

Installed Capacity Manual Revisions

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Agenda

- **Background**
- **Proposed Revisions to ICAP Manual**
 - Expanding Capacity Eligibility
 - Tailored Availability Metric
 - Initial Wind UCAP Percentage
 - External ICAP Rights
- **Proposed Revisions to ICAP Manual Attachments**
 - Expanding Capacity Eligibility
 - Tailored Availability Metric

Revisions Related to Expanding Capacity Eligibility

- **Revisions to the ICAP Manual and ICAP Manual Attachments are necessary to administer the Expanding Capacity Eligibility rules, and will become effective in accordance with the effective date for the respective tariff revisions**
 - The Expanding Capacity Eligibility rules value resources in the Capacity market based on the reliability benefit that the resource provides to the system
 - The rules will allow resources with short durations that currently cannot participate in the Capacity market to be eligible for Capacity market participation
- **Revisions have been made to the following sections of the ICAP Manual and corresponding Attachments to accommodate these rules:**
 - ICAP Manual sections 2.5, 4.1.1, 4.2, 4.5, 4.8.1, 4.8.2, and 4.12
 - ICAP Manual Attachments D, J, and M

Revisions Related to Expanding Capacity Eligibility

- **The following sections of the ICAP Manual include revisions to accommodate the Expanding Capacity Eligibility ruleset:**
 - Sections 2.5, 4.1.1, 4.2, 4.5, 4.8.1, 4.8.2, and 4.12
- **The proposed revisions reflect the following rules for ICAP Suppliers with Energy Duration Limitations:**
 - Account for the Adjusted Installed Capacity value associated with Installed Capacity Suppliers, which is based on the resource's corresponding Duration Adjustment Factor
 - Description of the incremental penetration of Resources with Energy Duration Limitations
 - Specification of the Energy Duration Limitations, corresponding Duration Adjustment Factors, and Peak Load Windows
 - This includes the NYISO's authority to shift the Peak Load Window for ICAP Suppliers with Energy Duration Limitations
 - Details of the DMNC testing requirements and Bid, Schedule, Notify obligations
 - Updated references throughout the ICAP Manual accordingly

Revisions Related to Expanding Capacity Eligibility

- **The following revisions have been made to the ICAP Manual Attachments to accommodate ICAP Suppliers with Energy Duration Limitations:**
 - Attachment D
 - Updates to the classification of Energy Storage Resources for purposes of DMNC testing
 - Attachment F
 - Update to NYISO person of contact for communication with Market Participants
 - Attachment J
 - Details of the derating factor calculations for ICAP Suppliers with Energy Duration Limitations
 - Attachment M
 - Updates to align the CLR classification rules with existing practices
 - Updates to the ELR classification to account for Energy Duration Limitations

Revisions Related to Tailored Availability Metric

- **Revisions to the ICAP Manual and ICAP Manual Attachments are necessary to administer the Tailored Availability Metric rules, and will become effective in accordance with the effective date for the respective tariff revisions**
 - The Tailored Availability Metric rules address changes to the metrics for derating and performance factors to more accurately reflect the reliability contribution of these resources
- **Revisions have been made to the following sections of the ICAP Manual and corresponding Attachments to accommodate these rules:**
 - ICAP Manual sections 1, 4.4.9, 4.4.10, 4.5
 - ICAP Manual Attachment J

Revisions Related to Tailored Availability Metric

- **The following sections of the ICAP Manual include revisions to accommodate the Tailored Availability Metric ruleset:**
 - Sections 1, 4.4.9, 4.4.10, and 4.5
- **The proposed revisions have been made to reflect the following:**
 - The period of data (*i.e.*, the two previous like-Capability Periods) that will be used to calculate the derating factors for resources that use the EFORd or Unavailability Factor
 - Details of the appropriate data to use when Resources are not in operation for the entirety of the past two like-Capability Periods
 - Moving the details on the calculation of the production factor of Intermittent Power Resources to Attachment J

Revisions Related to Tailored Availability Metric

- **The following revisions have been made to the ICAP Manual Attachments to accommodate the Tailored Availability Metric ruleset:**
 - Attachment J
 - Details of the period of data (*i.e.*, the two previous like-Capability Periods) used to calculate the derating factors for Resources that use the EFORd or Unavailability Factor
 - Details of the production factor calculation for Intermittent Power Resources

Revisions Related to Initial Wind UCAP Percentage

- **Revisions to the ICAP Manual are recommended to better align the initial wind UCAP percentages with the Tailored Availability Metric rules, and will become effective in accordance with the effective date for the respective tariff revisions**
 - The new initial wind UCAP percentages utilizes updated wind data and are developed with the methodology in accordance with the Tailored Availability Metric rules
- **Revisions have been made to ICAP Manual Section 4.5 (b)**

Revisions Related to Initial Wind UCAP Percentage

- **The following revisions have been made to ICAP Manual Section 4.5 (b)**
 - The description of the methodology used to develop the new initial wind UCAP percentages for land-based wind resources
 - The description of the intended methodology to develop the new initial wind UCAP percentages for offshore wind resources
 - The updated table with new initial wind UCAP percentages for land-based wind resources
 - The updated table with place holders for wind UCAP percentages for offshore wind resources and a note with the timeline for expected updates

Revisions Related to Initial Wind UCAP Percentage

- **The new initial UCAP percentages for offshore wind are pending updated data from National Renewable Energy Laboratory (NREL), which is expected in early 2021**
 - Current available offshore wind data from NREL covers the period of 2007-2014 and was developed in 2015
 - NREL confirmed that new offshore wind data will be released early 2021 and it will be a 20-year dataset
 - The ICAP Manual revisions for offshore wind initial UCAP percentages are expected upon the release of updated NREL data

Revisions Related to External Import Rights

- Revisions to the ICAP Manual to update the External Import Rights Limits for the 2021/2022 Capability Year are necessary to reflect the maximum amount of import capacity allowed from neighboring Control Areas
- The proposed revisions have been made to the following section:
 - Section 4.9.6

Revisions Related to External Import Rights

- **MARS simulations were performed on the LCR MARS database to determine capacity imports allowed without violating the LOLE criterion**
- **The final values for import capability reported will be subjected to a deliverability test**
 - If all the MWs are deemed deliverable, the final values reported will be the Import Rights per each Control Area
 - If the MWs are not deemed deliverable, the final values for each Control Area will be reduced to the amount deliverable
 - Deliverability test currently in progress

Revisions Related to External Import Rights

Four-Control-Area-Participation	PJM	ISO-NE	Quebec	Ontario	Totals
Initial Values (TTC Summer Ratings)	1450	1400	1690	1850	6390
Grandfathered Rights*	1080	0	1110	0	2190
Individual Limits (above GF)	285	459	18	80	842
Simultaneous Limits (above GF)	149	241	9	42	441
Final Values **	1229	241	1119	42	2631

*Includes ETCNL for these purposes

**2021/2022 Capability Year Subject to Deliverability Study

Next Steps

- **BIC vote on ICAP Manual**
- **For Import Rights Limits:**
 - Deliverability results scheduled to complete mid-February
 - Final import rights limits posting along with other Summer Capability Period auction information February 26, 2021
 - Summer Capability Period strip auction opens end of March 2021

Questions?

Appendix

Revisions Related to External Import Rights – Results continued

Four-Control-Area-Participation	2021/2022 Capability Year					2020/2021 Capability Year				
	PJM	ISO-NE	Quebec	Ontario	Totals	PJM	ISO-NE	Quebec	Ontario	Totals
Initial Values (TTC Summer Ratings)	1450	1400	1690	1850	6390	1450	1400	1690	1850	6390
Grandfathered Rights*	1080	0	1110	0	2190	1080	0	1110	0	2190
Individual Limits (above GF)	285	459	18	80	842	285	620	12	28	945
<i>Individual Limits (above GF) Delta</i>	0	-161	6	52	-103					
Simultaneous Limits (above GF)	149	241	9	42	441	152	332	6	15	505
<i>Simultaneous Limits (above GF) Delta</i>	-3	-91	3	27	-64					
Final Values **	1229	241	1119	42	2631	1232	332	1116	15	2695
<i>Final Values** Delta</i>	-3	-91	3	27	-64					

*Includes ETCNL for these purposes

**2021/2022 Capability Year Subject to Deliverability Study

Revisions Related to Import Rights - Ties Excluded

- Interface facilities having UDRs
- Controllable lines from PJM into NYCA
- The NUSCO 1385 (NNC) line

Revisions Related to Import Rights - Methodology

- **Initial MARS Database: 2021/2022 final IRM database as updated for the LCR study**
- **Model Grandfathered Rights imports consistent with the IRM study**
- **Determine imports for each Control Area individually by increasing imports on each Control Area's ties until the LOLE levels in the base case are met**

Revisions Related to Import Rights - Methodology continued

- Perform simultaneous runs of all included external ties together by increasing the ICAP imports based on the individual limits (beyond the Grandfathered Rights imports) until the LOLE levels in the base case are met
- These ICAP imports, when added to the Grandfathered Rights imports, determine the total simultaneous import limits before deliverability.

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- 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

