

# Co-located Storage Resource Model Updates

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Katherine Zoellmer

Market Design Specialist, New Resource Integration

**MIWG/ICAPWG**

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# Agenda

- **Project Background**
- **Proposed Tariff Changes**
  - MST 2.3
  - MST 4.2 and MST 4.4
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- **Next Steps**

# Note on the Tariff Changes

- The proposed tariff changes in the posted materials are built on top of the revisions that were approved at the December 2022 Management Committee meeting as part of the HSR project
- The additional proposed modifications for discussion today are highlighted in yellow

# Project Background

# CSR Model Background

- In 2021, the Co-located Storage Resource (CSR) model was deployed, allowing an Energy Storage Resource (ESR) to pair with a wind or solar Intermittent Power Resource (IPR) behind the same Point of Injection and share a set of CSR Scheduling Limits while participating in the ISO Administered Markets as two distinct Generators
- As part of the 2022 Hybrid Storage Resource (HSR) effort, the CSR model was expanded to include the following participation options:
  - ESR + Landfill Gas IPR
  - ESR + Limited Control Run-of-River Hydro (RoR)
  - ESR + Fast-Start Resource (FSR)

# CSR Model Background

- **A proposed 2024 project would further expand the eligibility of the CSR model to include steam turbines that pair with an ESR. Instead of creating an additional 2024 project, NYISO agreed to include this work as part of the ongoing HSR project**
- **As a result, the NYISO is proposing tariff modifications for a CSR expansion to allow an ESR paired with another Generator, with the following limitations on the non-ESR (second) Generator. The second Generator cannot be:**
  - A Withdrawal-Eligible Generator
  - A Limited Energy Storage Resource
  - A Generator comprised of a group of generating units at a single location, which grouped generating units are separately committed and dispatched by the ISO, and for which Energy injections are measured at a single location
  - One or more Generators that are participating via a model that can accommodate several participants (such as HSR and DER) – similar to the "no nested Aggregations" rule
  - Generators that serve a Host Load

# Types of Eligible Generators

- **Types of Generators that would be eligible to participate with the proposed changes as CSR with an ESR include, but are not limited to:**
  - Steam units
  - Combined Cycle Generators with only 1 PTID
  - Units with multi-hour start-up times

# Proposed Tariff Changes



# Overview of Tariff Changes

- **The following sections have proposed tariff changes to accommodate the Generator + ESR model:**
  - MST 2.3
  - MST 4.2
  - MST 4.4
  - MST 5.12
  - MST 7.2
  - MST 15.4
  - MST 23.2
  - OATT 2.7
- **Because many of the changes are made to the redlined tariff that was approved as part of the 2022 HSR project, the proposed modifications are highlighted in the posted materials**
- **The NYISO is still evaluating whether changes to other Tariff sections may be needed, but it expects most of the changes are being presented today.**

# Overview of Tariff Changes

- The following sections contain minor edits to accommodate the expansion of the model to additional eligible Generators:
  - MST 5.12.1
  - MST 7.2.8
  - MST 15.4.3.1
  - OATT 2.7.2.1.5 and OATT 2.7.2.4.4
- For example, proposed updates to MST 7.2.8 read:
  - “When an Energy Storage Resource participates as a Co-located Storage Resource, the credit issued to an affected Customer and the corresponding charge assessed to the Load Serving Entity will not include the Energy Storage Resource’s charging Energy received from the co-located **Intermittent Power ResourceGenerator** behind the Co-located Storage Resource’s shared Point of Injection/Point of Withdrawal.”

# MST 2.3

- The NYISO proposes a modification to the definition of “Co-located Storage Resources” in MST 2.3 to expand eligibility of the program
- The NYISO proposes the following updated definition:
  - An Energy Storage Resource and one other type of Generator that is not a Withdrawal-Eligible Generator. The second participating Generator can be either a wind, or solar or landfill gas fueled Intermittent Power Resource, a Limited Control Run-of-River Hydro Resource, or a Fast Start Resource-Dispatchable Generator which may need to be committed by the ISO and require time to start-up. The two Generators must: (a) are both be located behind a single Point of Injection (as defined in Section 1.16 of the OATT); (b) participate in the ISO Administered Markets as two distinct Generators; and (c) share a set of CSR Scheduling Limits. Resources-Generators that serve a Host Load may not participate in the ISO-Administered Markets as components of a CSR include: (a) Limited Energy Storage Resources, (b) a Generator comprised of a group of generating units at a single location, which grouped generating units are separately committed and dispatched by the ISO, and for which Energy injections are measured at a single location, (c) Generators participating via a model that can accommodate several participants, including but not limited to Hybrid Storage Resources and Aggregations, and (d) Generators that serve a Host Load.

# MST 4.2 and MST 4.4

- The NYISO proposes a modification to MST 4.2.1.3.2 to address scheduling in the Day-Ahead Market with respect to the CSR Scheduling Limits
- The NYISO proposes the following language:
  - An Energy Storage Resource that, together with a ~~Fast-Start Resource-Generator~~ that submits a Minimum Generation Bid or is a Fixed Block Unit, participates as Co-located Storage Resources shall not submit Day-Ahead Market Bids that would self-commit the Energy Storage Resource to inject Energy such that the ~~Fast-Start Resource-Generator's~~ Minimum Generation (which is equal to the ~~or~~ full output ~~offer~~ for a Fixed Block Unit), plus the Energy Storage Resource's self schedule, exceeds the CSR injection Scheduling Limit.
  - When a Generator that submits a Minimum Generation Bid or that is a Fixed Block Unit participates as a Co-located Storage Resource, the ISO will treat the Generator as operating at, at least, its Minimum Generation Level (or full output for a Fixed Block Unit) for the purpose of scheduling the Energy Storage Resource whenever the Generator is scheduled, including during start-up and shut-down periods.
- Corresponding proposed changes are in MST 4.4.1.2.1 to address the Real-Time Market

# MST 5.12

- **The NYISO proposes an addition to MST 5.12.6.2 to account for a reduction to the CSR Scheduling Limits or unavailability within the Generator UCAP calculations**
- **The NYISO proposes the following language:**
  - The amount of Unforced Capacity that a Generator that is participating as part of a Co-located Storage Resource is authorized to supply in the NYCA shall account for reductions to the CSR Scheduling Limits, or the unavailability of the associated facilities, in accordance with ISO procedures.

# MST 23.2

- The NYISO proposes a modification to the definition of “Examined Facility” in MST 23.2.1 to account for the proposed eligibility changes to the model
- The NYISO proposes the following changes within the definition:
  - In the case of a Project that is Co-located Storage Resources ~~comprised of either a landfill gas Intermittent Power Resource or a Fast Start Resource, plus an Energy Storage Resource,~~ or a Project that is a Hybrid Storage Resource that has a landfill gas Intermittent Power Resource as a component, the landfill gas or Fast Start Resource ~~each participating Generator or component facility shall be treated as a separate Examined Facility unless the Developer of the Project certifies that all of the Project’s participating Generators or the component facilities qualify~~ ~~es~~ as an Excluded Facility, as defined in this Services Tariff, and it is determined to meet the criteria provided in that definition.

# Next Steps

# Next Steps

- **Return to an upcoming MIWG to present any additional required tariff updates**
  - Followed by going to BIC and MC in Q1 2024 for a vote



# Questions?

# 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