

CSR Tariff Updates

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October 05, 2021

Agenda

- Background
- Explanation of Issue
- Proposed Tariff Revisions
- Next Steps

Background

Background

- On January 29, 2021, the NYISO filed with FERC the Tariff revisions for the Co-Located Storage Resource (CSR) participation model proposal
- On March 30, 2021, FERC issued an order accepting the NYISO's proposed Tariff revisions
- As the NYISO has been working to implement the CSR participation model by the end of 2021, it has identified some clarifying revisions that should be made to certain Tariff sections to accommodate scenarios when other constraints in the NYISO optimization should be prioritized above the CSR injection Scheduling Limit and the CSR withdrawal Scheduling Limit constraints

Explanation of Issue

Reasons for Proposed Tariff Updates

- **NYISO implementation of CSR injection and withdrawal Scheduling Limit Constraints and CSR-Generator specific operating parameters**
 - A few CSR Tariff revisions suggest that the CSR injection and withdrawal Scheduling Limit constraints may be prioritized over unit-specific limitations that affect a CSR Generator's operation (such as a ramp limit or a CSR Generator's UOL or LOL)
 - The Tariff language is not consistent with the NYISO's intended implementation. The NYISO will relax a CSR Scheduling Limit constraint if necessary to respect the unit-level parameters of a CSR Generator, including its ramp rate, UOL, LOL and telemetry
- **The proposed changes will improve CSR Tariff language consistency**
 - FERC accepted Tariff language in several sections of the CSR filing that uses more flexible language (stating NYISO will “account for” the relevant scheduling limit) to explain how the CSR withdrawal and injection Scheduling Limits are implemented. The proposed revisions will conform all descriptions of the NYISO's implementation to this more flexible standard

Example: CSR injection Scheduling Limit Conflicts with Generator Ramp Rate

Equipment at the CSR POI experiences an issue, and the CSR injection Scheduling Limit drops from 200MW to 100MW

	CSR ESR	CSR IPR
UOL (MW)	50	150
NYISO Schedule (MW)*	50	50
Telemetered Output (MW)	50	150
Ramp Rate (MW/minute)	4	11

- **50MW ESR output + 150MW IPR output = 200MW (violates CSR Injection Scheduling Limit by 100MW)**
- **(4MW/minute ESR ramp rate + 11MW/minute IPR ramp rate) * (5-minute RTD interval) = 75MW/5 minutes**
 - Given the ramp rate of each Generator in the CSR, the combined output cannot get below the CSR Injection Scheduling Limit by the next RTD interval (units can only move 75MW, but output is 100 MW above the CSR injection Scheduling Limit)
 - In this scenario, the NYISO's dispatch software would violate the CSR injection Scheduling Limit in order to respect the Generator ramp rates for a few intervals, until the net output of the CSR Generators can be dispatched down to the Scheduling Limit

*In this simplified example, CSR Generator schedules are limited to energy only.

Proposed Tariff Revisions

Proposed Tariff Revisions

■ MST/OATT Definition

- CSR Scheduling Limits: The CSR injection Scheduling Limit ~~sets the maximum is used to determine the~~ combined Regulation Capacity, Operating Reserve and Energy injection schedules for, and the maximum permitted net injection by a CSR's Generators. The CSR withdrawal Scheduling Limit ~~sets the maximum is used to determine the~~ combined Regulation Capacity and Energy withdrawal schedules for, and the maximum permitted net withdrawal by a CSR's Generators.

Proposed Tariff Revisions (cont'd)

- **MST Sections 15.4.2.1 and 15.4.3.1 (same text in both sections):**
 - For Co-located Storage Resources the sum of the amount of Energy each Generator is scheduled to provide, the amount of Regulation Service the Energy Storage Resource is scheduled to provide, and the amount of each Operating Reserves product the Energy Storage Resource is scheduled to provide, shall ~~not exceed~~ [account for](#) the CSR injection Scheduling Limit. The net amount of Energy that the CSR Generators are scheduled to withdraw, plus the amount of Regulation Service the Energy Storage Resource is scheduled to provide, shall ~~not exceed~~ [account for](#) the CSR withdrawal Scheduling Limit.
- **Statements that the ISO shall or will “account for” CSR Scheduling Limits are included in other sections of the accepted CSR Tariff revisions, including MST Sections 4.2.1.3.1, 4.4.1.2, 4.4.2.1 and 5.12.6.2**

Next Steps

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- **Seek stakeholder vote at October BIC and MC**
- **Seek BOD approval (November 2021)**
- **File with FERC and request a flexible effective date for the Tariff changes that is prior to 12/31/21**

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