

NYISO 2019 DER Market Design – 205 Filing Concepts

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Agenda

- **Background & Overview**
- **Concepts**
- **Next Steps**

Background & Overview

- The NYISO filed its DER Market Design on June 27, 2019.
- FERC accepted the NYISO's proposed DER Market Design in January 2020.
- The NYISO has since worked towards deployment of the market design, in tandem with its FERC Order No. 2222 compliance initiative.
- Throughout the implementation process, the NYISO has identified areas in its previously accepted tariff where revisions are necessary to:
 - Clarify previously accepted concepts
 - Align the tariff with the NYISO's software implementation
- NYISO will submit a FPA 205 filing to FERC containing these revisions to become effective on deployment of DER in 2023.

DER Minimum Capability

NYISO Minimum DER Capability

- **The NYISO is proposing a 10-kW minimum capability requirement for individual DER participating in an Aggregation.**
- **A minimum capability for each DER will better align initial DER market deployment with the monitoring and verification capabilities of the NYISO.**
 - The NYISO will propose an update to its tariff and procedures to incorporate the requirement for individual DER to have a minimum capability of 10 kW
- **The NYISO will, following initial deployment of DER, explore lowering this minimum capability to accommodate smaller DER once it gains experience managing Aggregations of DER.**

Station Power

Station Power – Aggregations

- **The definition of Station Power, under the FERC-accepted 2019 DER market design, was modified to restrict access to Station Power if a Resource participates in a “DER Aggregation.”**
- **The NYISO will modify this definition to remove the term “DER,” in order to extend the requirement to all Aggregations, not solely DER Aggregations.**
 - For example, Single Resource Type Aggregations of Generators, ESRs, Solar, Wind, or Landfill Gas
- **There are no Aggregation types that will be eligible to utilize the NYISO’s Station Power program.**

Meter Data Submission

Submission of Aggregation Meter Data

- **The NYISO clarifies the submission of aggregated Revenue Quality Meter Data for an Aggregation shall be the responsibility of the Aggregation's applicable Meter Authority.**
 - The Meter Authority is either the applicable Member System or a qualified Meter Services Entity (MSE)
- **The NYISO explains this responsibility in the Aggregation Manual, and in the Revenue Metering Requirements Manual.**
- **The NYISO will reference these documents in its update to the MST to clarify this responsibility.**

MST 4.5.2.4

Demand Reductions

– Removal

MST 4.5.2.4 Removal

- **MST “4.5.2.4 Demand Reductions,” which applied to the Day Ahead Demand Response Program (DADRP) did not get marked as deleted text in the 2019 filing**
- **Section 4.5.2.4 Demand Reductions will be redlined out of the tariff**
 - This tariff redline will have a later effective date due to the transition of DSASP/DADRP participants to the DER model

Resources Swapping Aggregations

Resources Changing Aggregations

- **NYISO will update previously accepted MST 5.12.13.1 as follows:**
 - “An individual resource within an Aggregation ~~and/or an Aggregation~~ may only change from a homogenous Aggregation that is not a DER Aggregation to a DER Aggregation at the beginning of a Capability Year, provided that the Aggregation notifies the ISO by August 1 of the year prior to the beginning of the Capability Year. An individual resource within an Aggregation ~~and/or an Aggregation~~ may only change from a DER Aggregation to a homogeneous Aggregation that is not a DER Aggregation at the beginning of a Capability Year, provided that the Aggregation notifies the ISO by August 1 of the year prior to the beginning of the Capability Year.”
- **The ability to ‘switch Aggregation Types’ is not accurately described by this clause given the NYISO’s software development.**
- **Aggregations may not change types dynamically, but an Aggregator may discontinue use of an Aggregation and create a new Aggregation of the desired ‘Type.’**
 - For example: An Aggregation comprised of ESRs may not add a solar facility and effectively change its type to a ‘DER’ Aggregation. Rather, the Aggregator will be required to Separate the original Aggregation from the market, and submit a new Aggregation containing all desired DER contained therein

MST 2.13 and MST 13.3 – Meter Services Entity Definition

Meter Services Entity Definition

- **The NYISO will clarify, in MST 2.13 and MST 13.3, the definition of a ‘Meter Services Entity’ by removing the terms “DSASP Provider” and “Demand Reduction Provider.”**
 - These terms are only applicable to the DSASP and DADRP programs, which will both be phased out in the early stages of DER program deployment
 - This tariff redline will have a later effective date due to the transition of DSASP/DADRP participants to the DER model

Charging at Retail

Retail Charging Rate for Aggregations

- **Per Services Tariff 7.2.8, if a Load Serving Entity requires an Energy Storage Resource to also pay a retail rate for its charging withdrawals, then the ISO shall issue a credit to the affected Customer for the associated Actual Energy Withdrawals and assess a charge to this Load Serving Entity for the same Actual Energy Withdrawals.**
- **At the time of NYISO's 2019 DER market design filing, this concept had not been contemplated for DER with energy storage capabilities.**
- **The NYISO will modify MST 4.1.10 to:**
 - Address Aggregations with Energy Storage Resources that are required to charge at a retail rate
 - Require that, when at least one Energy Storage Resource in an Aggregation is required to charge at a retail rate, all Energy Storage Resources within the Aggregation must charge at the retail rate
 - Require that all Energy Storage Resources within an Aggregation that are required to charge at a retail rate must be served by the same LSE/retail rate authority

TSC/NTAC

TSC/NTAC Applicability to Energy Storage Resources in Aggregations

- Subsequent to the NYISO's 2019 DER and Aggregation Filing, FERC directed that Energy Storage Resources be subject to the Transmission Services Charge (TSC) and NYPA Transmission Adjustment Charge (NTAC) under certain circumstances
- NYISO proposes to modify OATT Sections 2.7.2.1.5 and 2.7.2.4.4 to clarify how TSC/NTAC will be assessed to ESR Aggregations and DER Aggregations.
 - Aggregations will pay a TSC directly to the Transmission Owner in whose Transmission District the Aggregation is located for its net withdrawals when it is not providing a service.

Uplift Reporting

Uplift Reporting for Aggregations

- Per MST 4.1.3.3, the NYISO will post the total uplift paid to Resources on its public website, including total uplift paid across all categories.
- The NYISO's 2019 DER market design tariff did not remove DSASP and DADRP from the reporting requirement, and furthermore did not genericize the language to include Aggregations of DER.
- The NYISO will revise MST 4.1.3.3 to provide for uplift reporting on Aggregations of DER.
- The NYISO will further revise MST 4.1.3.3 to remove DSASP and DADRP
 - This tariff redline will have a later effective date due to the transition of DSASP/DADRP participants to the DER model

Aggregations and Meter Authorities

Aggregation Meter Authority Details

- Subsequent to submitting the 2019 DER and Aggregation market rules, the NYISO identified the need for additional detail describing the use of a Meter Authority by an Aggregation.
- The NYISO will revise its tariff and procedures to include the following rules, which expand upon, but do not fundamentally change, how Aggregations and Meter Authorities must interact:
 - All DER in an Aggregation must use the same Meter Authority (E.g., the same MSE or Member System).
 - Individual DER are permitted to change Meter Authorities if swapping between Aggregations.
 - Aggregations are not permitted to change Meter Authorities once enrolled.
 - If an Aggregator wishes to change Meter Authority, it must enroll a new Aggregation and separate the former Aggregation
 - DER Aggregations (Not Single Resource Type Aggregations) are permitted to use a Meter Services Entity (MSE).
 - Single Resource Type (SRT) Aggregations are not permitted to use an MSE and must use the applicable Member System for metering services.

Aggregation Reference Levels

Cost-Based References for Aggregations

- The NYISO's 2019 filing did not specify the type of reference levels that an Aggregation would be eligible to use.
- The NYISO offers Cost-Based, Bid-Based, and LBMP-Based reference levels for Resources offering into the market.
- The NYISO will revise its tariff and procedures to provide that Aggregations shall be ineligible to use Bid- or LBMP-Based reference levels for Energy market mitigation.
 - Aggregations can change composition on a monthly basis

DER Separation from Wholesale Market Participation

DER and/or Aggregation Separation from Wholesale Market

- **The NYISO did not include specific rules regarding the ability for either 1) the NYISO or 2) the applicable Aggregator to remove (described as “separation” in the NYISO’s software) a DER and/or an entire Aggregation from wholesale market participation.**
- **The NYISO will modify its tariff and procedures to clarify that:**
 - The NYISO may remove an individual DER or an entire Aggregation from the market in order to maintain reliability or as a result of a failed meter data validation
 - The Aggregator may elect to remove an individual DER or an entire Aggregation from the market if desired

SCR Transition

Transition from SCR to DER

- **Special Case Resources (SCR) will be permitted to transition from the SCR program model to the DER model.**
- **The NYISO will update its tariff to reflect the transition process for SCRs entering the DER model, including performance testing for SCRs transitioning to the DER model.**

Wind Output Limit – MST 2.23

MST 2.23 Definition – Wind Output Limit

- NYISO proposes incremental revisions to the "Wind and Solar Output Limit" to:
 - Accommodate other revisions to the definition filed and accepted since the NYISO's 2019 DER filing; and
 - Clarify the Resources that will not be eligible to receive a Wind and Solar Output Limit.
- New revisions are highlighted in yellow.

Wind and Solar Output Limit: A Base Point Signal calculated for an Intermittent Power Resource depending on wind or solar energy as its fuel and which, when sent to the Intermittent Power Resource, shall include a separate flag directing the Intermittent Power Resource not to exceed its Base Point Signal. ~~All~~ Intermittent Power Resources that depend ~~depending~~ on wind or solar energy as their fuel shall be eligible to receive a Wind and Solar Output Limit, ~~other than~~ except for those that depend on wind for their fuel and were in commercial operation as of January 1, 2002 with name plate capacity of 12 MWs or fewer and ~~Intermittent Power Resources depending on wind~~ or solar energy as their fuel that participate in a DER Aggregation, ~~shall be eligible to receive a Wind and Solar Output Limit.~~

Data Transfer

NYISO Transfer of Data to the Distribution Utility

- The NYISO's 2019 DER market design did not contemplate a review of DER by the applicable Distribution Utility.
- NYISO will implement a manual DU review process in 2023, prior to the deployment of Order 2222 at a later date.

Interconnection Agreement Compliance

DER Interconnection Agreements

- **The NYISO's 2019 DER market design provided that DER market entry requires a successful interconnection agreement.**
 - In Order No. 2222 the FERC disclaimed jurisdiction over interconnection of DER for the sole purpose of participation in the wholesale markets through an Aggregation
 - DER will not be subject to the NYISO's SGIP
- **The NYISO will update its tariff to require that Aggregators ensure Aggregation operating parameters are consistent with the applicable Interconnection Agreements of the DER in the Aggregation.**
 - Aggregators will be responsible for compliance with the terms of the Interconnection Agreements of the DER they represent

BPCG & DAMAP

BPCG and DAMAP Equations

- The NYISO's 2019 DER filing provided that DER shall be eligible for DAMAP and BPCG only under certain circumstances, including when dispatched Out Of Merit (OOM).
- The NYISO has identified certain edits to its existing equations to determine the amount of BPCG and/or DAMAP to integrate DER, notably Demand Side Resources.
- The NYISO will propose certain modifications to the BPCG and DAMAP equations that incorporate DER and clarify the formulae.

ECBL Proxy Load Calculation

ECBL Proxy Load Calculation

- **The Economic Customer Baseline is the baseline used to calculate a Demand Side Resource's Demand Reduction**
 - The ECBL is calculated from historic metered load from the same time interval from ten previous like days
 - $\text{Measured Demand Reduction} = \text{ECBL} - \text{Measured Load}$
- **The Proxy Load is used as a stand in for historical Metered Load when the Demand Reduction is dispatched**
- **The NYISO will modify the tariff such that the Proxy Load is calculated as the sum of the Metered Load and the measured Demand Reduction**
 - This shortens the ECBL lookback period when the Demand Side Resource is dispatched regularly
- **If the Demand Side Resource reduces Load when LBMP is less than Monthly Net Benefits Threshold, measured Demand Reductions will not be included in the Proxy Load**
 - The ECBL will only add back previous performance when the Demand Reduction is economic

Next Steps

Next Steps

- **NYISO will return to a future ICAPWG to review draft tariff language, and thereafter seek approval from BIC and MC.**
- **NYISO will seek an effective date for the tariff changes that is consistent with the implementation schedule for the 2019 market design.**
- **Please send any questions that were not addressed during this presentation to: DER_Feedback@nyiso.com**

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

Questions?