

Engaging the Demand Side Feedback Summary

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Agenda

■ Special Case Resources

- Required SCR Event Notification
- Operational Frequency and Resource Duration

■ Distributed Energy Resources

- DER Telemetry
- Proposal to utilize Cost-based References for DER Aggregations
- Proposed 10kW minimum DER size threshold

Project Overview

Project Overview

- **Deliverables:**

- Q4 Issue Discovery

- **Project Description:**

- Engaging the Demand Side is intended to be a highly collaborative project that will leverage stakeholder feedback in identifying potential issues with or gaps in the NYISO's existing participation opportunities for Demand Side Resources and DER generators. Information gathered as part of this project will inform a final report to be released in Q4 of 2023, which will recommend next steps regarding future Market Design projects/efforts to address solicited feedback.

Engaging the Demand Side March Meetings

- **The NYISO held two off-site meetings in March to discuss topics pertinent to this project effort with Market Participants:**
 - The March 22nd Meeting focused on topics relevant Demand Side Resource participation options in the C&I sector, namely the SCR program
 - The March 23rd Meeting focused on topics relevant to Demand Side Resource participation options in the Mass Market/Retail sector, namely the DER Participation Model
- **Meetings were open to all Market Participants**
- **The NYISO has also met with several Market Participants over the course of the last month to further discuss some of the feedback they offered at the March Meetings**

Feedback Disclaimer

- Feedback presented in this slide deck is the aggregated result of discussions with several **SCRs/RIPs/Aggregators/Public Entities** that participated in the March Engaging the Demand Side Meetings, and may not reflect sector-wide opinions

Special Case Resources

SCR Program Feedback

- **SCRs have expressed a general desire for participation options that support additional operational flexibility**
 - Flexibility in Resource Capacity duration
 - Flexibility in Resource response time

SCR Event Notification Window

- **Presently, the SCR program requires that the NYISO issue an SCR Event Advisory 21 hours (or 24 hours, if the notice is issued after 3:00 pm) ahead of a given SCR Event**
 - This long lead time allows most SCRs to handle SCR Event Response manually
 - Makes it easier for SCRs to schedule or reschedule site maintenance
 - Allows some large production facilities the opportunity to recover production that will be lost during the SCR Event in off-hours
- **Several SCRs have indicated the ability, or potential ability, to respond to events given significantly shorter notice**
 - Automation of SCR response could reduce required notification time down to 2-3 hours for some large production facilities
 - Required notification time may be even shorter for Resources whose participation is automated, such as big box stores utilizing a building management system for participation, or a Resource that participates via a Generator on AGC controls

SCR Event Notification Window

- **Cost and core business impacts from a shorter notification time may be minimal, but have not yet been identified**
 - Qualitatively, SCRs anticipate a shorter notification time would not result in increased operational risk, and would not increase their costs in a meaningful way
 - Core business processes (staff communication, coordination) would need to be adapted for the shorter notification time, and would reduce the SCR's adaptability, but shorter notification times are not expected to meaningfully disrupt core business functions

Resource Duration and Frequency of Response

- **SCRs have expressed interest in participation options that would allow access to a wider range of Resource duration options**
 - SCRs report that the SCR program's 4-hour duration requirement is an inflexible designation that is not intended to reflect the different capabilities of individual Demand Side Resources that participate in the program
 - Some SCRs are already capable of 6-hour, 8-hour, or even longer durations, without the need for any sort of technical enhancements
 - The feasibility of a given SCR being able to support a longer Resource duration is really a question of economics, as opposed to a question of operational and technical capabilities
- **Several SCRs indicated that they could comfortably respond to multiple SCR Events within a single week, without major impacts to core business functions**
 - These same SCRs reported that it becomes more difficult to support given the prospect of longer SCR Events/Resource durations – an SCR may be able to support multiple 4-hour events in a given week, but can only manage to respond to a handful of 8-hour events before impacts to core business become too costly

SCRs and the DER Participation Model

- **NYISO is evaluating whether the DER Participation Model might offer some of the flexibility that SCRs have requested**
 - DER allows Resources to select a 2, 4, 6, or 8 hour duration when registering as a Capacity Supplier
 - A Resource in the DER Participation Model bidding into the DA market would receive a DA schedule by 11AM the day prior to a given operating day
 - Maintains longer notification horizon of the SCR Program
- **Several sticking points**
 - DER model requires six-second telemetry between the Aggregator and NYISO/TO (SCR model does not require real-time telemetry)
 - Bid/Schedule/Notify Requirements for Capacity Suppliers
 - The DER model is dispatch-only

The DER Participation Model

DER Participation Model Feedback

- **Aggregators have expressed concern in several key areas of the DER Participation Model:**
 - DER Telemetry Requirements
 - Proposal to utilize Cost-based References for DER Aggregations
 - Proposed 10kW minimum DER size threshold

DER Telemetry Requirements

- **Aggregators have expressed concern over the DER Participation Model's Telemetry requirements, specifically for “mid-size” Resources between 100kW and 1MW**
 - Resources below 100kW may utilize alternative telemetry rules to report data to the NYISO, subject to NYISO approval
 - Resources above 100kW must adhere to the same telemetry requirements as conventional generators - there is concern that this would be cost prohibitive for mid-size DERs, and would act as a barrier to entry to the DER Participation Model
- **NYISO believes some of this concern may be addressed by a given DER's ‘on-board tech’, specifically in inverter-based Resources**
 - These Resources may have the means to provide output data in near real-time using on-board performance monitoring devices within their inverters
 - Resources that are participating via a building management system may also benefit from on-board performance measurement devices
- **Aggregators proposed potentially utilizing utility AMI meters to address their concerns**
 - AMI meters report data at a much slower frequency than the NYISO's required 6-second telemetry; implications of this approach would need to be assessed
 - Utility AMI meter programs are not currently universally available

Cost-Based References

- **Aggregators raised concerns regarding the NYISO's choice to utilize cost-based references for DER Aggregations**
 - Worried that, given the variable nature of a DSR's core business costs, an accurate cost-based reference may prove difficult to develop
 - Opportunity and real costs vary quarter to quarter, week to week, depending on the health of the core business sector, and of the DSR's core business itself
- **NYISO's market mitigation team has since held a workshop to discuss cost-based references with Market Participants**

<10kW DER Participation

- **At the March Meetings, NYISO proposed that Aggregators may be able to help alleviate some of the administrative costs of small DER participation by inheriting some of the verification and validation responsibilities of the NYISO**
 - NYISO plans to continue communicating with Aggregators on this point as the NYISO finalizes the processes and documentation that will support DER enrollment

<10kW DER Participation

- **NYC has concerns with expansion of DER participation to <10 kW (i.e., residential customers):**
 - Potential for mixed messages
 - Hot weather tends to overlap with peak demand/usage and calls for demand response
 - Public health messaging and demand response messaging could be in conflict
 - Absence of consumer protections
 - No rules to govern aggregator conduct
 - Lack of oversight by utilities
 - Unclear consequences for abusive conduct

<10kW DER Participation: Use Cases

- A residential DER facility with a Generator that is less than 10 kW
- A residential DER facility with an ESR that is less than 10 kW
- A residential DER facility with a Generator that is less than 10 kW and an ESR that is less than 10 kW on the same site
- <10kW curtailable loads
- NYISO is interested in hearing about any other additional, or more specific, use cases for <10kW DER Participation
 - Additional feedback can be submitted to me by e-mail: fbiancardi@nyiso.com

Next Steps

- **Begin drafting initial draft of the Engaging the Demand Side report**
- **6/23 MIWG – Project Update #2**
- **7/27 MIWG – Project Update #3**

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?