



Energy Storage Integration

Feedback Update

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Background

- **Since the announcement of the NYS PSC REV initiative, there has been a growing interest in wholesale market participation of storage resources**
- **Currently, the NYISO has several resource classifications that can accommodate participation of storage in the wholesale markets**
 - ***Energy Limited Resource (ELR)***
 - ***Limited Energy Storage Resource (LESR)***
 - ***Demand Side Ancillary Services Program (DSASP)***
 - ***Special Case Resource (SCR)***

Initiative Scope

- **In the near-term, the NYISO is evaluating its current programs in which energy storage resources can participate and assessing potential needs for expanding and/or enhancing such existing programs**
- **In the longer-term, the NYISO will evaluate storage optimization techniques that will provide additional tools to aid the scheduling of storage resources**
- **The longer-term initiative is primarily intended to address wholesale, in-front-of-the-meter storage resources**

Stakeholder Feedback Summary

NYISO solicited stakeholder feedback on March 1, 2016 on Storage Market rules. The following is a summary of the feedback:

- ***Evaluate options for new programs or modify existing programs that would***
 - ***Provide additional market participation options for storage resources with greater than 1 hour, but less than 4 hours of service capability***
 - ***Enabling storage resources with runtimes that don't meet current program requirements to participate***

Stakeholder Feedback Summary cont.

- *Expanding the availability of “state of charge” management signal to more resource types*
- *Expand the allowable uses of aggregations to more resource types and decrease the minimum MW threshold required to participate*
 - *Reduce 1 MW threshold for LESR participation*
- *Define the rules for determining the Capacity value for renewable resources paired with storage and consider if these paired resources would retain “intermittent” classification*

Stakeholder Feedback Summary cont.

- *Consider allowing storage resources with less than 4 hours of capability to participate in the energy market*
- *Integration of storage resources should be an evolving process. The NYISO should continue to improve upon its programs and assess opportunities for additional enhancements over time*
- *The NYISO should seek to improve price formation and market participation options for storage resources proactively, rather than awaiting investment in resources (i.e., the market constructs should help aid and guide investment decisions)*

Stakeholder Feedback Summary cont.

- ***Clarify and assist Market Participants in understanding current market rules for storage resources to participate in existing programs***
- ***Clarify NPCC rules for the provision of synchronized reserves***
- ***Assess opportunities to accommodate the characteristics of storage resources as part of other ongoing efforts by the NYISO to optimize the output of other supply resources***

Anticipated Timeline

Jun - Sept

Develop Energy Storage Concepts
& Request/Review Feedback

Oct - Dec

Develop Tariff & Implementation Plan

2017

Continue to Work on Energy Storage
Concepts

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit 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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