

# DER Market Design Updates

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**MIWG**

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# Background

Date	Working Group	Discussion points and links to materials
03-06-18	Market Issues Working Group (MIWG)	<a href="#">DER Market Design: Aggregations</a>
04-26-18	Market Issues Working Group (MIWG)	<a href="#">DER Market Design: Measurement &amp; Configuration</a>

# Purpose of Today's Meeting

- Review market design for:
  - DER Aggregations and
  - Interconnection Requirements

# Purpose of the DER Roadmap Effort

- Develop a Dispatchable DER Participation Model for the NYISO-administered wholesale markets
- Create a model that supports the **NYISO Market Design Vision** - *Attract and retain the most efficient resources to meet NY's reliability needs.*

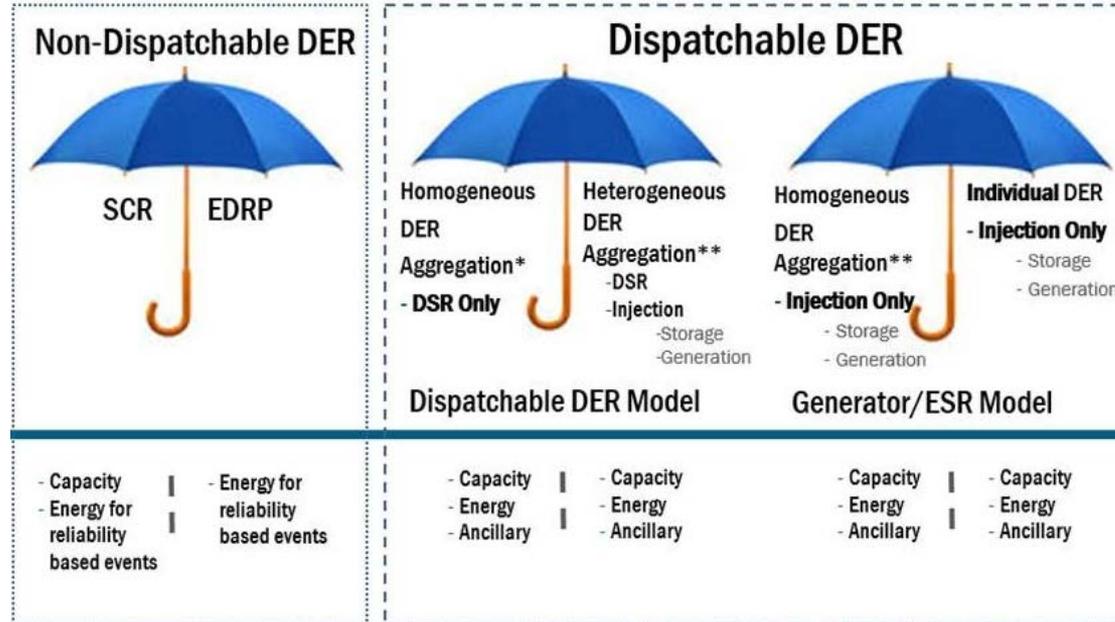
# DER Market Participation

- In the MDCP NYISO proposed to allow DER to utilize different participation models
- The participation model used by a DER will be determined by its capabilities and how it chooses to aggregate

# DER Participation Models

- **Aggregations may be homogenous or heterogeneous**
  - Heterogeneous aggregations will be subject to the rules developed using this MDCP
  - Except for Demand Side Resources, homogenous aggregations will be subject to the rules of the particular resource type (i.e., Generator, ESR, Intermittent Power Resource)
    - Dispatchable Demand Side Resources will be subject to the rules developed for heterogeneous aggregations
    - Non-dispatchable Demand Side Resources may continue to participate in the EDRP or SCR Program

# Participation Models Available to DER



\*Aggregations consisting only of Demand Side Resource (DSR) can be composed of 1 or more Facility

\*\* All other aggregations must be composed of 1 or more Facilities

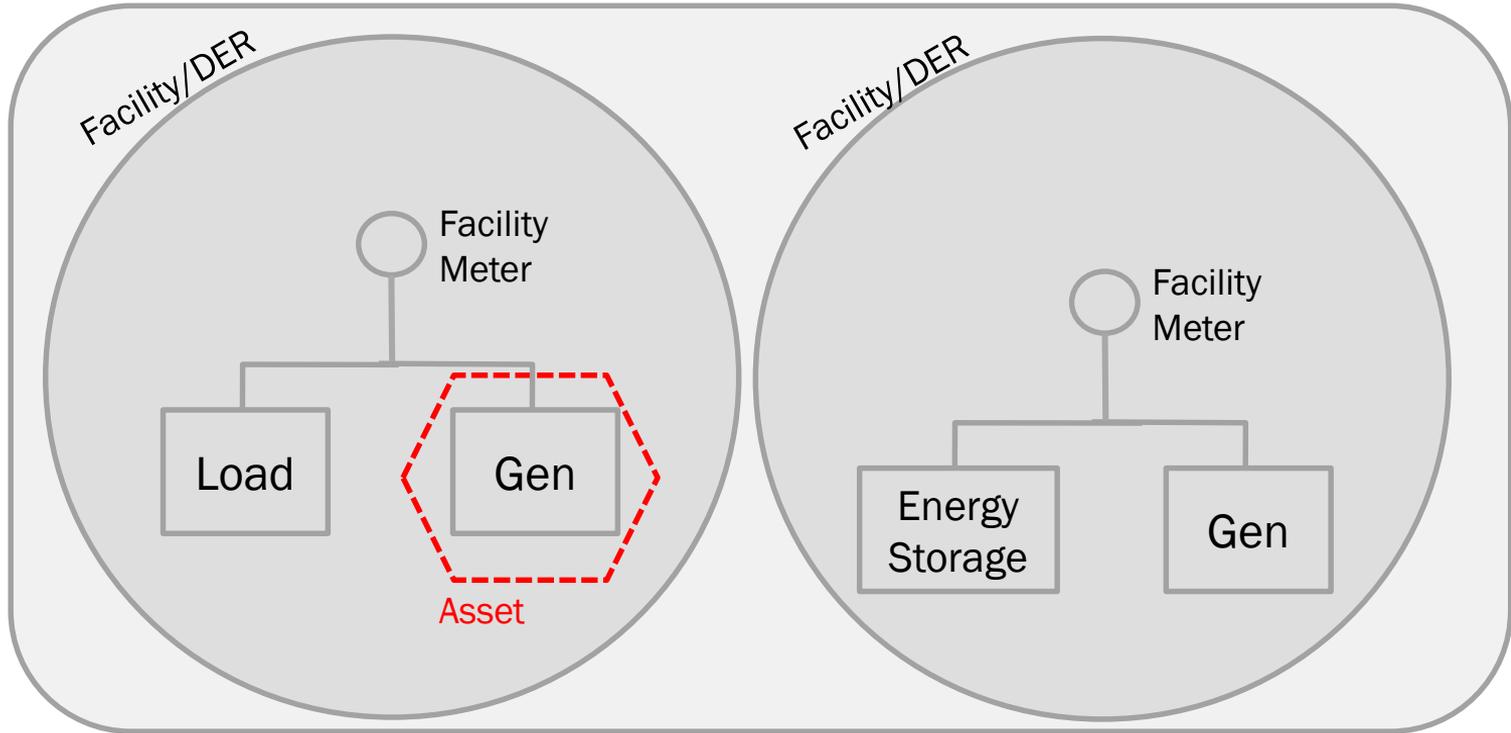
# Overview of DER Aggregation Basics

# DER Aggregation Basics Recap

- DER will be permitted to aggregate to meet minimum eligibility requirements and performance obligations
- The DER Coordinating Entity (“DCE”) will be the aggregator and NYISO Market Participant
- The DER Coordinating Entity Aggregation (“DCEA”) will be a group of one or more resources participating in the NYISO Market, represented by a PTID
  - Bidding and Performance Obligations will be done and measured on a DCEA basis
  - Settlements and M&V will be done on the DCEA basis, with separate processes being used for the injection and load reduction portion

# Terminology Overview

DCEA



# DER Aggregation Basics, con't

- **All resources within a DCEA will be required to be behind the same NYISO modeled Transmission Node**
  - The NYISO is working with utilities to identify the minimum set of Transmission Nodes which will accurately reflect intra-zonal congestion
  - Methodology for Transmission Node identification for DCEA modeling will be completed as part of the 2018 Market Design process

# DER Interconnection and BSM

# DER Interconnection Basics

- **DER will be evaluated on an individual basis**
  - Not in aggregate (DER not DCEA)
- **Injection resources subject to the NYISO's interconnection procedures will be evaluated for ERIS, and if requested, for CRIS**
  - This includes resources which have the ability to both inject and reduce load, either in separate or overlapping intervals
    - This would be a co-located Injection and Load Reduction entities behind the same point of interconnection/utility meter
  - CRIS obtained through the NYISO's interconnection process will be assigned to the individual resource
- **Load Reduction-only resources will not be evaluated for interconnection and will have the ability to offer capacity without CRIS**

# DER Interconnection - Injection

- Any resource with the capability to inject will be evaluated under the interconnection requirements based on its injection capability
  - Less than or equal to 20 MW, follows Small Generator Interconnection Process for ERIS
    - If the resource requires non-Local System Upgrade Facilities, it must enter a Class Year Study for ERIS
  - For CRIS, the resource must complete a Class Year Deliverability Study (unless the resources is 2 MW or less) and accept its cost allocation and post security for any System Deliverability Upgrades

# DER Interconnection - CRIS

- Any resource requesting CRIS will be evaluated under the BSM Rules
- A resource with the ability to both inject and perform Load Reduction would only receive CRIS for the injection portion of the resource, to the extent the resource obtains CRIS in accordance with the NYISO's interconnection procedures
- The NYISO is currently evaluating:
  - Whether the BSM Rule Unit Net CONE test (the "Part B Test") to determine uneconomic entry should be adjusted for DER injection resources
    - Based on a required attribute of a DER injection resource that distinguishes it from other Generators or UDR projects, or another rationale
  - Whether there should be an adjusted timeline for the evaluation of the subset of DER injection resources that does not require CRIS to participate in the capacity market
    - The current BSM Rule evaluation and process occurs in conjunction with the timing of the Class Year decisional rounds.
    - The proposed Renewable and Self Supply exemption tariff revisions (pending before the Commission) have inputs that tied to the Class Year

# Offering Capacity – Load Reduction-only

- **SCR resources have the ability to offer Capacity but do not need CRIS**
  - This right only exists when enrolled
- **Distributed Energy Resources that only have the ability to perform Load Reduction would share the same market entry process and have the same opportunities presently available to SCRs**

# Next Steps

- In 2018, the NYISO will develop rules for energy and capacity market offer requirements, mitigation, forecasting and interconnection
  - The NYISO will also more fully develop the market rules and tariff language to implement the 2017 MDCP
- The NYISO will evaluate the implementation of rules through the pilot program
- NYISO plans to conclude development of rules in 2018 for the eventual implementation of DER in 2021

# Feedback?

- To ensure all feedback is captured please email additional feedback to: [DER\\_Feedback@nyiso.com](mailto:DER_Feedback@nyiso.com)

Reminder – All comments received will be posted on the NYISO Distributed Energy Resources [webpage](#)

# Appendix A - Acronyms

- DER – Distributed Energy Resource
- DCE – DER Coordinator Entity
- DCEA – DCE Aggregation
- DSP – Distributed System Platform
- DR – Demand Response
- RT - Real-Time
- DA – Day-Ahead
- RTC – RT Commitment
- RTD – RT Dispatch
- DAM – DA Market
- RTM – RT Market

# The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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