need for these physical and software upgrades,

particularly if the Commission agrees that the NYISO does not have an obligation to develop its own Distribution Utility Energy delivery data.

Advanced Energy Economy (“AEE”) protests the NYISO’s proposal to require the Aggregator to attest that each of the DER it enrolls in the NYISO-administered markets is fully eligible to participate in the wholesale markets (which includes satisfying the opt-in requirement where applicable). AEE argues that the Aggregator attestation requirement “adds an administrative burden” for Aggregators, and that it is not efficient for Aggregators to perform this task.¹⁹ The Commission should reject AEE’s argument.

Order No. 2222 did not require RTOs and ISOs to relieve Aggregators of the obligation to perform those tasks necessary for participation in the wholesale markets. Instead, Order No. 2222 directed the RTOs and ISOs to remove any unnecessary and unduly burdensome barriers to entry. Requiring Aggregators to attest to each DER’s eligibility to participate in the wholesale markets is not an unnecessary or unduly burdensome requirement. The NYISO believes the best solution is for the Aggregator to obtain information on MWh served directly from the Distribution Utility and report that information to the NYISO.

An Aggregator will know the identity of each Distribution Utility in whose service territory its resources reside because (1) the Aggregator will either have to complete an interconnection process for each resource or there will already be an interconnection agreement in place with the Distribution Utility,²⁰ (2) one or more of its resources might also be participating in a retail program, and (3) the Aggregator will be responsible for sharing its daily operating plan with the Distribution Utility. Because the Aggregator will have regular and direct

¹⁹ AEE Comments/Protest at 24.

²⁰ Demand Side Resources are not typically required to complete an interconnection process because they do not inject Energy onto the system.

contact with the Distribution Utility concerning any resources located in that Distribution Utility's service territory, the Aggregator is in the best position to (i) identify the Distribution Utility in whose service territory each of its DERs is located, (ii) identify the associated RERRA, and (iii) obtain the Distribution Utility's written confirmation that it either (a) delivers greater than 4 million MWh/year, or (b) delivers 4 million MWh per year or less, and the relevant RERRA has authorized wholesale market participation in that Distribution Utility's service territory. The NYISO does not expect the Aggregator to collect Distribution Utility meter data to calculate the 4 million MWh, but rather to coordinate with the Distribution Utility (as it will need to do for many other purposes in order for its DER to participate in the wholesale markets) and to confirm the necessary details before the Aggregator attests that a particular DER is eligible to participate in the wholesale markets.

ii. Timing of Determining Opt-In Eligibility/4 million MWh

The Indicated TOs propose a revision to Section 4.1.10 of the Market Services Tariff to more clearly identify the gap in time between when the 4 million MWh calculation can be performed (after December 31st) and the date any resulting decision to opt-in, or not to opt-in, would take effect (on May 1, at the start of the next new Capability Year).²¹ The NYISO agrees that the Indicated TOs' proposal to add the words "for the forthcoming Capability Year" to Section 4.1.10 of the Market Services Tariff is a helpful clarification. The NYISO requests that the Commission accept the NYISO's compliance Filing and instruct the NYISO to revise Services Tariff Section 4.1.10 to include the proposed revision in a further compliance filing.

²¹ Indicated TOs Comments at 7.

iii. Attestation Process/Affirmative Opt-In/Presumption of Attestation

The Compliance Filing proposed that an Aggregator complete the small-utility opt-in attestation for each DER's enrollment, and annually thereafter.²² Both the Indicated TOs and New York Association of Public Power ("NYAPP") addressed this component of the attestation proposal in their filings. NYAPP asks that the small utility be notified when an Aggregator attests that the RERRA has opted customers of the small utility into wholesale market participation,²³ and include in the attestation a certification that the Aggregator has notified the applicable small utility of the DER's intention to participate in the wholesale market.²⁴ The NYISO supports NYAPP's requested revision to the Tariff revisions submitted in the Compliance Filing. The NYISO requests that the Commission accept the NYISO's Compliance Filing and instruct the NYISO to require the Aggregator to (a) notify all applicable small utilities that it is enrolling one or more customers of the small utility as a DER in the wholesale markets, and (b) include in its attestation to the NYISO a statement that it provided such notification in a future compliance filing.

The Indicated TOs recommend that the NYISO's proposed revisions to Services Tariff Section 4.1.10 be clarified by replacing "meeting" with "that distributed less than or equal to" the 4 million MWh threshold.²⁵ The NYISO agrees that the Indicated TOs proposal is a helpful clarification. The NYISO respectfully requests that the Commission accept the NYISO's Compliance Filing and instruct the NYISO to make the requested tariff modification in a further compliance filing.

²² Compliance Filing at 37-38.

²³ NYAPP Comments at 5.

²⁴ *Id.* at 6.

²⁵ Indicated TOs Comments at 7-8.

The NYISO proposed to require each Aggregator to update its small utility opt-in attestation on an annual basis, but further proposed that, if the Aggregator failed to submit an updated attestation for a given year, the last validly submitted attestation would carry forward. The NYISO's proposal reflects its experience administering these types of annual (or other regularly scheduled interval) designations, and the desire for efficient operation of the wholesale markets. The Aggregator will have an obligation to provide accurate information to the NYISO in the form of the Attestation. If an Attestation becomes out of date due to a change in the RERRA's opt-in determination, the Aggregator must notify the NYISO of that change. The NYISO expects that Aggregators will maintain compliance with this market rule, and therefore, to avoid disruption to DER, Aggregations, and the markets, proposed to permit an Attestation submitted in a previous year to carry forward.²⁶

The Indicated TOs and NYAPP take contrary positions on how frequently Aggregators should be required to update their attestations after the initial attestation is submitted. The Indicated TOs recommend that Aggregator attestations only be required when a relevant change occurs.²⁷ For example, if a Distribution Utility that historically distributed more than 4 million MWh/year falls below the 4 million MWh threshold, then the Aggregator should be required to submit an attestation; or if a RERRA withdraws its decision to opt customers of a small utility in to participating in the NYISO's DER program, then the Aggregator would be required to submit an attestation. NYAPP, on the other hand, states that Aggregators should be *required* to submit a

²⁶ For example, the 2022 Summer Capability Period Installed Capacity market strip auction is scheduled to open on March 29, 2022, and close on March 30, 2022, prior to the deadline to for Aggregators to attest to RERRA opt-in. This timeline means that an Aggregator may offer capacity for the Summer Capability Period (beginning May 1), but subsequently be prohibited from supplying that capacity if it fails to submit an Attestation, even if the RERRA authorizes the DER to participate in the wholesale market.

²⁷ Indicated TOs Comments at 8-9.

new attestation every year.²⁸ If the Commission determines that the NYISO's proposal is not consistent with the directives of Order No. 2222, then the NYISO prefers the approach advanced by Indicated TOs because it avoids imposing unnecessary administrative burdens and potential for market disruption, but the NYISO recognizes that NYAPP raises valid concerns.

2. Distribution Utility's Role in Authorization of Aggregations

Order No. 2222 requires each RTO/ISO to establish market rules that address market participation agreements for distributed energy resource aggregators.²⁹ To demonstrate compliance with this requirement, the NYISO described the steps that an Aggregator must complete prior to offering an Aggregation's capability in the wholesale markets. While many of the registration steps are similar to the steps required for all Suppliers, the NYISO also proposed to require an Aggregator to submit an attestation that it "has all necessary authorizations from the Distribution Utility and RERRA necessary to establish the Aggregation and for each individual facility to participate in the Aggregation."³⁰

Indicated TOs protest the NYISO's proposal as "impermissibly vague because it fails to provide sufficient details about sequencing and the Distribution Utility's role and responsibilities in the authorization process,"³¹ and ask the Commission to require the NYISO to better define the Distribution Utility's obligations, and to provide a timeline for the various components of the registration and enrollment process.³²

The NYISO understands Indicated TOs' concerns, but believes their comments present a "what comes first, the chicken or the egg" problem. The Indicated TOs propose that the

²⁸ NYAPP Comments at 7-8.

²⁹ Order No. 2222 at P 352.

³⁰ Compliance Filing at 47.

³¹ Indicated TOs Comments at 10.

³² *Id.*

Distribution Utility's 60-day review clock not commence until the Aggregator submits its attestation that its DER(s)/Aggregation has met the criteria for wholesale market participation. However, the Aggregator will not be able to do that, because one of the criteria for wholesale market participation is the attestation that the Aggregation is in compliance with all applicable Distribution Utility tariffs and operating procedures, which operating procedures may depend upon the result of the Distribution Utility's review of the potential impacts on the distribution system.³³

As described in the Compliance Filing, the Distribution Utility's 60-day review period will start on the day that the NYISO sends a notice to the Distribution Utility that the required information has been submitted and is available for review. The NYISO is developing software that will automate the DER and Aggregation enrollment process. Aggregators will be provided with electronic forms that they will complete and submit to the NYISO. Once submitted, the NYISO will undertake an automated review of the data provided, and if that review determines that the submission is complete, the information will be sent to the Distribution Utility to start the 60-day clock. It is possible that the Distribution Utility will not receive all of the information it requires for its analysis, or that some of the information will prove inaccurate (for example, the Aggregator might accidentally supply an incorrect meter number). To the extent that these types of issues arise, the Distribution Utility should promptly inform the NYISO of its concern, but, to the extent possible, continue its reliability review. If the Aggregator is not able to address a Distribution Utility's valid concern within a time that allows the Distribution Utility to complete its review, then the NYISO expects that the Distribution Utility will notify the NYISO within the 60-day window of its inability to complete the review.

³³ Order No. 2222 at P 352.

3. Issues Related to DER Participation in Both the Wholesale and Retail Markets

Order No. 2222 required each ISO/RTO to revise its tariff to include, “any appropriate restrictions on the distributed energy resources’ participation in RTO/ISO markets through distributed energy resource aggregations, if narrowly designed to avoid counting more than once the services provided by distributed energy resources in RTO/ISO markets.”³⁴ The Commission granted the RTO/ISOs regional flexibility with respect to the restrictions each proposes to minimize market impacts caused by the double counting of services by distributed energy resources in the RTO/ISO markets.³⁵

In its Compliance Filing, the NYISO proposed to address the following directive with regard to a DER’s provision of both wholesale and retail services in a new Section 4.1.10.6 of the Services Tariff.

A Resource participating in an Aggregation shall not be eligible to supply Energy, Operating Reserves, Regulation Service, or Installed Capacity in the ISO-administered markets when the Resource provides the same or substantially similar service in a retail market or program.

When a Resource participates in one or more retail markets or programs, an Aggregator may only register that Resource in an Aggregation that does not provide the same or substantially similar service in the ISO-administered markets. For example, if a Resource provides Installed Capacity or a substantially similar service to a retail market or program, the Aggregator shall not enroll the Resource in an Aggregation that also supplies Unforced Capacity in the ISO’s Installed Capacity market. The Aggregator may, however, enroll the Resource in an Aggregation that only supplies Energy and Ancillary Services in the ISO-Administered Markets.

The NYISO’s proposed restrictions prevent a DER from enrolling in an Aggregation to provide the same MW for the same or a substantially similar service in wholesale and retail programs; preventing the DER from being compensated twice for providing the same or a substantially similar service.

³⁴ *Id.* at P 160.

³⁵ *Id.* at P 164.

A number of comments and protests argue that the use of the phrase “same or substantially similar service” is vague as the NYISO’s Tariffs do not define what constitutes a “substantially similar service.”³⁶ The NYISO has carefully considered the arguments raised in several of the protests, and agrees that the language “substantially similar service” results in unneeded uncertainty about what programs are prohibited. The NYISO also agrees with comments indicating that the New York Public Service Commission has taken an active role, specifying when participants in specific retail programs cannot also participate in the wholesale markets.³⁷ The NYISO does not object to removing the phrase “or a substantially similar service” from the requirements in Section 4.1.10.6 of the Services Tariff, so that the requirements only apply to the provision of the “same” service in the wholesale and retail markets.³⁸

To administer this updated requirement, the NYISO requests that the Commission instruct it to amend its proposed Aggregator attestation requirement in Section 4.1.10.5 of the Services Tariff to require that an Aggregator also attest that the individual DERs participating in a given aggregation are not providing through a retail market or program the same service(s) that the aggregation will be providing in the NYISO-administered markets. The Aggregator has a direct relationship with each DER that participates in its aggregation and must, necessarily, be aware of the retail programs that

³⁶ See Indicated TOs Comments at 10-11; Clean Energy Coalition Protest/Comments at 4-9; AEMA Protest at 4-8; AEE Comments/Protest at 18-20.

³⁷ See AEE Comments/Protest at 19-20. The NYISO expects that the New York Public Service Commission will continue to issue decisions identifying retail participation programs that preclude participation in the NYISO-administered markets.

³⁸ The primary concern raised in the protests can be addressed by removing the phrase “or a substantially similar service” from the proposed revisions to the Services Tariff. The NYISO does not agree that changing “the same service” to “an identical service” would remove ambiguity. The term “same service” is consistent with the language the Commission used in its Order No. 2222.

each of its DERs participate in.³⁹ The Aggregator is responsible for determining (a) which DERs to include in an Aggregation, and (b) how each Aggregation it administers participates in the NYISO-administered wholesale markets. The Aggregator is the entity best positioned to achieve compliance with these requirements when enrolling DERs in its Aggregation(s).

The amendment to the Aggregator attestation requirement that the NYISO proposes above would also be consistent with the Aggregator's duties under proposed Market Services Tariff Section 4.1.10.7.3. That Tariff provision makes the Aggregator responsible for ensuring that its Aggregation, and the individual resources participating therein, comply with all applicable rules and regulations of the RERRA. Such retail rules and regulations could include restrictions limiting dual participation in wholesale and retail programs.⁴⁰ Consistent with Order No. 2222, the RERRA also decides whether to opt-in the customers of small utilities to participate in the RTO/ISO markets through aggregations.

Finally, some commentators and protestors argue that the NYISO's proposal to bar the enrollment of DERs in an Aggregation if they provide the "same" service at retail that the Aggregation has registered to provide in the NYISO-Administered Markets is not a sufficiently narrow method of addressing double counting and duplicate compensation concerns.⁴¹ The comments and protests would instead require the NYISO to perform granular monitoring of the resources that participate in an Aggregation and granular settlement of the Aggregation that the NYISO is not capable of performing.⁴² The NYISO will not have the ability to monitor all of the

³⁹ If an Aggregator does not know what retail programs its DERs participate in, or the retail obligations of each of its DERs, then the NYISO does not know how the Aggregator will be able to efficiently respond to the NYISO's dispatch instructions.

⁴⁰ The New York Public Service Commission has conditioned participation in some retail distributed energy resource programs on those resources not also participating in the NYISO-administered markets. The New York Public Service Commission's exercise of authority is consistent with Order No. 2222 at PP 61, 162 (addressing the scope of RERRA authority).

⁴¹ See, e.g., Clean Energy Coalition Protest/Comments at 8; AEE Comments/Protest at 19.

⁴² Practically speaking, to enforce the more granular prohibitions proposed in the protests and comments, the NYISO's automated systems would need to: (i) know which prohibited ("same") services (if any) each DER in an Aggregation provides at retail, (ii) track the operation of each individual DER within each Aggregation providing wholesale services, and (iii) modify settlements based on how an Aggregation dispatched its DERs in real-time to

DER that participate in an Aggregation to determine which DER in the Aggregation are providing each wholesale service the NYISO schedules the Aggregation to provide. The NYISO will not be capable of determining (i) whether a DER that participates in an Aggregation is providing a service in the wholesale markets that it is not eligible to provide, or (ii) if a DER is providing the same service in the retail and wholesale markets at the same time. Enforcing such requirements would necessitate more intrusive (and expensive) metering and telemetry requirements for Aggregations and extensive improvements to the DER software the NYISO is in the process of developing. Imposing such tracking and settlement requirements would significantly delay NYISO's implementation of DER in its markets. The proposed revisions to Section 4.1.10.6 of the Services Tariff that preclude an Aggregator from registering a DER in an Aggregation that provides the same service in the NYISO-administered markets that the DER provides at retail is the narrowest measure the NYISO can enforce.

For the reasons explained above, it is reasonable for the NYISO to address double counting and duplicate compensation through its Aggregation enrollment and attestation rules. Consistent with this response, the NYISO requests that the Commission instruct it to (a) remove the references to “substantially similar” services from proposed Section 4.1.10.6 of its Market Services Tariff, and (b) amend its proposed Aggregator attestation requirement in Section 4.1.10.5 of the Services Tariff to require that an Aggregator also attest that the individual DERs participating in a given aggregation are not providing through a retail market or program “the same service” that the aggregation will be providing in the NYISO-administered markets.

4. Metering and Telemetry

Several protestors and commenters argue that the NYISO's metering and telemetry requirements for Aggregations do not fully comply with Order No. 2222 and are not just and

prevent payment when a “prohibited” DER is used to provide a service. It would be near-impossible to enforce the requirement in the Day-Ahead Market, since there is no DER-specific operating data for the NYISO to review.

reasonable, particularly the telemetry requirement that an Aggregator must provide six-second telemetry for its Aggregation and the requirement that metering data be submitted by noon the day after the operating day for use in the NYISO's settlement process.⁴³ As detailed below, the Commission should reject these arguments and accept the NYISO's metering and telemetry requirements without modification.

Order No. 2222 requires each RTO/ISO to establish market rules that address metering and telemetry hardware and software for distributed energy resource aggregations, but does not specify the metering and telemetry requirements each RTO/ISO must use.⁴⁴ Instead, Order No. 2222 directs RTOs and ISOs to develop metering and telemetry requirements that meet the needs of distributed energy resource aggregations in their regions, and explain in their compliance filings why those requirements are just and reasonable, and do not pose unnecessary and undue barriers to individual distributed energy resources participating in an aggregation.⁴⁵

The Commission accepted metering and telemetry rules for the NYISO's DER and Aggregation participation model in the DER Order in Docket No. ER19-2276.⁴⁶ The Commission-accepted rules are described in the NYISO's Order No. 2222 Compliance Filing. At particular issue in comments and protests is the NYISO's requirement that Aggregations satisfy the metering and telemetry standards applicable to Generators, including the requirement that Generators provide six-second telemetry. These requirements provide the NYISO with both the real-time operational data and after-the-fact metering data that the NYISO requires to

⁴³ NYAPP Comments at 11-14; AEMA Protest at 8-12; AEE Comments/Protest at 10-13.

⁴⁴ Order No. 2222 at PP 262-263.

⁴⁵ *Id.* at PP 263-264.

⁴⁶ See DER Order, 170 FERC ¶ 61,033 at PP 72-74 (2020). The Commission accepted in a separate proceeding additional requirements concerning metering and accounting practices for Energy Storage Resources referenced in the 2020 DER Order. See *New York Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,225 at PP 200-201 (2019); order on compliance, 172 FERC ¶ 61,119 at P 26 (2020).

determine whether Aggregations are responding to NYISO direction and to timely and accurately implement its settlement process for Aggregations and other Market Participants.

The six-second telemetry requirement for Aggregations was protested in Docket No. ER19-2276 by many of the same parties that seek to re-litigate the telemetry requirement in this proceeding.⁴⁷ The substantive concerns the protesters raise in their comments in this Docket are the same concerns they raised, and the Commission ruled on in P 74 of its DER Order.

As explained in Docket No. ER19-2276 and reiterated here, the NYISO's telemetry requirements for Aggregations are just and reasonable and do not create an undue burden. The six-second scan rate applicable to all Generators and Aggregations is needed to (i) maintain situational awareness of the NYCA electric system, (ii) operate the NYISO's Automatic Generation Control process to maintain load and generation balance, (iii) meet mandatory bulk power system reliability criteria, including criteria unique to New York State, and (iv) respond to emergency conditions.⁴⁸

In particular, the NYISO currently uses six-second telemetry signals to meet mandatory reliability criteria required by the New York State Reliability Council ("NYSRC"). NYSRC

⁴⁷ See *New York Independent System Operator, Inc.*, Comments of Advanced Energy Management Alliance, Advanced Energy Economy, Consumer Power Advocates, Energy Spectrum, Inc., Natural Resources Defense Council (NRDC), Sustainable FERC Project, the New York Battery & Energy Storage Technology Consortium (NY-BEST), Docket No. ER19-2276-000 at 13-16 (July 18, 2019). The 2019 protests argued that the NYISO's six-second telemetry requirement for Aggregations was unjust and unreasonable because it would create a barrier to entry for smaller DERs, did not provide a meaningfully more accurate portrayal of resource performance than a one-minute telemetry requirement, and did not meaningfully contribute to reliability compared to a one- or five-minute requirement. The Commission rejected these arguments in P 74 of its 2020 DER Order and accepted the NYISO's telemetry requirements without modification.

⁴⁸ See *New York Independent System Operator, Inc.*, Request for Leave to Answer and Answer of New York Independent System Operator, Inc., Docket No. ER19-2276-000 at 12-14 (August 2, 2019) ("NYISO DER Answer"); see also, DER Real-Time Telemetry and Alternate Telemetry Approach for Small DER, Market Issues Working Group Presentation (Sept. 28, 2018), available at: <https://www.nyiso.com/documents/20142/2549675/DER%206-Second%20Telemetry%20-%20MIWG%2020180928%20MIWG.pdf>; DER & NYISO's Real-Time Telemetry Needs (Sept. 24, 2018), available at: https://www.nyiso.com/documents/20142/2549675/DER%20and%20NYISO%20Telemetry%20Requirement%20-%2020180928_MIWG.pdf.

Requirement D.1 for Mitigation of Major Emergencies requires that when a transmission facility experiences a thermal overload at or above its Short Term Emergency rating, the NYISO must take immediate corrective action, and must reduce the loading on the transmission facility below the Short Term Emergency Rating within five minutes.⁴⁹ The NYISO requires up-to-date (*i.e.*, six-second) information from resources to respond to the thermal overload, and to schedule resources in a manner that mitigates the issue in compliance with the reliability standard. Six-second data allows the NYISO's operators and software (Security Constrained Economic Dispatch and Automatic Generation Control) to identify the optimal resource schedules to mitigate the thermal overload and communicate those schedules to the applicable resources. Changing the telemetry scan rate from six seconds would materially hamper the NYISO's ability to respond to such emergencies.

In developing the Aggregation participation model, the NYISO considered stakeholder concerns over the costs of telemetry as it developed its requirements. However, the NYISO determined that the six-second requirement should be extended to Aggregations based on its experience operating New York's bulk power system, the expected impact of DER and Aggregations on that system, and the reliability criteria that the NYISO is required to meet.

The Commission assessed the protests and the NYISO's input in Docket No. ER19-2276 and determined that the NYISO's telemetry requirements were just and reasonable.⁵⁰ In particular, regarding the six-second telemetry requirement, the Commission explained:

We also find NYISO's proposed telemetry requirements to be just and reasonable. NYISO explains that requiring six-second telemetry data allows it to optimize system operations and meet certain reliability standards. Further, NYISO

⁴⁹ New York State Reliability Council, *Reliability Rules & Compliance Manual*, Part D. Emergency Operations R1.2 (vol. 44) (Apr. 11, 2019), *available at*: <http://www.nysrc.org/pdf/Reliability%20Rules%20Manuals/RRC%20Manual%20V44.pdf>.

⁵⁰ See DER Order at P 74.

explains that relaxing this requirement by, for example, changing the telemetry scan rate from six-seconds to one-minute, would materially hamper its ability to respond to system emergencies. NYISO also states that the six-second telemetry requirement and other proposed telemetry standards are consistent with standards applicable to other suppliers. We find this requirement is necessary to meet reliability standards and respond to emergencies, and also is consistent with NYISO's requirements for other resources.⁵¹

Order No. 2222 does not prescribe specific metering and telemetry requirements for RTOs and ISOs to implement. Instead, it allows each region to develop market rules appropriate for its needs. The NYISO developed its metering and telemetry requirements in Docket No. ER19-2276. The Commission should not permit the protesters to re-litigate issues that it already considered and decided when it accepted NYISO's DER and Aggregation participation model in its DER Order. On the basis of the Commission's acceptance of the metering and tariff requirements in the Section 205 proceeding, the NYISO completed these requirements and is in the process of coding them in its software. Any change to the NYISO's accepted Tariff rules that would permit Aggregations to provide telemetry at intervals other than on a six-second basis would require changes to the DER implementation that is already underway, including changes to software validations, new registration parameters, new operational and settlement procedures, and possible changes to how the NYISO assesses charges and penalties to Aggregations. Requiring the NYISO to make these changes would increase the costs the NYISO will incur to develop and implement DER and Aggregations and would delay the implementation of DER and Aggregations in the NYISO markets. For the reasons explained in this response, allowing the protesters a second bite at the apple would be highly inefficient, would delay implementation of DER in NYISO's markets, and would increase the NYISO's cost of implementing its DER rules.

⁵¹ *Id.*

The NYISO responds to other concerns about metering and telemetry that are raised in the comments and protests as follows:

- a) Advanced Energy Management Alliance (“AEMA”) argues the telemetry requirements will exclude the ability of residential customers to participate in Aggregations.⁵² However, the NYISO has established flexible rules for small DER with a response of under 100 kW participating in an Aggregation. The option to utilize alternative measurement and verification tools (such as calculating six-second telemetry values derived from five minute data in place of real-time measurement) avoids the need for small facilities to install more costly hardware and software that is required for conventional Resources.⁵³ AEMA also reiterates its argument from the Docket No. ER19-2276 proceeding that the NYISO should only require six-second telemetry for DERs greater than one MW in size.⁵⁴ As explained above, the Commission already considered arguments concerning the application of the six-second telemetry rules for DER Aggregations⁵⁵ and accepted the NYISO’s telemetry requirements in P 74 of its DER Order.
- b) AEMA next asserts that an Aggregation with a Resource using calculated, rather than six-second, telemetered values will be prohibited from providing Ancillary Services.⁵⁶ AEMA’s assertion is incorrect. As the NYISO explained in Docket

⁵² AEMA Protest at 8.

⁵³ 2019 DER Filing at 60.

⁵⁴ AEMA Protest at 12.

⁵⁵ *See* Footnote 49.

⁵⁶ AEMA Protest at 9.

No. ER19-2276 and its Compliance Filing, Aggregations will be eligible to provide Operating Reserves and Regulation Service to the extent that all the DER within the Aggregation qualify to provide those services. All Regulation Service providers operating in the NYCA must provide six-second telemetry because NYISO operators require six-second control over the Resource.⁵⁷ Therefore, an Aggregation containing one or more facilities that utilize calculated values will not meet the eligibility requirements. Utilization of calculated values however, does not disqualify an Aggregation from providing Operating Reserves.

- c) On page 9 of its protest AEMA states that when a customer has one or more DER assets that it wishes to register as different technology types, “each asset will require its own metering and telemetry, in addition to having metering and telemetry on the load at the point to interconnection.” AEMA argues this is an undue barrier. AEMA is correct that each facility in an Aggregation must be separately telemetered (or have a permitted alternative scheme) and metered. Order No. 2222 did not limit metering and/or telemetry to the aggregation level, but instead provided flexibility to ISO/RTOs to propose specific metering and telemetry requirements for individual distributed energy resources in an aggregation.⁵⁸ The metering and telemetry rules that AEMA is protesting were not proposed in the NYISO’s Order No. 2222 compliance filing. The NYISO

⁵⁷ The NYISO requires resources that are qualified to be regulation suppliers to be able to follow six-second AGC basepoint signals. The definition of “Dispatchable” in Section 2.4 of the Services Tariff states “Dispatchable Resources that are providing Regulation Service will follow six-second AGC Base Point Signals.” In addition, Section 4.2 of the NYISO’s Ancillary Services Manual explains that Regulation Service is bid into the market by Regulation Service qualified suppliers that have AGC capability and that wish to participate in the Regulation Service market.

⁵⁸ Order No. 2222 at P 267.

proposed to apply these rules to DERs and Aggregations in Docket No. ER19-2276, and AEMA (via its Comments submitted as one of the “Joint Parties”) did not challenge this component of the NYISO’s proposal. The Commission accepted the NYISO’s proposed Tariff revisions after considering protests filed by AEMA and others in its DER Order. As detailed above, the NYISO’s Commission-accepted metering and telemetry requirements are essential to obtain required performance data for real-time operations and for settlement purposes.

- d) AEMA also reiterates its argument from the Docket No. ER19-2276 proceeding that the costs of meeting the telemetry requirements create an undue barrier to entry and provided certain estimates of telemetry costs.⁵⁹ As the NYISO previously reported to the Commission in response to the same arguments in Docket No ER19-2276, providing telemetry—at any scan rate—is a cost that must be borne by Aggregators and individual DERs.⁶⁰ During its 2018-2019 DER market design process, the NYISO undertook an evaluation of the costs for providing six-second telemetry in response to stakeholder concerns.⁶¹ The results of the NYISO’s evaluation were well below the AEMA estimates.⁶² The expected costs are reasonable, and are necessary to allow the NYISO to maintain situational awareness, comply with applicable reliability criteria, and respond to emergency conditions. Additionally, the NYISO performed an evaluation of new technologies that could help enable the participation of DER in the NYISO

⁵⁹ AEMA Protest at 10.

⁶⁰ NYISO DER Answer at 13.

⁶¹ *Id.*; *see also*, NYISO presentations at footnote 49.

⁶² NYISO DER Answer at 13.

markets in 2019. As a result of this evaluation, the NYISO will allow the use of Software Defined Wide Area Networks (“SD-WAN”) as an alternative to the existing Multi-Protocol Label Switching (“MPLS”) to facilitate transmission of Aggregation telemetry data to and from the NYISO. The SD-WAN technology and applicable software can be installed and connected in a matter of weeks, much quicker than MPLS installation and connection. The NYISO also expects an SD-WAN solution to cost significantly less to install and maintain than MPLS connections. Based on the information it reviewed, the NYISO believes the utilization of SD-WAN technology avoids the special construction costs and network maintenance fees associated with MPLS over dedicated lines. As described in the Appendix to the NYISO’s *Enabling Technologies for Distributed Energy Resources* report,⁶³ an SD-WAN solution has been operational in a different ISO for a number of years.

- e) AEMA next argues that the Aggregator telemetry requirements are unreasonable because Aggregators will be required to provide multiple streams of telemetry and revenue quality meter data for DER Aggregations, which exceeds the requirements for other Generators.⁶⁴ The telemetry and metering requirements for an Aggregation consisting of multiple separate resource types are necessarily more complex than the requirements that apply to an individual Generator. The Aggregator has voluntarily assumed the role of offering multiple Resources into

⁶³ Enabling Technologies for Distributed Energy Resources: An Evaluation of Alternative Telemetry Communication Technologies (December 2019); *available at*: <https://www.nyiso.com/documents/20142/1391862/Enabling-Technologies-for-DER-Study-Report.pdf/>.

⁶⁴ AEMA Protest at 9.

the NYISO's markets via a single, composite Bid, and operating those Resources to achieve the schedule and dispatch that the NYISO provides. Unlike a Generator, a DER's performance may include Demand Reduction, which is not always eligible to be paid the LBMP. An Aggregation may also include Energy withdrawals if it contains an Energy Storage Resource. In these cases, the Aggregation will be required to provide distinct streams of data for Energy injections, Energy withdrawals, and Demand Reductions to the extent that each response type is included in the Aggregation. Therefore, AEMA is correct that an Aggregator may need to provide metering data in excess of what is expected of a traditional Generator when the Aggregation includes resources that respond to NYISO dispatch signals via Demand Reductions, and/or Energy withdrawals. However, the telemetry and metering requirements, taken as a whole, are not any greater than the combined requirements of the participating resource types. An Aggregator will not be required to support telemetry and metering for Demand Reductions or Energy withdrawals for an Aggregation that does not include any Demand-Side Resources or Energy Storage Resources. These requirements are necessary for real-time grid operations and accurate settlements (*e.g.*, to properly settle Demand Reductions consistent with Order No. 745).

- f) AEMA asserts that the NYISO does not provide an explanation for why it is necessary to require six-second telemetry for each wholesale service regardless of what the individual DERs provide, and argues there should be an Aggregation-based minimum size requirement below which telemetry would not be required.⁶⁵

⁶⁵ AEMA Protest at 10.

Similarly, AEE argues that the NYISO does not provide an explanation for why the Aggregation model requires six-second telemetry for all Aggregations, regardless of the services provided.⁶⁶ As the NYISO explained in response to similar protests by these parties in Docket No. ER19-2276,⁶⁷ six-second telemetry information is necessary to maintain system reliability, provide grid operators with situational awareness, and respond to emergency situations.⁶⁸ The Commission accepted the NYISO's metering and telemetry requirements in that docket, noting that the "requirement is necessary to meet reliability standards and respond to emergencies, and also is consistent with NYISO's requirements for other resources."⁶⁹

- g) AEE argues the NYISO's statements concerning six-second telemetry are difficult to reconcile with the large quantity of DERs already operating in New York, referencing New York's retail net metering program.⁷⁰ The NYISO, however, does not have operational control over resources that only participate in retail net metering programs. Retail net metering resources that do not participate in the NYISO's wholesale markets do not respond to the NYISO's dispatch instructions and are not relied upon by the NYISO to achieve compliance with applicable reliability rules. The NYISO has no authority to require any metering for DER that only participate in retail net metering programs.

⁶⁶ AEE Comments/Protest at 11-13.

⁶⁷ See NYISO DER Answer at 12-14.

⁶⁸ See *Id.*

⁶⁹ DER Order at P 74.

⁷⁰ AEE Comments/Protests at 12.

- h) NYAPP raises questions concerning the impact of the telemetry and metering requirements on small utilities.⁷¹ The metering and telemetry requirements are applicable to Aggregators and Aggregations, not to small utilities. The NYISO is willing to work with small utilities to address specific concerns.
- i) Finally, AEMA and AEE argue that the NYISO's requirement that settlement-quality meter data be submitted by noon on the day after an operating day creates barriers to participation, particularly for smaller entities.⁷² They argue that this will require duplicative metering infrastructure as Aggregators will not have access to utility meter data in time to meet the deadline. AEMA requests an extension of this deadline. The NYISO's market rules do not require an Aggregator to submit metering data for use in the NYISO's settlement process by noon on the day after the operating day. The market rules require the applicable metering authority to submit that data. An Aggregator may act as the meter authority for its Aggregation(s) if it chooses to be a Meter Services Entity, but it not obligated to do so.⁷³ The Aggregator may decide to utilize the applicable Transmission Owner to serve this role, or to employ a third-party Meter Services Entity, in which cases the Transmission Owner or third-party would be required to submit the data.

⁷¹ NYAPP Comments at 11-14

⁷² AEMA Protest at 11-12; AEE Comments/Protest at 13.

⁷³ An Aggregator acting as the Meter Services Entity for its Aggregation(s) assumes the role of the meter authority for those DER. Assumption of this additional role is not required by the NYISO's tariffs, and an Aggregator may alternatively: (i) utilize the applicable Transmission Owner, or (ii) a third-party Meter Services Entity to act as the meter authority for its Aggregation(s). The requirement to submit meter data by noon on the day following the operating day applies to the applicable meter authority.

Order No. 2222 did not prescribe specific metering and telemetry requirements for DER Aggregations, and the NYISO did not propose new metering and telemetry requirements in this docket, but instead relied on the metering and telemetry requirements proposed in Docket No. ER19-2276. Those requirements were the result of an extensive stakeholder process and subject to stakeholder approval and were accepted by the Commission in the DER Order. The NYISO is working diligently to implement the accepted rules. For the reasons explained in this section of the NYISO's Answer the Commission should reject all protests of the NYISO's metering and telemetry requirements.

5. Aggregation Rules

i. Requirement that Aggregations Only Provide Wholesale Services that All Resources in Aggregation Can Provide

AEMA⁷⁴ and AEE⁷⁵ argue that the NYISO's requirements that (1) Aggregation may only qualify to offer the Ancillary Services that all individual facilities in the Aggregation are qualified to provide, and (2) each "heterogeneous" Aggregation⁷⁶ must operate using a fully dispatchable, continuous Bid curve across their entire operating range should be rejected because the NYISO has not demonstrated that it adequately considered the capabilities of the heterogeneous resource as a whole. The NYISO explained why these requirements are necessary

⁷⁴ AEMA Protest at 12-14.

⁷⁵ AEE Comments/Protest at 6-9.

⁷⁶ Under the rules that NYISO filed and the Commission accepted in Docket No. ER19-2276, "homogeneous" aggregations follow the same bidding rules as stand-alone resources of the same type. For example, a single-resource Aggregation of just wind Intermittent Power Resources or of just solar Intermittent Power Resources will follow the bidding rules that apply to stand-alone wind Intermittent Power Resources or to solar Intermittent Power Resources.

in Docket No. ER19-2276 and the Commission accepted the requirements as just and reasonable in that docket.⁷⁷

On pages 42 through 45 of the 2019 DER Filing the NYISO explained its Ancillary Services requirements for Aggregations, including DER Aggregations. In addition to the reasons that the NYISO provided in its filing letter, the NYISO notes that Northeast Power Coordinating Council (“NPCC”) Directory 5, Requirement 6 (Sustainability of Operating Reserve) requires that “A Balancing Authority’s synchronized reserve, ten-minute reserve, and thirty-minute reserve, if activated, shall be sustainable for at least one hour from the time of activation.”⁷⁸ The NYISO is required to ensure that *all* resources it relies upon to provide Operating Reserves can sustain their operating for at least one hour following activation. The NYISO can only ensure this requirement is satisfied if it knows that all of the resources in an Aggregation that provides Operating Reserves can satisfy the NPCC sustainability requirement.

On page 29 of the 2019 DER Filing the NYISO explained that Aggregations will not be considered for commitment and will always be treated as available for dispatch, consistent with their Bids. The NYISO explained this is appropriate because it does not have the means to effectively economically optimize the starts and stops of individual facilities within an Aggregation, and because the NYISO will not know which resources within an Aggregation are operating and which are not. Requiring the NYISO to consider resource start-up time, start-up costs, minimum down time, or other similar factors and issue commitments to resources that participate in an Aggregation would bring the NYISO’s DER development effort to a dead stop.

⁷⁷ See DER Order, 170 FERC ¶ 61,033 (2020) at PP 1, 13 (participation model will be dispatch-only), P 16 (an Aggregation may only qualify to offer the ancillary services that all individual facilities in the Aggregation are qualified to provide), P 34, Ordering Paragraph (A).

⁷⁸ NPCC Directory 5; *available at*: <https://www.npcc.org/content/docs/public/program-areas/standards-and-criteria/regional-criteria/directories/directory-5-reserve-20200426.pdf>.

Adding resource commitment to the NYISO's DER rules would require a complete redesign of the rules the Commission accepted Docket No. ER19-2276 and might not be technically feasible. Bidding requirements for "heterogeneous" DER Aggregations were addressed on pages 31-32 of the NYISO's 2019 DER Filing.

Neither of the requirements identified above were the subject of protests in Docket No. ER19-2276. The NYISO is fully engaged in the process of implementing the rules that the Commission accepted in Docket No. ER19-2276. An instruction that the NYISO must change its DER implementation, issued more than a year and a half after NYISO's Tariff revisions were accepted, would further delay the implementation of DER in the NYISO's markets.⁷⁹

On page eight of its protest AEE argues that if an Aggregator adds a "small" fully controllable Energy Storage Resource to a group of Intermittent Power Resources, then the Energy Storage Resource should gain the benefit of the special exceptions to the operating and settlement rules that apply to Intermittent Power Resources. In New York, an Intermittent Power Resource is "A device for the production of electricity that is characterized by an energy source that: ... (3) has variability that is beyond the control of the facility owner or operator." Because their output is not controllable, Intermittent Power Resources are accorded special operating and settlement treatment. Except when the NYISO issues a Wind or Solar Output Limit, Intermittent Power Resources are excepted from the settlement rules that impose charges for underproduction and from the rules that limit compensation for output that exceeds a resource's Energy

⁷⁹ As part of the NYISO's current effort to develop hybrid storage resources ("HSR"), it is considering how to enhance the range of Ancillary Services that HSRs can provide. The NYISO anticipates that improvements it develops in the HSR process may also be applicable to DERs and Aggregations. If so, the NYISO will propose tariff modifications to expand the range of Ancillary Services that DERs and Aggregations can provide as part of its HSR filing.

schedule.⁸⁰ Granting AEE's request would permit a "small" controllable Energy Storage Resource to ignore NYISO's dispatch and be compensated for all of its output. The NYISO has reliability concerns with the idea that fully controllable resources would be permitted to operate in a manner that is inconsistent with the NYISO's dispatch instructions. AEE's request was proposed in the NYISO's stakeholder process as a possible future market participation model. NYISO believes the idea should be prioritized and considered in the NYISO's stakeholder process and should only be implemented after acceptable rules to govern operation of such hybrid resources are in place.

ii. Prohibition of Single Resource Type Aggregations from Using the DER Aggregation Model

On pages 14 to 16 of its protest AEMA argues that homogeneous aggregations of a single resource type (such as aggregations of just Energy Storage Resources, or of just wind Intermittent Power Resources) should have the option to elect to participate as "heterogeneous" DER Aggregations. The Commission should reject this request because the two types of Aggregations are subject to different Energy and Capacity market participation rules. Section 4.1.10.1 of the Tariff revisions the Commission accepted in Docket No. ER19-2276 requires homogeneous aggregations to operate consistent with their shared, single resource type because the NYISO's resource-specific operating rules will better reflect the resources' operating characteristics than the more generic DER Aggregation rules that apply to Demand Side Resources and heterogeneous Aggregations. The NYISO did not propose any changes to this accepted Tariff language in its Order No. 2222 compliance filing.

⁸⁰ See, e.g., NYISO Services Tariff Sections 2.3 (definition of "Compensable Overgeneration"), 15.3A.1 (Persistent Undergeneration Charges), 15.3A.2 (Exemptions), 15.3A.2.4, 15.3A.2.5.

The NYISO developed the Energy Storage Resource rules to accommodate an Energy Storage Resource's operating characteristics. The NYISO developed its wind and solar Intermittent Power Resource rules to accommodate the operating characteristic of those resources. If an Aggregation that is made up entirely of solar Intermittent Power Resources is permitted to elect to participate as a DER Aggregation, then the Aggregation will be expected to operate to achieve the dispatch that the NYISO issues, may be assessed persistent undergeneration charges when it under-delivers, and it won't be paid for output in excess of its dispatch schedule above 3% of the Aggregation's Upper Operating Limit.⁸¹ Because DER Aggregations are expected to follow their schedules, NYISO's Operations Department might be forced to take action if the DER Aggregation of solar resources persistently fails to follow the NYISO's dispatch instructions. All of these problems are avoided if the Aggregation instead operates as a homogeneous Aggregation of solar Intermittent Power Resources, as the NYISO's accepted Tariff rules require it to do.⁸²

A similar set of concerns arise in the NYISO's Capacity market. The NYISO developed its wind and solar Intermittent Power Resource rules to accommodate the operating characteristics of those resources. Under the NYISO's Capacity market rules solar Intermittent Power Resources are not required to Bid their full Installed Capacity MW (ordinarily equivalent to a Generator's Upper Operating Limit) or to Schedule a bilateral transaction in the Day-Ahead Market like other Installed Capacity Suppliers.⁸³ If an Aggregation that is comprised entirely of solar Intermittent Power Resources is permitted to participate as a DER Aggregation, then it will

⁸¹ See, e.g., Services Tariff Sections 2.3 (definition of "Compensable Overgeneration"), 15.3A.1 (persistent undergeneration charges); 15.3A.2.5 (exemption from persistent undergeneration charges for wind and solar Intermittent Power Resources).

⁸² See DER Order at PP 6, 95, 111.

⁸³ See Services Tariff Sections 5.12.7 and 5.12.11.4.

become subject to the obligation to Bid or Schedule its full Installed Capacity amount in some or all hours of the Day-Ahead Market. Of course, there will be no way for a solar Intermittent Power Resource to ensure its real-time operation matches any Day-Ahead Energy schedule it receives.

A more significant concern is presented by the manner in which the NYISO performs its Resource Adequacy modeling of the two different types of resources in establishing the Resource Adequacy Requirements used in the Capacity market. The NYISO determines the expected output of Aggregations of solar Intermittent Power Resources based on an output curve that covers all 8760 hours of the year. DER Aggregations are modeled differently. If an Aggregation that is comprised entirely of solar Intermittent Power Resources is permitted to elect to operate as a DER Aggregation with a six-hour duration limitation, then the NYISO will model the resource as being capable of operating at its full capability for (any) six consecutive hours within the Peak Load Window for purposes of establishing the Resource Adequacy Requirements used in the Capacity market.⁸⁴ In the winter, the Peak Load Window includes nighttime hours. There is an obvious mismatch between the capabilities of the solar resources and the modeling expectations NYISO employs to represent DER Aggregations that could place reliability at risk. Again, all of the problems the NYISO describes are avoided if the Aggregation instead operates as a homogeneous Aggregation of solar Intermittent Power Resources, as the NYISO's accepted Tariff rules require it to do.⁸⁵

⁸⁴ The relatively low EFORD of this hypothetical Aggregation of solar Intermittent Power Resources would reduce, but would not eliminate, the additional risk caused by modeling such an Aggregation in a manner that is wholly inconsistent with the Aggregation's actual physical operating capabilities.

⁸⁵ See DER Order at PP 6, 95, 111.

6. Distribution Utility Review of DER Enrollment

i. Commencement of 60-Day Clock for Distribution Utility Evaluation

Order No. 2222 requires each RTO and ISO to modify its tariff to include a comprehensive, non-discriminatory process for Distribution Utilities to review the individual DER that comprise an aggregation. The Commission stated that “a lengthy review time or the lack of a deadline could erect a barrier to distributed energy resource participation” in the wholesale markets, and “may unduly delay participation.”⁸⁶ To mitigate these concerns, the Commission stated that “any distribution utility review must be completed within a limited, but reasonable amount of time,” and set that period not to exceed 60 days.⁸⁷ After many discussions with the majority of the Indicated TOs, the NYISO proposed a 60-day review period for Distribution Utilities, the maximum length of time permitted under Order No. 2222. The NYISO proposed to start the 60-day clock on the date upon which the NYISO electronically transmits the applicable information to the Distribution Utility.

The Indicated TOs protest the NYISO’s proposal to begin the 60-day clock on the date that the information is transmitted to the applicable Distribution Utility, and instead proposes that the clock start on the date that the Distribution Utility confirms receipt of such information, and again, if necessary, on the date that it determines that the information provided is deficient.⁸⁸ The Commission should reject Indicated TOs requested modification. The Commission’s review requirement and timeline is intended to “balance the need for distribution utility review with the need to avoid creating potential barriers to distributed energy resource aggregation.”⁸⁹ The

⁸⁶ Order No. 2222 at P 295.

⁸⁷ *Id.*

⁸⁸ Indicated TOs Comments at 13.

⁸⁹ Order No. 2222 at P 293.

modifications requested by the Indicated TOs threaten to upset that balance. If the Commission were to permit Distribution Utility confirmation of receipt to begin the clock, there is no limit to how long the Distribution Utility could wait to confirm delivery and delay the start of the 60-day review period.

As the NYISO described in Part 2, the NYISO's software systems will automatically notify the Distribution Utility when the NYISO's submission software completes an automated check to determine the Aggregator's submission is complete. The Distribution Utility will then be able to retrieve the data. There is no reason to expect that the notification will not arrive on the same day it is sent. However, the NYISO is willing to establish communications protocols to provide the Distribution Utility notice that the notification was transmitted and the NYISO's database was available, mitigating concerns that the data would arrive unnoticed by the Distribution Utility. NYAPP also asks that the Distribution utility be notified of the start of the 60-day clock.⁹⁰ The Distribution Utility will be notified when the NYISO transmits the notification that the data for the 60-day review is available to be retrieved from the NYISO database, thus triggering the start of the 60-day evaluation period.

Indicated TOs further request that the Commission require the 60-day clock to restart if the Distribution Utility identifies data deficiencies. Indicated TOs' proposal again raises questions about the appropriate balance between safety and reliability review, and avoiding creating barriers to entry. As explained above in Part 2, the NYISO will perform automated checks of the information provided by the Aggregator to confirm that the required information is provided. If certain data is deficient, or if additional data is required, the NYISO expects that Distribution Utilities will inform the Aggregator and NYISO promptly, at which point the Aggregator will need to provide the requested information. If the Distribution Utility's concern

⁹⁰ NYAPP Comments at 10.

is not satisfactorily resolved by the end of the 60-day review window, it can recommend that the NYISO not authorize the particular DER or Aggregation for participation in the wholesale markets citing the data deficiency as the reason. These market rules place responsibility for meeting NYISO and Distribution Utility data requirements squarely on the Aggregator, which is in best position to respond to the Distribution Utility's concerns. The Commission should reject Indicated TOs request to restart the 60-day clock if a Distribution Utility identifies data deficiencies, unless the deficiencies are significant enough to prevent the Distribution Utility from timely completing its review.

Indicated TOs also argue that the NYISO should have "the obligation to collect any and all data" needed by the various Distribution Utilities to evaluate the safety and reliability of individual DER and Aggregations. The Commission should reject Indicated TOs argument. Under market rules proposed in the Compliance Filing, the NYISO would provide the applicable Distribution Utility with all of the information it collects at each DER and Aggregation's enrollment. The NYISO expects that Distribution Utilities may require additional information in order to complete their review. The NYISO is willing to work with Distribution Utilities to identify a common set of data that all Distribution Utilities require. Once this common set of data is identified, the NYISO proposes to require that the Aggregator provide that data with its NYISO enrollment and registration materials.

Distribution Utilities and Aggregators, however, will work hand-in-hand to effectuate DER and Aggregation participation in the NYISO-administered markets (for example, the Utilities will be responsible for entering into applicable interconnection agreements) and are expected to be communicating directly throughout that process. The Distribution Utility, not the NYISO, is best positioned to articulate resource and aggregation-specific data needs to the

Aggregator with respect to a particular DER or Aggregation (and those data needs may differ based on the DER type, configuration, location on the distribution system, and distribution system needs). It would be inefficient for the NYISO to amend its DER and Aggregation enrollment materials for each DER and/or Aggregation.⁹¹ Therefore, the Commission should reject Indicated TOs request that the NYISO collect “any and all” data in favor of requiring the NYISO and Distribution Utilities to identify a common set of Distribution Utility-needed data that will be collected at enrollment.

ii. Changes to Aggregations That are Subject to the Distribution Utility’s Review

Order No. 2222 required that RTOs/ISOs offer a Distribution Utility the opportunity to review distributed energy resources and aggregations upon the initial registration of those resources, but also when there are “incremental changes to a distributed energy resource aggregation” participating in the wholesale markets.⁹² In compliance with this directive, the NYISO proposed that a “Distribution Utility shall have sixty (60) calendar days to review the reliability and safety impact of each new Distributed Energy Resource connecting to its electric facilities that seeks to participate in the ISO Administered Markets, and any incremental change to an Aggregation.”⁹³

Indicated TOs argue that the combination of the terms “new” and “connecting” conflates two separate processes: initial interconnection of a DER to the utility’s system, and the initial

⁹¹ Indicated TOs proposal may also result in the NYISO being involved in disputes between the Aggregator (or developer) and the applicable Distribution Utility, over matters that do not implicate or concern the NYISO. The potential for such disputes creates regulatory and legal risk for the NYISO that it should not be required to bear.

⁹² Order No. 2222 at P 292.

⁹³ Proposed Services Tariff Section 4.1.10.7.1. AEMA argues that the NYISO should justify allowing Distribution Utilities the full 60-day evaluation period permitted by Order No. 2222. AEMA Comments at 16. The NYISO chose 60 days after discussions with Distribution Utilities. Those utilities expressed the need, at least at the outset, to be afforded the full 60-day period. As the NYISO stated in the Compliance Filing, Distribution Utilities are not obligated to take the full 60-day period, and the NYISO will work with utilities and Aggregators on a case-by-case basis to complete the necessary reviews in less than 60 days if possible. Compliance Filing at 44.

registration of the DER for wholesale market participation. The NYISO agrees that a reasonable modification would clarify this issue. The NYISO respectfully requests that the Commission direct the NYISO to modify proposed Services Tariff Section 4.1.10.7.1 to state: “A Distribution Utility shall have sixty (60) calendar days to review the reliability and safety impact of each Distributed Energy Resource that is connecting or connected to its electric facilities upon that Distributed Energy Resource’s initial enrollment to participate in the ISO Administered Markets,”

Indicated TOs also protest the NYISO’s inclusion of the term “incremental,” arguing the utility should be notified of “any” change and offered the opportunity to perform a 60-day safety and reliability evaluation of each change to an Aggregation. The NYISO agrees to Indicated TOs modification, and respectfully requests that the Commission direct the NYISO to modify proposed Services Tariff Section 4.1.10.7.1 to replace “incremental” with “any.”

AEMA also protests the NYISO’s use of the phrase “incremental changes,” arguing that a change even as small as an increase of 1 kW would require Distribution Utility review. The NYISO understands AEMA’s position, but the NYISO’s proposed tariff language comports with Order No. 2222’s directive. The NYISO does not support a *de minimis* threshold to exempt incremental changes from Distribution Utility review at this time. A uniformly applicable *de minimis* threshold would be impossible to implement across the NYCA because system conditions on the distribution systems vary and even within a distribution system conditions can vary from network to network, making it virtually impossible for the NYISO to identify a universally appropriate *de minimis* threshold. Each Distribution Utility should have the opportunity to review changes to DER electrically connected to its system.

AEE protests the NYISO's proposal to permit Distribution Utilities to have a 60-day evaluation period for incremental changes to Aggregations, arguing such period should be reduced to 30 days. The NYISO's accepted market rules require that the NYISO be given at least 30-days notice of a facility's intent to change Aggregations.⁹⁴ The 30-day window was selected to balance the needs of individual facilities and Aggregations and the administrative and operational needs of the NYISO. Order No. 2222 directed RTOs and ISOs to provide the Distribution Utility up to 60 days (though in the case of modifications the Commission posited that it may reasonably be less than 60 days) to review incremental changes to Aggregations. The NYISO proposed the 60-day period for Distribution Utility review of incremental changes after careful consideration and consultation with utilities. The NYISO understands AEE's position, but believes a 60-day Distribution Utility review period is appropriate for New York. The NYISO also continues to require the Commission-accepted 30-day advance notice period to make changes in the NYISO's systems. The NYISO expects a portion of its work can be completed simultaneous with the Distribution Utility's evaluation. However, the NYISO will still need time to complete its administrative work transitioning a DER between Aggregations after the utility completes its evaluation and the NYISO knows the change can be implemented.

AEE argues that the Compliance Filing is not transparent because it lacks specific Distribution Utility review criteria. The NYISO proposed that the Distribution Utility's review be limited to the safety and reliability of the applicable distribution system. The NYISO is not equipped, nor can it effectively educate itself as to the potential safety and reliability concerns of each network on each distribution system in the NYCA. Distribution Utilities employ engineers that are well equipped to evaluate the systems they manage. The NYISO is not in a position to

⁹⁴ 2019 DER Filing at 27.

dictate the specific evaluation criteria to be considered by the Distribution Utility. Moreover, as the distribution systems change over time, the evaluation criteria is also likely to change. If the NYISO were to include specific review criteria in its Tariffs, any changes to that criteria would be subject to the NYISO's stakeholder process and a full FPA Section 205 proceeding, which are not designed to address distribution system safety and reliability criteria.

AEE also argues that the NYISO's proposed timeline for providing registration and enrollment data to the Distribution Utility "creates the opportunity for additional, unspecified delay from internal ISO processes," erecting barriers to entry. Order No. 2222 rightly does not direct RTOs and ISOs to complete DER and Aggregation and Enrollment processes within a specified amount of time, as AEE would prefer. As the NYISO explained in Part 2, it is developing an automated enrollment process whereby the Aggregator will complete and submit a fillable electronic form with DER-specific information the NYISO needs. Once the Aggregator submits the form, the software will run an automated check for completeness, and, if complete, will notify the Distribution Utility that an enrollment is complete and start the 60-day evaluation period. The NYISO's DER and Aggregation enrollment role is more broad than facilitating Distribution Utility review of changes to Aggregations. While the NYISO commits to processing enrollments and registrations as expeditiously as possible, circumstances may dictate necessary delays to address specific concerns.

iv. Presumption of No Harm if the Distribution Utility Does Not Act By End of 60-Day Review Period

Indicated TOs express concern with the NYISO's proposal that there is a "presumption of no harm" (meaning the NYISO will permit the relevant DER(s) or Aggregation to begin participating in the wholesale markets) if the Distribution Utility has not communicated any concerns at the end of the 60-day evaluation period. The NYISO agrees with Indicated TOs that

distribution system safety and reliability are serious considerations with respect to DER and Aggregation participation in the wholesale markets. The NYISO is concerned, however, that without the proposed rule, the Distribution Utility could indefinitely toll expiration of the 60-day evaluation window merely by being non-responsive. The Commission should reject Indicated TOs argument. In an effort to help smooth this process the NYISO has previously offered to the Indicated TOs that it will provide a “reminder” to the applicable Distribution Utility approximately ten days prior to the expiration of the 60-day window.⁹⁵ Such reminder should prompt the Distribution Utility to complete its evaluation if it has not already done so.

v. Obligation to Address Concerns Identified by Distribution Utility Before A DER or Aggregation is Permitted to Participate

Indicated TOs argue that the NYISO’s proposed Tariff revisions grant NYISO “inappropriate latitude” to address safety and reliability concerns identified by the Distribution Utility.⁹⁶ The NYISO agrees to modify its proposed tariff revisions as follows: “The ISO shall ~~may~~ limit the capacity and/or wholesale market services a Distributed Energy Resource is authorized to supply to address the reliability and/or safety concern communicated by the Distribution Utility to the ISO to the extent such concerns are not resolved to the satisfaction of the Distribution Utility through the course of the enrollment process.”⁹⁷ The NYISO agrees to the Indicated TOs request to change “may” to “shall.” The NYISO requests that the Commission instruct it to revise Services Tariff Section 4.1.10.7.1 to include the proposed revision.

⁹⁵ If the tenth day prior to the close of the 60-day window occurs on a weekend or holiday, the NYISO will provide notice on a business day, as appropriate.

⁹⁶ Indicated TOs Comments at 17.

⁹⁷ Indicated TOs propose additional changes on pages 17-18 as follows: “If the ISO does not receive timely notification from the Distribution Utility pursuant to this Services Tariff Section 4.1.10.7.1, then the ISO will assume that the operation of the Distributed Energy Resource may will not have a material reliability and/or safety impact on the applicable distribution system.” This proposed modification is unrelated to the NYISO’s treatment of *identified* reliability and safety concerns, and the NYISO does not support the Indicated TOs proposal for the reasons described in Part 6(iv).

vi. Miscellaneous Changes

Indicated TOs propose three miscellaneous changes to Services Tariff Section 4.1.10.7.1, and 4.1.10.7.2.⁹⁸ The NYISO agrees that the Indicated TOs proposals to these sections are helpful clarifications. The NYISO requests that the Commission instruct it to revise Services Tariff Sections 4.1.10.7.1 and 4.1.10.7.2 consistent with the changes proposed on pages 19 and 20 of the Indicated TOs comments.

7. Ongoing Operational Coordination

AEMA argues that NYISO should not assess non-performance penalties to Aggregations when the Aggregation is unable to comply with the NYISO's dispatch instructions due to a reliability action taken by the Distribution Utility.⁹⁹ The Commission should reject AEMA's request. The NYISO's proposal to assess non-performance penalties to an Aggregation when it does not achieve its NYISO dispatch or schedule due to a reliability action by the Distribution Utility is appropriate. The rule is consistent with how Generators are treated today when their output is limited by the NYISO or by a Transmission Owner to protect reliability. As between (a) the Loads that will pay more to procure a replacement resource when the Aggregation fails to operate to achieve its NYISO schedule or dispatch, and (b) the Aggregation that elected to participate in the NYISO's markets and should be aware of the loading and capabilities of the local Distribution Utility system, it is entirely sensible to assign this risk to the Aggregation. The Aggregation is the *only* entity that could act to prevent the issues from arising by (i) developing resources that are properly scaled to the capability of the local distribution system, or (ii) limiting its Bids when the DU's distribution system is likely to be affected by limitations, or (iii) paying for distribution system upgrades to improve deliverability.

⁹⁸ Indicated TOs Comments at 19-20.

⁹⁹ AEMA protest at 17.

8. Locational Requirements/Transmission Nodes.

On pages 18-19 of its protest, AEMA raises concerns about NYISO's implementation of Transmission Nodes.¹⁰⁰ AEE raises similar concerns on pages 26-28 of its protest. The Commission accepted the NYISO's proposal to aggregate DER resources at Transmission Nodes as just and reasonable in the DER Order. The NYISO is working to implement the rules that the Commission accepted in Docket No. ER19-2276. Speculative concerns that AEMA and AEE raise about how NYISO might implement Transmission Nodes in their protests are premature because the NYISO is still working to implement them.

9. Coordination Issues Between DERA and Distributed Utility or RERRA

AEE, NRDC, and SFP assert that the NYISO's proposed requirements concerning coordination with RERRAs are poorly defined and may cause delays and barriers to DER participation.¹⁰¹ For the reasons explained below, the Commission should accept the RERRA requirements set forth in the Compliance Filing without modification.

First, AEE asserts that the NYISO's definition of an RERRA is vague and can be read to include a wide variety of entities, including the NYPSC, power authorities, and municipalities and cooperative utilities.¹⁰² The NYISO agrees that the RERRA for a Distribution Utility could be the New York Public Service Commission or the board of a municipality or cooperative. The NYISO's definition of an RERRA as set forth in Section 4.1.10 of the Services Tariff is the definition of the term provided by the Commission in its Order No. 719 and reiterated in Order

¹⁰⁰ In response to AEMA's question about whether a single Aggregation can cover several Transmission Nodes, the definition of Aggregation that was proposed by the NYISO in Services Tariff Section 2.1 and accepted by the Commission in Docket No. ER19-2276 states "Energy injections, withdrawals and Demand Reductions are modeled at a *single* Transmission Node" for Aggregations. Emphasis added.

¹⁰¹ AEE, NRDC, and SFP Comments/Protest at 20-22.

¹⁰² *Id.* at 21-22.

No. 2222.¹⁰³ AEE, NRDC, and SFP do not provide grounds for using a different definition than that established by the Commission, nor a basis for limiting the definition of an RERRA to a particular regulatory agency, authority, or organization.

Second, AEE questions the need for, and scope of, RERRA review of DERs participating in an aggregation. Order No. 2222 required RTO/ISOs to specify how they will accommodate and incorporate voluntary RERRA involvement in coordinating the participation of aggregated distributed energy resources in the RTO/ISOs' markets.¹⁰⁴ Order No. 2222 did not mandate particular roles and responsibilities for RERRAs, but provided examples of possible roles and responsibilities and required that any such roles and responsibilities be included in the RTO/ISO tariffs.¹⁰⁵

In its Compliance Filing, the NYISO proposed to insert a new Section 4.1.10.7.3 that established the role of RERRAs. In this provision, the NYISO proposed to require each Aggregator to ensure that its Aggregation and the individual Resources within the Aggregation comply with all applicable rules and regulations promulgated by a RERRA and included in a Distribution Utility's tariffs. This requirement ensures that the RERRA has a role that it may elect to administer through its rules and regulations in coordinating the participation of aggregated distributed energy resources in RTO/ISO markets. This requirement is consistent with the requirements for CAISO's Distributed Energy Resource Provider model referenced by the Commission as an example of RERRA coordination in Order No. 2222.¹⁰⁶

¹⁰³ Order No. 2222 at P 33 n. 65 (defining "relevant electric retail regulatory authority" as "the entity that establishes the retail electric prices and any retail competition policies for customers, such as the city council for a municipal utility, the governing board of a cooperative utility, or the state public utility commission.") (citing Order No. 719, 125 FERC ¶ 61,071 at P 158 (2008).)

¹⁰⁴ Order No. 2222 at P 322.

¹⁰⁵ *Id.* at P 324.

¹⁰⁶ *Id.* at P 323.

The NYISO also proposed to provide each DER's RERRA with the physical and operational data collected for the DER upon the RERRA's request. The information the NYISO will share with the RERRA is the same as is provided to the applicable Distribution Utility and will allow the RERRA to submit to the NYISO information that will assist the NYISO in determining the services the DER is authorized to supply. The NYISO will consider any information provided by the RERRA in its evaluation of the DER.

Consistent with Order No. 2222, the NYISO's proposed requirements provide a mechanism for voluntary RERRA involvement and give the RERRA discretion to decide its level of involvement. The NYISO anticipates that there may be a wide variety of RERRAs with varying levels of capabilities and interest in coordinating with the NYISO. The provision, however, provides each RERRA with an opportunity to play a role in coordinating the participation of aggregated DERs in the NYISO's markets.

10. Energy Efficiency Participation as Capacity Resource and "Passive Demand"

The Clean Energy and Consumer Advocates argue that the NYISO should be required to permit energy efficiency resources to participate as supply-side DER resources in its Capacity market. The Commission should reject this request.

Order No. 2222 specifies that "distributed energy resource aggregations must be able to meet the qualification and performance requirements to provide the service that they are offering into RTO/ISO markets."¹⁰⁷ The DER rules that the NYISO filed and the Commission accepted in Docket No. ER19-2276 permit energy efficiency resources to participate in DER Aggregations subject to the same requirements, terms and conditions as other resources. A general eligibility rule that applies to nearly all Resources seeking to qualify as Installed

¹⁰⁷ *Id.* at P 117.

Capacity Suppliers, other than Responsible Interface Parties, is that they must be able to participate in the NYISO's Energy market and be able to respond to and perform in a manner consistent with the directions and control of the NYISO.¹⁰⁸ Only Aggregations that satisfy the requirements found in Sections 2, 4, and 5 of the Services Tariff are eligible to participate as Installed Capacity Suppliers.

For the reasons explained below, the NYISO should not be required to change the DER rules that the Commission accepted in Docket No. ER19-2276 to enable energy efficiency resources to participate in the NYISO's Capacity market based on a different set of participation requirements that are more favorable and permissive than the rules that apply to other DERs. In the alternative, if the Commission requires the NYISO to give energy efficiency resources preferential treatment, the NYISO should not be required to implement energy efficiency as a supply-side resource in its Capacity markets unless and until (a) it has had time to develop an appropriate market design and necessary Tariff rules, and (b) it has the staff and tools necessary to implement or manage robust measurement, verification and audit requirements.

Energy efficiency reduces demand. Its impact is accurately accounted for on the demand-side without the need to estimate the expected benefit, or to measure, verify and audit resource performance on a continuing basis. While NYISO recognizes that Capacity payments could be an additional source of revenue to spur energy efficiency projects, the NYISO does not see significant reliability or market efficiency benefits in moving energy efficiency from the demand-side to the supply-side.

Moving energy efficiency to the supply side would make it necessary to estimate demand reduction impacts by performing ongoing measurement and verification that would be both

¹⁰⁸ Responsible Interface Parties reduce demand consistent with the direction and control of the NYISO.

costly (in terms of dollars and new staff), and inexact. Overstating the reduction provided by energy efficiency resources on the supply-side would both (1) unjustifiably increase the charges assessed to NYCA Loads, and (2) reduce the NYISO's ability to ensure that NYCA Load is served reliably.

The NYISO and its independent Market Monitoring Unit, Potomac Economic, have significant concerns about the practicability of verifying and auditing the initial and continuing Capacity benefits that an energy efficiency installation provides. As Potomac Economics explained on pages 110-112 of its 2020 State of the Market Report for the Midcontinent Independent System Operator ("MISO"):

Although MISO has attempted to make the most reasonable assumptions it can, the resulting capacity credits are unlikely to be accurate. To address this concern, the IMM performed an audit of EE capacity that had been sold in the PRA in prior years. Based on this audit, we found that the EE resources audited did not actually reduce MISO's peak demand, and the associated capacity accreditation grossly overstated the reliability value of the EE resources.

- Virtually all of the claimed savings were related to typical products being purchased by retail customers for which the EE resource had no effect in precipitating the purchases.
- In other words, the product purchases would have occurred with or without the EE resource and, therefore, would have already been accounted for in MISO's load forecast.
- Unlike the type of program illustrated above, the capacity payments were not used to provide meaningful incentives to customers increase the sales of EE products.
- The claimed savings were not reasonably verified as required under Attachment UU of the MISO Tariff.

On page 127 of its 2020 State of the Market Report for the MISO Potomac Economics provided the following recommendations:

Given these concerns, we recommend that MISO terminate its rules allowing EE resources to sell capacity because EE resources are demonstrably not comparable to generation or other resources that legitimately provide capacity under Module E. In the alternative, we recommend the following changes to ensure that the savings offered are more likely to be real:

- Clarify the Tariff to require a contractual relationship with the end-use customer that: (a) prompts an action that would not likely have occurred otherwise, and (b) transfers the energy efficiency credits from the customer to the supplier;
- Specify that baseline assumptions must reflect prevailing consumer preferences and purchase patterns, rather than minimum efficiency standards.
- Enforce the measurement and verification rules by requiring some form of credible measurement of the savings, even if simply by sampling or survey after installation.

PJM Interconnection's Independent Market Monitor, Monitoring Analytics, has raised similar concerns about the measurement and verification of energy efficiency programs that receive capacity revenues. Monitoring Analytics' 2020 State of the Market Report (Volume 2, p. 331) recommends that energy efficiency "not be included in the PJM Capacity Market":

Prescriptive energy efficiency MW have an assumed savings calculated based on an assumed installation rate and the difference between the assumed electricity usage of what is being replaced and the assumed electricity usage of the new product. All lighting EE is prescriptive. Prescriptive energy efficiency MW were 86.5 percent of all energy efficiency MW and HVAC, new construction and appliances were 13.5 percent in the 2019/2020 Delivery Year. Prescriptive energy efficiency MW were 85.1 percent and HVAC, new construction and appliances were 14.9 percent in the 2020/2021 Delivery Year. The measurement and verification method for prescriptive energy efficiency projects relies on neither measurement or verification but instead relies on unverified assumptions and is too imprecise to rely on as a source of capacity comparable to capacity from a power plant. The nonprescriptive measurement and verification methods are also inadequate and rely on samples and assumptions for limited periods.

The MMU recommends that energy efficiency MW not be included in the PJM Capacity Market. The measurement and verification protocols for energy efficiency are too imprecise to rely on as a source of capacity. Effective energy efficiency measures reduce energy usage and capacity usage directly. The reduced market payments are the appropriate compensation. [Footnotes omitted.]

The measurement and verification concerns described by Potomac Economics and Monitoring Analytics will become reliability concerns if the NYISO is required to permit energy efficiency resources to participate in its Capacity market and they do not perform as-promised. Keeping energy efficiency resources on the demand-side avoids the risk of over-estimating their impact, to the detriment of reliability. Order No. 2222 should not be interpreted as requiring the

NYISO to give energy efficiency resources preferential access to the Capacity market or to assume the market and reliability risks that doing so would introduce.

The NYISO also faces practical impediments to implementing energy efficiency as a supply-side Capacity resource in its markets. The DER market rules and Tariff revisions that the Commission accepted in the DER Order were not developed or designed to accommodate Capacity market (only) participation by energy efficiency resources. It would be extremely difficult and time-consuming for NYISO to re-design the DER implementation that it has been working to complete for more than a year to incorporate energy efficiency as a Capacity-only resource.

The NYISO is not aware of any appreciable benefit that would be achieved by permitting energy efficiency resources that only participate in the Capacity market into its accepted DER market design, but is certain that such an effort would significantly delay the implementation of DER in its markets. The participation of energy efficiency resources in the Capacity market should be undertaken (if at all) as a separate project. The NYISO's position is consistent with the statement on pages 3-4 of the Consumer Advocates' protest that "Developing a model for EE resources to participate in NYISO's capacity market in a manner that is appropriate for its unique market design is a complicated undertaking that is best informed by a robust stakeholder process. Such a process need not, and should not, delay implementation of the rest of NYISO's DER participation model to the extent the model is otherwise compliant with Order No. 2222."

To develop and implement an effective enrollment, measurement, verification and audit program for energy efficiency Capacity suppliers, the NYISO would need to (a) develop new Tariff rules, (b) develop new software capabilities, and (c) add new staff members to manage and implement this brand new program. This proposed new project should be considered in the NYISO's project prioritization process. The NYISO does not have the necessary headcount or

budget to add a project of this scope or necessary staff in 2021 or 2022.¹⁰⁹ A project to develop energy efficiency as a Capacity market resource could *begin* in 2023 if the Commission so instructs. However, the NYISO reiterates that the Commission should not impose such a requirement given the absence of benefits, the magnitude of the costs, and the aforementioned warnings from market monitors regarding the problems of allowing energy efficiency resources to participate as capacity sellers in other regions.

The DER rules that the NYISO filed and the Commission accepted in Docket No. ER19-2276 permit energy efficiency resources to participate in DER Aggregations, subject to the same requirements, terms and conditions as other resources. This is all that Order No. 2222 requires. For the foregoing reasons, the NYISO is opposed to developing new rules to enable energy efficiency to participate as a supply-side resource in its Capacity markets *without* satisfying the requirements that apply to competing Installed Capacity Suppliers.

If the Commission determines that the NYISO is required to accommodate energy efficiency resources as Capacity Suppliers on a preferential basis in order to comply with Order No. 2222, then the NYISO requests that the Commission give the NYISO sufficient time to (1) develop an appropriate market design and file necessary Tariff rules, and (2) build the software and staff necessary to implement or manage robust measurement, verification and audit rules and procedures for such capacity suppliers. Doing so would be consistent with the significant extensions of time that the Commission has granted other regions to submit their Order No. 2222 compliance filings.¹¹⁰

¹⁰⁹ The NYISO is in the process of adding staff to support the list of 2022 projects that are currently being included for prioritization. The NYISO's market design team is adding two new staff members just to support the current plans.

¹¹⁰ See, e.g., *Midcontinent Independent System Operator, Inc., et al.*, 175 FERC ¶ 61,013 (2021) (accepting extensions to Order No. 2222 compliance filing deadline for MISO, SPP, and PJM until April 18, 2022, April 28, 2022, and February 1, 2022, respectively).

On page 10 of their protest, AEE argues that the NYISO should revise its DER rules to accommodate passive demand “such as behind-the-meter solar PV acting as a load reducer.” This request does not make practical sense for several reasons. First, in many cases the load being reduced would be paying retail rates, which often exceed wholesale rates, so the load is likely to receive a greater financial benefit by simply using the solar PV to reduce its load.¹¹¹ Second, assuming the solar PV is capable of producing 100 kW or more of Energy, the Aggregator would need to directly meter the solar PV’s output to distinguish it from the load, and the load would either need to be separately metered, or it would need to be assessed an additional (retail) charge for energy that is equal to the metered output of the solar PV that is sold in the wholesale market. The NYISO has not developed a market design to address this particular resource configuration. However, if the solar PV resource exceeds 100 kW and is separated from the associated load, it will be able to participate in a DER consistent with the NYISO’s DER market rules that the Commission has already accepted.

11. Data Requirements for Registration

AEE, NRDC, and SFP request that the Commission direct the NYISO to define in its tariff the data and information requirements for individual DERs participating in an aggregation and to provide a description detailing why the requirements are necessary for participation.¹¹² As described below, the Commission should accept the NYISO’s approach concerning the information and data requirements for Aggregators and individual DERs that is detailed in the Compliance Filing and was previously accepted by the Commission for the NYISO’s Aggregation participation model.

¹¹¹ The NYISO would be strongly opposed to permitting a DER to arbitrage differences between average cost retail rates and wholesale rates by participating in the NYISO’s markets only at times when the wholesale rate exceeds the retail rate. The NYISO expects that the New York Public Service Commission would share its concerns.

¹¹² AEE Comments/Protest at 25-26.

As part of the NYISO's existing Aggregation participation model, the NYISO established a new Section 4.1.10.5 in its Services Tariff concerning the information and data that an Aggregator must provide to register its aggregation. Section 4.1.10.5 requires an Aggregator to register as a NYISO Customer, which includes complying with "the registration requirements set forth in Services Tariff Section 9, and the ISO Procedures...."¹¹³ The NYISO supplemented the registration requirement in the Compliance Filing to also require that "[a]n Aggregator must identify each individual facility in an Aggregation in accordance with the ISO Procedures."¹¹⁴

As described in the 2019 DER Filing, "[a]s with all other NYISO Customers, an Aggregator will have to execute service agreements for the OATT and Services Tariff, to satisfy the existing customer registration requirements, register their Aggregations, and enroll individual facilities in accordance with ISO Procedures."¹¹⁵ The NYISO further indicated in the 2019 DER Filing that it "will provide those processes and procedures to stakeholders prior to implementing the new rules for Aggregations."¹¹⁶ The NYISO's registration and information approach for Aggregators and individual DERs is consistent with its approach for registering other Resource's participating in the NYISO's markets.¹¹⁷ The data and information requirements for the Resources are typically contained in the applicable Market Participant registration materials (that must be submitted prior to a Resource being authorized to participate in the market) and the various business practice manuals and user guides applicable to particular Resource types and software systems.

¹¹³ The NYISO's tariff requirements for an applicant to apply and register to become a NYISO Customer are set forth in Section 9 of the Services Tariff.

¹¹⁴ Proposed revision to Services Tariff Section 4.1.10.1.

¹¹⁵ *New York Independent System Operator, Inc.*, Proposed Tariff Revisions Regarding Establishment of Participation Model for Aggregations of Resources, Including Distributed Energy Resources, and Proposed Effective Dates, Docket No. ER19-2276-000 at 27 n 71 (June 27, 2019) ("June 27 Filing").

¹¹⁶ 2019 DER Filing at 27.

¹¹⁷ Compliance Filing at 30-31.

Since the Commission’s acceptance of the NYISO’s Aggregation participation model in 2020, the NYISO has been working diligently to develop, test, and deploy the modifications to the NYISO’s software and hardware necessary to implement the Aggregation participation model, and the related tariff requirements, in the fourth quarter of 2022. This includes developing the tariff-required processes and procedures for registering Aggregations and enrolling DERs. Due, in part, to the anticipated volume of DERs, the NYISO is automating components of the registration process for DERs. The information and data requirements developed by the NYISO must be consistent with the applicable software currently under development. Once the NYISO completes these software and systems, it will be able to finalize the list of attributes necessary to register an Aggregation and enroll individual DERs and to present that information to stakeholders. The Compliance Filing identifies and explains the types of information that the NYISO anticipates will be required concerning Aggregations and individual DERs, but the final data and information requirements remain under development in concert with the development of the required software and systems.¹¹⁸ The NYISO will develop a new business practice manual that exclusively addresses participation of Aggregations in the NYISO-administered markets. Manuals are subject to review and approval by the NYISO’s stakeholders.

11. Buyer Side Mitigation

The NYISO reviewed the comments and protests arguing that changes to address its buyer-side mitigation (“BSM”) rules are needed to permit maximum, cost-effective DER participation. On April 20, 2021, the NYISO began discussions with its stakeholders on preparing the Capacity market for the Grid in Transition, which includes reforms to the BSM

¹¹⁸ *See Id.* at 31-32.

rules. The NYISO is actively engaged with its stakeholders in developing a proposal that is intended to (i) improve the Installed Capacity market's ability to attract and retain resources needed to maintain reliable electric service for all New Yorkers during the Grid in Transition process, and (ii) reform BSM rules related to public policy projects. The NYISO believes that BSM concerns for DERs and other resources can be best addressed in this forum.

12. Capacity Resource Interconnection Service ("CRIS")

The Commission should reject AEE's unsupported request to not require "CRIS review"¹¹⁹ for DERs or Aggregations that are less than 5 MW. The NYISO applies its deliverability requirements for CRIS requests on a comparable basis to all resources that seek to participate in its Capacity market. AEE does not present any valid basis for a DER-specific exception here. The NYISO's existing processes include significant flexibility for the evaluation of CRIS requests, including the Class Year or an Expedited Deliverability Study.

¹¹⁹ "CRIS review" appears to be a reference to the NYISO's review of CRIS requests under applicable deliverability requirements in Attachments S and X to the NYISO OATT.

III. CONCLUSION

WHEREFORE, the New York Independent System Operator, Inc. respectfully requests that the Commission accept this Answer, accept the Compliance Filing in the above-referenced docket, and direct the NYISO to make a further compliance filing as described in this Answer.

Respectfully Submitted,

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September 14, 2021

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 14th day of September 2021.

/s/ Joy A. Zimmerlin

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