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Independent System Operator

2025 - 2029 ICAP Demand Curve Reset: Seasonal Reference Point Price Proposal

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Agenda

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- Response to Stakeholder Question
- Next Steps
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  - Draft Tariff Revisions – 08/03/2023

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Incremental Tariff Revisions

Incremental Tariff Revisions

- **In response to stakeholder feedback on the draft tariff revisions presented at the 08/03/23 ICAPWG meeting, the NYISO is proposing incremental revisions to MST 5.14.1.2.2 and 5.14.1.2.2.3**
  - MST 5.14.1.2.2 was revised to clarify the conditions assumed for each Capability Period when setting the reference point and maximum clearing price (i.e., the newly defined "reference point assumed excess conditions")
  - Clarified in MST 5.14.1.2.2.3 that the guardrails on the maximum and minimum percentages of the annual net revenue requirement assumed to be recovered in a season (i.e., "CPMax" and "CPMin") apply to the ICAP Demand Curves produced for each annual update
- **The incremental revisions are highlighted in yellow in today's meeting materials**

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Response to Stakeholder Question

Response to Stakeholder Question

- A question was raised at the 08/03/23 ICAPWG meeting regarding whether the current tariff would allow for separate zero crossing points for each Capability Period under the seasonal reference point price proposal
- The current tariff requires that the zero crossing points be assessed as part of the reset process for each ICAP Demand Curve and remain fixed for the entirety of each reset period
- Because the seasonal reference point price proposal requires ICAP Demand Curves to be established for each Capability Period, separate zero crossing points could potentially be established for the separate ICAP Demand Curves for each Capability Period if warranted
  - As required by the scope of each reset, the independent consultant will evaluate the appropriate zero crossing points for each curve
  - However, if differing zero crossing points for each Capability Period were determined to be warranted, the zero crossing points for each Capability Period must be determined as part of the reset process and remain fixed for the entire reset period

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Next Steps

Next Steps

- September/October BIC and MC: Seek stakeholder approval of proposed enhancements

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Questions?

Appendix

Background

Background

- **The Market Services Tariff requires the NYISO and its stakeholders undertake a periodic comprehensive review to determine the necessary inputs and assumptions for developing the ICAP Demand Curves for the period covered by each such review**
  - This review process is undertaken every four years and is commonly referred to as the DCR
  - Each ICAP Demand Curve is based on the estimated cost to construct and operate a hypothetical new capacity supply resource in various locations throughout New York
- **The 2023 project deliverable is a Q3 Study Defined**

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Previous Discussions

Previous Discussions

Date	Working Group	Discussion Points and Links to Materials
February 7, 2023	ICAPWG	DCR Kickoff: https://www.nyiso.com/documents/20142/36079056/2%202023-02-07%20ICAPWG%20DCR%20Kickoff.pdf/90011547-9c0b-bead-ac10-f56ff479415d
February 21, 2023	ICAPWG	Overview of draft DCR schedule, RFP schedule, draft RFP sections, and ICAP Demand Curve Reference Point Price Proposal: https://www.nyiso.com/documents/20142/36339783/2023-02-21%20ICAPWG%20-%20Demand%20Curve%20Reset.pdf/75b586ad-7725-e47a-8f34-89705e5004f4
March 7, 2023	ICAPWG	Review of updated DCR schedule and RFP sections: https://www.nyiso.com/documents/20142/36639552/2023-03-07%20ICAPWG%20-%20Demand%20Curve%20Reset%20v2.pdf/ae66691e-224d-ce7d-afbe-40f8f6fcb9a7
April 27, 2023	ICAPWG	ICAP Demand Curve Reference Point Price Proposal – CPMax and CPMin Values: https://www.nyiso.com/documents/20142/37254128/2025-2029%20DCR%20Reference%20Point%20Price%20Proposal%20-%20ICAPWG%20042720 23%20v3%20-%20clean.pdf/1f5ff7b9-17b9-84cd-5b90-dce23952291e
June 27, 2023	ICAPWG	Maximum Clearing Price Calculation and WSR/SWR and ZCP Interaction: https://www.nyiso.com/documents/20142/38423065/3%202025-2029%20DCR%20Reference%20Point%20Price%20Proposal%20-%20ICAPWG%20062720 23.pdf/e2eefd32-c689-105b-7e2d-17fb14e72a2d ICAP Demand Curve Reference Point Price Proposal – Example Reference Point Prices: https://www.nyiso.com/documents/20142/38423065/Seasonal%20Reference%20Point%20Price%20Proposal%20-%20Example%20Reference%20Point%20Prices%20v2%20-%20clean.pdf/e6e8443d-12e5-96d3-4d2b-d605a2f2830c

Previous Discussions

Date	Working Group	Discussion Points and Links to Materials
August 3, 2023	ICAPWG	Summary of Draft Tariff Revisions: https://www.nyiso.com/documents/20142/39102681/2025-2029%20DCR%20Reference%20Point%20Price%20Proposal%20-%20ICAPWG%2008032023%20Draft%20v3.pdf/9070bd79-8d30-6966-a6b6-6a181e6c280f Draft Tariff Revisions: https://www.nyiso.com/documents/20142/39102681/MST%205.14%20-%20Seasonal%20Reference%20Point%20Price%20Revisions.pdf/34efe711-8465-1685-be3b-95a0f57b9d2a

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Overview of Proposed Enhancements

Proposed Enhancements: Reference Point Prices

- **The NYISO proposes to separately calculate summer and winter reference point prices, resulting in separate curves for each season, starting with the 2025/2026 Capability Year**
  - The following slides provide an overview of the proposed formula changes

Proposed Enhancements: Reference Point Prices

- The NYISO proposes adjustments to the numerators of the reference point price formulas to allocate the annual revenue requirement of the peaking plant (i.e., "$ARV_z * AssmdCap_z$") between the Summer and Winter Capability Periods, based upon the percentage of reliability risk in each season (i.e., "$SLOLE$" and "$WLOLE$"), subject to guardrails on the maximum and minimum percentages assumed to be recovered in a season (i.e., "$CPMax$" and "$CPMin$")
  - The NYISO proposes to initially set the CPMax and CPMin values at 65% and 35%, respectively, for the 2025-2029 reset period
    - Proposed initial values are intended as conservative bounds while the IRM modeling is undergoing consideration of modifications to enhance seasonal modeling assumptions
    - Initial values are also informed by the historical seasonal revenue recovery implicitly assumed in establishing the ICAP Demand Curves
  - The NYISO also proposes that the CPMax and CPMin values be evaluated as part of each quadrennial review beginning with the 2029-2033 reset

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Proposed Enhancements: Reference Point Prices

- The NYISO proposes adjustments to the denominators of the formulas to improve the accounting for seasonal differences in capacity availability and the seasonal “level of excess” conditions considered in establishing the curves

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Proposed Enhancements: Reference Point Prices

- Current Monthly Reference Point Price Formula:[1]

$$RP_z = \frac{ARV_z * AssmdCap_z}{6 * [SDMNC_z * \left(1 - \frac{LOE_z - 1}{ZCPR_z - 1}\right) + WDMNC_z * \left(1 - \frac{LOE_z - 1 + WSR_z - 1}{ZCPR_z - 1}\right)]}$$

- Proposed Summer Monthly Reference Point Price Formula:[2]

$$SRP_z = \frac{ARV_z * AssmdCap_z * max[min(CPMax, SLOLE), CPMin]}{6 * SDMNC_z * \left(1 - \frac{SLOE_z - 1 + max(0, SWR_z - 1)}{ZCPR_z - 1}\right)}$$

- Proposed Winter Monthly Reference Point Price Formula:[2]

$$WRP_z = \frac{ARV_z * AssmdCap_z * max[min(CPMax, WLOLE), CPMin]}{6 * WDMNC_z * \left(1 - \frac{WLOE_z - 1 + max(0, WSR_z - 1)}{ZCPR_z - 1}\right)}$$

New Terms
- $CPMax$
- $CPMin$
- $SLOLE$
- $WLOLE$
- SWR_z
- $SLOE_z$
- $WLOE_z$

[1]Detailed in Section 5.5 of the ICAP Manual
[2]Proposed additions to existing reference point price formula noted in red

Proposed Enhancements: Reference Point Prices

- **New Terms in proposed reference point price formulas**
  - $\boldsymbol{CPMax}$: the maximum percentage of the Annual Reference Value ($\boldsymbol{ARV_z}$) to be recovered by the peaking plant in one Capability Period
  - $\boldsymbol{CPMin}$: the minimum percentage of the Annual Reference Value ($\boldsymbol{ARV_z}$) to be recovered by the peaking plant in one Capability Period (equal to 1 minus $\boldsymbol{CPMax}$)
  - $\boldsymbol{SLOLE}$: the percentage of the annual loss of load expectation expected to occur in the Summer Capability Period based on the preliminary base case, as approved by the NYSRC, for the NYCA Installed Reserve Margin study covering the Capability Year for which the monthly ICAP reference point price is calculated
  - $\boldsymbol{WLOLE}$: the percentage of the annual loss of load expectation expected to occur in the Winter Capability Period based on the preliminary base case, as approved by the NYSRC, for the NYCA Installed Reserve Margin study covering the Capability Year for which the monthly ICAP reference point price is calculated (equal to 1 minus $\boldsymbol{SLOLE}$)
  - $\boldsymbol{SWR_z}$: the ratio of the amount of ICAP available in the ICAP Spot Market Auctions in the Summer Capability Period to the amount of ICAP available in the ICAP Spot Market Auctions for the Winter Capability Period for location z (equal to 1 divided by $\boldsymbol{WSR_z}$)
  - $\boldsymbol{SLOE_z}$: the ratio of level of excess that would occur in the Summer Capability Period (i.e., the applicable minimum ICAP requirement, plus $\boldsymbol{SDMNC_z}$) to the applicable minimum ICAP requirement for location z
  - $\boldsymbol{WLOE_z}$: the ratio of level of excess that would occur in the Winter Capability Period (i.e., the applicable minimum ICAP requirement, plus $\boldsymbol{WDMNC_z}$) to the applicable minimum ICAP requirement for location z

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Proposed Enhancements: Maximum Clearing Prices

- **The maximum clearing price on each ICAP Demand Curve is set at 1.5 times the monthly value of the applicable peaking plant gross cost**
  - The NYISO currently accounts for the applicable winter-to-summer ratio and the percentage of capacity at the prescribed level of excess conditions when translating the annual value of the applicable peaking plant gross cost to a monthly value (see ICAP Manual Section 5.5)
- **The current calculation of the maximum clearing price could, under certain conditions, produce a maximum clearing price that is less than the seasonal reference point price resulting from the proposed enhancements**
- **In order to ensure that the maximum clearing price is greater than the seasonal reference point price, the NYISO proposes to calculate seasonal maximum clearing prices**
  - As shown on the next slide, the proposed seasonal maximum clearing price calculations utilize the proposed seasonal reference point price formulas but replace net cost of new entry (CONE) with 1.5 times gross CONE

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Proposed Enhancements: Maximum Clearing Prices

- Current Maximum Clearing Price Formula:

$$MaxCP_z = 1.5 * WSR_z * LOE_z * \left(\frac{Gross\ CONE_z}{12}\right)$$

- Proposed Summer Maximum Clearing Price Formula:[1]

$$SMaxCP_z = \frac{1.5 * Gross\ CONE_z * AssmdCap_z * max[min(CPMax, SLOLE), CPMin]}{6 * SDMNC_z * \left(1 - \frac{SLOE_z - 1 + max(0, SWR_z - 1)}{ZCPR_z - 1}\right)}$$

- Proposed Winter Maximum Clearing Price Formula:[1]

$$WMaxCP_z = \frac{1.5 * Gross\ CONE_z * AssmdCap_z * max[min(CPMax, WLOLE), CPMin]}{6 * WDMNC_z * \left(1 - \frac{WLOE_z - 1 + max(0, WSR_z - 1)}{ZCPR_z - 1}\right)}$$

[1]Differences from the proposed reference point price formulas are noted in red

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Draft Tariff Revisions – Presented at the 08/03/23 ICAPWG Meeting

Draft Tariff Revisions – 08/03/23 ICAPWG

- **MST 5.14.1.2**
  - Added requirement that, starting with the 2025/2026 Capability Year, ICAP Demand Curves be established for each Capability Period within a Capability Year
- **MST 5.14.1.2.2**
  - Added requirement that, starting with the 2025/2026 Capability Year, seasonal reliability risk be accounted for in the establishment of the ICAP Demand Curves
    - Added specification that the seasonal reliability risk be based on the results produced from the preliminary base case model approved by the NYSRC for determining the NYCA Installed Reserve Margin applicable to the Capability Year for which the applicable ICAP Demand Curves will be in effect

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Draft Tariff Revisions – 08/03/23 ICAPWG

- **MST 5.14.1.2.2 (continued)**
  - Added requirement that, starting with the 2025/2026 Capability Year, the ICAP Demand Curves be subject to maximum and minimum percentages of the allowable portion of the annual revenue requirement that can be assumed for recovery in each Capability Period (*i.e.*, CPmax and CPmin)
    - Sets the maximum and minimum percentage values at 65% and 35%, respectively, for the 2025/2026 through 2028/2029 Capability Years
    - Requires the maximum and minimum percentage values to be evaluated each Demand Curve reset (DCR) starting with the 2029-2033 DCR
      - Specifies that any adjustments to the maximum and minimum percentage values shall be identified in the DCR filing and remain fixed for the entire period covered by the applicable periodic review

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Draft Tariff Revisions – 08/03/23 ICAPWG

- **MST 5.14.1.2.2 (continued)**
  - Revised the description of accounting for seasonal differences in capacity availability as part of the annual update process to account for the need to update both the winter-to-summer ratio (WSR) and the summer-to-winter ratio (SWR), starting with the 2025/2026 Capability Year
    - Further discussed in MST 5.14.1.2.3
  - Added requirement that, starting with the 2025/2026 Capability Year, the seasonal reliability risk percentages be updated as part of the annual update process

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Draft Tariff Revisions – 08/03/23 ICAPWG

- **MST 5.14.1.2.3**
  - Added requirements that, starting with the 2025/2026 Capability Year, the maximum clearing price and reference point for each ICAP Demand Curve account for: (i) the applicable WSR or SWR; and (ii) seasonal reliability risk
    - Included clarification that if a WSR or SWR is a value less than one, the value shall be deemed to be zero for purposes of determining the applicable reference point, consistent with the proposed seasonal reference point formulas
  - Made conforming edits to replace references to "winter-to-summer ratio" with "the seasonal amount of capacity available in ICAP Spot Market Auctions" to account for consideration of both the winter-to-summer ratio and the summer-to-winter ratio

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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

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