

Energy Storage Resources: ICAP Manual Changes

Sarah Carkner
Market Design Specialist

BIC

May 20, 2020

Agenda

- Background
- ICAP Manual Revisions
- ICAP Manual Attachment Revisions
- Next Steps

Background

FERC Order No. 841

- On February 15, 2018, FERC issued a final rule to remove barriers to the participation of Energy Storage Resources (ESRs) in the competitive wholesale markets
- On December 3, 2018, NYISO filed proposed tariff revisions to comply with Order No. 841 to accommodate and establish rules for participation of ESRs in the ISO-administered markets
- On December 20, 2019, FERC issued an Order accepting the majority of the NYISO's proposed tariff revisions
 - The NYISO is undertaking a small number of further compliance obligations directed in the December 20, 2019 Order
 - NYISO also sought rehearing on the application of transmission charges to ESR Energy withdrawals, and the Commission's required effective date of May 1, 2020
 - The Commission has not yet issued an Order on the NYISO's request for rehearing regarding the application of transmission charges
 - FERC accepted the NYISO's request to extend the deadline for the implementation of the compliance tariff revisions to no later than September 30, 2020

Purpose of Today's Meeting

- **Stakeholder vote on revisions to the ICAP Manual and ICAP Manual Attachments that are necessary to administer the ESR tariff revisions**
 - Note that the revisions presented today capture only the rules proposed in the NYISO's ESR compliance filing
 - A redlined version of the proposed changes to the ICAP Manual and Attachments are posted with today's meeting materials

Previous Presentations

■ March 20, 2020

- <https://www.nyiso.com/documents/20142/11452204/4%20ESR%20ICAP%20Manual%20Presentation.pdf/>

■ February 10, 2020

- <https://www.nyiso.com/documents/20142/10753567/ESR%20ICAP%20Manual%20Changes%20pres.pdf/>

■ December 5, 2019

- <https://www.nyiso.com/documents/20142/9622070/ESR%20ICAP%20Manual%20Changes%20presentation.pdf/>

■ July 10, 2019

- <https://www.nyiso.com/documents/20142/7503488/ESR%20ICAP%20Manual%20Changes%20presentation.pdf/>

ICAP Manual Revisions

DRAFT – FOR DISCUSSION PURPOSES ONLY

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.

Proposed Installed Capacity Manual Changes

- **Section 4.2.2 – Resource Specific Test Conditions**
 - Addition of DMNC testing requirements for Energy Storage Resources
 - Measures maximum sustained output over 4 consecutive hours
 - Resources can derate to meet the 4 hour duration requirement

Proposed Installed Capacity Manual Changes

- **Section 4.5 – Calculation of the Amount of Unforced Capacity each Resource may Supply to the NYCA**
 - Addition of Energy Storage Resource UCAP Calculation Procedure
 - Clarify the UCAP calculations applicable to different resource types
 - Specifically include ESRs as a resource type
 - Clarify the default derating factor for different resource types, including ESRs

Proposed Installed Capacity Manual Changes

- **Section 4.8.1 – Generators and System Resources**
 - Inclusion of a Bid, Schedule, Notify requirement for Energy Storage Resources

ICAP Manual Attachment Revisions

DRAFT – FOR DISCUSSION PURPOSES ONLY

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.



Proposed Revisions to ICAP Manual

Attachment D

■ Attachment D – DMNC/PMPC Test Form

- The DMNC/PMPC Test Form has been updated to include Energy Storage Resources
- The form for ESRs is similar to that of Hydro Generation

Proposed Revisions to ICAP Manual

Attachment J

- **Attachment J – Unforced Capacity for Installed Capacity Suppliers includes revisions throughout Section 3.1 – 3.6 to address the following:**
 - Revisions to the definitions of $CRIS_{gm}$ and $DMNC_{gm}$
 - Revisions to correct the months used in the EFORd calculation
 - Revisions were made to include all Intermittent Power Resources rather than just wind generation
 - Subsection titles have been revised for consistency of terminology between sections
 - Sections titles have been revised for consistency of terminology between sections

Proposed Revisions to ICAP Manual

Attachment J

- **Attachment J – Unforced Capacity for Installed Capacity Suppliers**
 - A new section, 3.7, has been created to include the details of the Unforced Capacity calculation for Energy Storage Resources
 - This calculation uses the same timeframe as the EFORd calculation
 - The Unavailability Factor for ESRs will be based on the resource's availability to the Real-Time Market System using the following components:
 - UOL Availability_{gi}
 - LOL Availability_{gi}
 - Storage Availability_{gi}
 - Energy Level Availability_{gi}
 - Interval Seconds_{gi}
 - Additional detail on these equations are included in Section 3.7

Proposed Revisions to ICAP Manual

Attachment K

■ Attachment K – Reportable Operating Data

- Revisions have been made to remove details on GADS Reporting Requirements
 - The concept with additional details are captured correctly in Attachment J
 - Attachment J has been revised to explicitly include ESRs as a resource type for this requirement

Next Steps

BIC vote on May 20, 2020

Feedback/Questions?

Email additional feedback to: scarkner@nyiso.com and deckels@nyiso.com

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 policymakers, stakeholders and investors in the power system



www.nyiso.com