

2026-2027 Winter Capability Period: Potential ICAP Market Parameter Misalignment

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MC

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*Reposted April 30, 2026 (includes correction to formula on Slide 19)

Agenda

- Background
- Review NYISO's Proposal
- Review Draft Tariff Revisions
- Next Steps
- Appendix: Previous Presentations and Additional Proposal Details

Background

Problem Defined

■ Background:

- The stakeholder-approved Winter Reliability Capacity Enhancements proposal is proposed for implementation starting with the 2027-2028 Capability Year. The proposal, among other components, includes the implementation of seasonal capacity requirements and seasonal elections for Unforced Deliverability Rights (UDRs) and External-to-Rest of State Deliverability Rights (EDRs).
 - The proposal was filed with FERC on 2/18/2026.
- Under the recently implemented Triggering Resource rules, two sets of ICAP market parameters have been developed for the 2026-2027 Capability Year reflecting different potential assumptions for ICAP market participation by the UDRs awarded to the Champlain Hudson Power Express (CHPE) project (i.e., “CHPE-In” and “CHPE-Out”).
 - Two sets of Locational Minimum Installed Capacity Requirements (LCRs) were presented and approved at the January 15, 2026 Operating Committee meeting

■ Problem Statement:

- CHPE’s expected entry into the ICAP market during 2026-2027 Capability Year introduces the potential for ICAP market parameter misalignment to arise during the 2026-2027 Winter Capability Period.
- The ICAP market parameter misalignment stems from two primary factors: (1) seasonal capacity availability assumptions accounted for in the ICAP Demand Curves, and (2) intra-seasonal differences in capacity supply availability and assumptions underlying the associated LCRs.
- The NYISO’s proposal seeks to respond to the potential for misalignment that could arise during the peak winter months (December 2026 – February 2027) if the CHPE UDRs provide a valid notice of intent to commence ICAP market participation during the 2026 Summer Capability Period.

■ Long Term Solution:

- The Winter Reliability Capacity Enhancements proposal, approved at the 11/20/2025 MC meeting, would mitigate this potential misalignment concern through the introduction of seasonal capacity requirements that account for seasonal UDR and EDR elections with such elections being subject to a must-offer requirement.
- However, because the Winter Reliability Capacity Enhancements proposal is slated for implementation starting with the 2027-2028 Capability Year, an interim solution is needed for the 2026-2027 Winter Capability Period.

Proposal Details

Proposed Solution

- **The proposed solution would only take effect if the CHPE UDRs provide a valid notice of intent to commence ICAP market participation during the 2026 Summer Capability Period.**
 - August 10, 2026 is the latest a valid notice for the CHPE UDRs could be submitted for the 2026 Summer Capability Period.
- **If a valid notice is not received by August 10, 2026, the NYISO will retain the ICAP market parameters associated with the “CHPE-Out” case for the 2026-2027 Winter Capability Period and no modifications would be made to the Load Zone J LCR or the 2026-2027 winter ICAP Demand Curves.**
- **If the CHPE UDRs provide a valid notice of intent to commence ICAP market participation during the 2026 Summer Capability Period, the NYISO proposes a two-part solution for 2026-2027 Winter Capability Period to address the potential misalignment issue.**
 1. Update the 2026-2027 winter ICAP Demand Curve reference prices and max clearing prices for adjustments to incorporate expected capacity supply availability for the CHPE UDRs (assuming for purposes of the alternative curves that the CHPE UDRs supply 1,250 MW during the summer and “shoulder” winter period (November 2026, March 2027 and April 2027) and 0 MW during the “peak” winter period (December 2026, January 2027 and February 2027)).
 - See Appendix for additional details on the proposed alternative winter ICAP Demand Curves
 - No changes are required for the previously determined 2026 summer ICAP Demand Curve parameter values.
 2. Update the Load Zone J LCR for the winter peak months (December 2026 - February 2027) to reflect the Load Zone J LCR associated with the “CHPE-Out” case (82.6%). The “CHPE-In” case Load Zone J LCR (86.4%) would be used for the winter shoulder months (November 2026, March 2027, and April 2027).
 - See Appendix for additional information regarding the use of two LCRs for Load Zone J
- **The combination of revising the Load Zone J LCR in the winter peak months (December 2026 - February 2027) and updated 2026-2027 winter ICAP Demand Curves provides a reasonable means for responding to the potential winter misalignment issue.**
 - Updating the 2026-2027 winter ICAP Demand Curves responds to the potential misalignment between expected winter capacity supply availability and the seasonal capacity availability adjustments to the ICAP Demand Curves.
 - Use of the “CHPE-Out” case LCR for Load Zone J during the peak winter months responds to the potential misalignment between the minimum capacity requirements and expected available capacity supply.

Proposed Solution (cont.)

- **To produce the alternative winter ICAP Demand Curves, the NYISO calculated revised 2026-2027 winter-to-summer ratio (WSR) values that were used to determine updated parameters for the 2026-2027 winter ICAP Demand Curves (see Appendix for additional details)**
 - The updated WSR values used the following capacity supply availability assumptions for the CHPE UDRs: 0 MW during winter peak months (December-February) and 1,250 MW for all other months (summer months and winter shoulder months)
 - The updated WSR for Load Zone J fell below 1.0 requiring a modification to the current ICAP Demand Curve parameter formulas to avoid adjustments to the Load Zone J ICAP Demand Curve summer reference point price and maximum clear price values
- **To account for the reduction of the Load Zone J LCR during the peak winter months (December 2026 – February 2027), an additional adjustment to the winter reference point price of the New York City ICAP Demand Curve was required to ensure the curves can provide revenue sufficiency for the Load Zone J proxy unit over the course of the 2026-2027 Capability Year (see Appendix for additional details)**
 - The NYISO determined that a reference point price of \$10.18/kW-month was required for the Load Zone J alternative winter ICAP Demand Curve

Proposed Tariff Revisions

Proposed Revisions to MST Section 5.11

■ Section 5.11.7.1

- New paragraph detailing that for the 2026-2027 Capability Year, if the Triggering Resource provides valid notice to commence ICAP market participation during the 2026 Summer Capability Period, then the NYISO will implement the ICAP market parameters reflecting the inclusion of the Triggering Resource (i.e., CHPE-In), except for the locational requirements applicable for Load Zone J and use of the alternative winter ICAP Demand Curves during the 2026-2027 Winter Capability Period.
 - The Load Zone J LCR from the CHPE-In case (86.4%) will apply for November 2026, March 2027, and April 2027
 - The Load Zone J LCR from the CHPE-Out case (82.6%) will apply for December 2026 – February 2027
- All other ICAP market parameters for the CHPE-In case would apply for all months of the 2026-2027 Winter Capability Period if the Triggering Resource provides valid notice to commence ICAP market participation during the 2026 Summer Capability Period

Proposed Revisions to MST Section 5.14

■ Section 5.14.1.2

- Clarifying revisions to note that if the Triggering Resource provides valid notice to commence ICAP market participation during the 2026 Summer Capability Period, then the ICAP Demand Curves specified in MST Section 5.14.1.2.1 will apply for the 2026-2027 Winter Capability Period.

■ Section 5.14.1.2.1

- Added section to expressly identify the contingent alternative ICAP Demand Curves parameter values for the 2026-2027 Winter Capability Period that apply if the Triggering Resource provides valid notice to commence ICAP market participation during the 2026 Summer Capability Period.
- Clarifies that the previously posted 2026 Summer Capability Period ICAP Demand Curves determined from the annual update for the 2026-2027 Capability Year remain unchanged and will be used for all months of the 2026 Summer Capability Period
- Clarifies that if the Triggering Resource does not provide valid notice of intent to commence ICAP market participation during the 2026 Summer Capability Period, the previously posted 2026-2027 Winter Capability Period ICAP Demand Curves determined from the annual update for the 2026-2027 Capability Year remain unchanged and will be used for all months of the 2026-2027 Winter Capability Period

■ Clarifying revisions to acknowledge that the alternative winter 2026-2027 ICAP Demand Curves were not developed as part of the annual update process and include unique characteristics not accounted for in the typical determination of the ICAP Demand Curve parameters

- Section 5.14.1.2.2 and 5.14.1.2.2.3

Next Steps

Next Steps

- Subject to NYISO Board of Directors approval, target submittal of the proposed tariff changes to FERC in June.
- Present corresponding ICAP manual updates at future working group meetings.
- For any questions or feedback, please email adrake@nyiso.com

Appendix

Previous Presentations

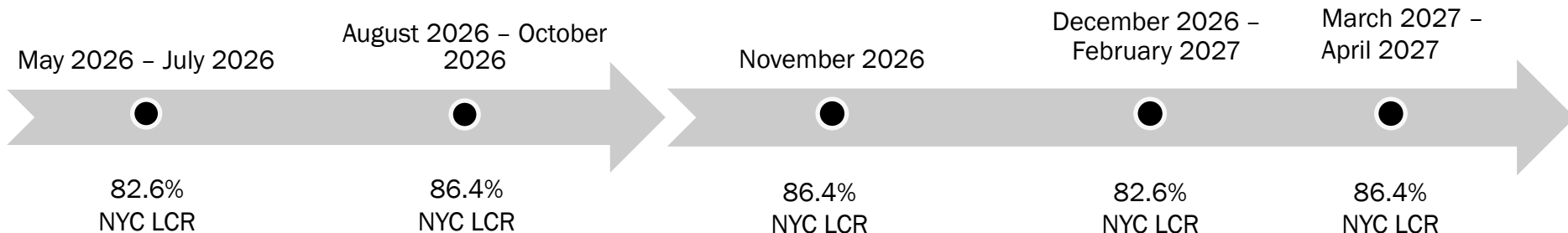
Date	Working Group	Discussion Points and Links to Materials
January 12, 2026	ICAPWG	2026-2027 Winter Capability Period: Potential ICAP Market Parameter Misalignment https://www.nyiso.com/documents/20142/56339181/2026-2027%20Winter%20Capability%20Period%20-%20Potential%20ICAP%20Market%20Parameter%20Misalignment%20-01122026%20ICAPWG%20Final.pdf/
February 24, 2026	ICAPWG	2026-2027 Winter Capability Period: Potential ICAP Market Parameter Misalignment https://www.nyiso.com/documents/20142/57218179/2026-2027%20Winter%20Potential%20Misalignment%20-%2002.24.2026%20ICAPWG%20Final.pdf/
March 16, 2026	ICAPWG	2026-2027 Winter Capability Period: Potential ICAP Market Parameter Misalignment https://www.nyiso.com/documents/20142/57396654/6%202026-2027%20Winter%20Potential%20Misalignment%20-%2003162026%20ICAPWG%20Final.pdf/
April 8, 2026	ICAPWG	2026-2027 Winter Capability Period: Potential ICAP Market Parameter Misalignment https://www.nyiso.com/documents/20142/57614757/2026-2027%20Winter%20Potential%20Misalignment%20-%2004082026%20ICAPWG%20Final%20-%20Reposted.pdf/
April 15, 2026	BIC	2026-2027 Winter Capability Period: Potential ICAP Market Parameter Misalignment https://www.nyiso.com/documents/20142/57654024/6%202026-2027%20Winter%20Potential%20Misalignment%20-%2004152026%20BIC%20Final.pdf/

Proposed Implementation of Load Zone J LCRs - Example

Load Zone J (NYC) LCR Assumptions

Summer Capability Period*

Winter Capability Period



*Based on an illustrative example assuming that a valid notice of intent to commence ICAP market participation is received for the CHPE UDRs by June 10, 2026 indicating an intent to commence ICAP market participation for the August 2026 delivery month

Proposed Alternative Winter ICAP Demand Curves

- Based on consideration of historical information/data, the 2026-2027 IRM study assumptions, and other relevant information regarding expected near-term capacity supply conditions for Hydro Quebec, the NYISO recommends assuming the following capacity supply availability values for the CHPE UDRs for purposes of determining alternative winter ICAP Demand Curves.
 - 0 MW in the peak winter months (December, January, and February)
 - 1,250 MW in the shoulder winter months (November, March, and April) and all summer months
- The NYISO updated the 2026-2027 WSR calculations to include the CHPE UDRs for all three years using the assumptions described above. The updated 3-year average WSR values are as follows:

2026-2027 WSR		Proposed Updated WSR	
NYCA	1.032	NYCA	1.017
GHIJ	1.047	GHIJ	1.003
NYC	1.050	NYC	0.986
LI	1.070	LI	1.070

- The updated 3-year average WSR for Load Zone J falls below 1.0 representing more expected available supply in the summer season compared to the winter.
 - An adjustment to the current ICAP Demand Curve parameter formulas for Load Zone J was used to avoid further adjustments to the summer reference point and maximum clearing prices
 - The adjustment removed escalation of the summer reference point and maximum clearing prices when the summer-to-winter ratio (SWR) is greater than 1 and scaled down the corresponding winter values
- To account for the impacts of using two LCR values during the winter season for Load Zone J, an additional adjustment was required for the alternative winter ICAP Demand Curve for New York City (see following slides)

Proposed Alternative Winter ICAP Demand Curves (cont.)

- In principle, the seasonal ICAP Demand Curve reference prices are set such that the hypothetical proxy unit can recover the applicable annual revenue requirement at the prescribed level of excess (LOE) conditions over the course of the Capability Year.
 - For the 2026-2027 Capability Year, this is defined as capturing the entry of the 200 MW 2-hour battery energy storage system at conditions where supply equals the minimum ICAP requirements, while also accounting for seasonal supply differences.
- The proposal to alternate between two LCRs for Load Zone J during the 2026-2027 Winter Capability Period presents conditions not fully accounted for in the current seasonal reference point formulas.
 - The current formulas do not account for two requirement values during the winter with one such value being lower than the summer requirements.
- To account for the proposed use of a lower Load Zone J LCR during the peak winter months, an adjustment to the winter ICAP reference price is required to ensure the curves can provide revenue sufficiency for the Load Zone J proxy unit over the course of the 2026-2027 Capability Year.

Proposed Alternative Winter ICAP Demand Curves (cont.)

- **To account for the reduction of the Load Zone J LCR during the peak winter months (December 2026 – February 2027), an upward adjustment to the winter reference point price of the New York City ICAP Demand Curve is required.**
 - The NYISO determined that a reference point price of \$10.18/kW-month was required for the Load Zone J alternative winter ICAP Demand Curve
 - The formula deriving this reference point price is provided on the following slide
- **The recommended adjustment recognizes that the NYISO's proposal effectively represents the creation of two winter curves (i.e., one for each requirement set) in Load Zone J and the need to reconcile these two curves into a single Load Zone J reference price for the 2026-2027 Winter Capability Period. The use of two minimum requirement values for Load Zone J produces different pricing values at the LOE conditions for each requirement set.**
 - For the shoulder winter months (November 2026, March 2027, and April 2027), the price at the LOE conditions for Load Zone J is \$9.72/kW-month
 - For the peak winter months (December 2026 - February 2027), the price at the LOE conditions for Load Zone J is \$7.09/kW-month
- **A similar adjustment is not required for the other alternative winter curves because the NYISO's proposal retains use of a single minimum requirement during the winter that aligns with the summer for all areas other than Load Zone J**

Proposed Alternative Winter ICAP Demand Curves (cont.)

- The formula used to derive the \$10.18/kW-month reference price is as follows:

$$WRP_z = \frac{ARV_z * AssmdCap_z * \max[\min(CPMax, WLOLE), CPMin]}{WDMNC_z * \left[3 * \left(1 - \frac{(WLOE_z - 1 + WSR - 1)}{ZCPR_z - 1} \right) + 3 * \left(1 - \frac{((WLOE_z - 1 + WSR) * (\frac{LCR_{WS}}{LCR_{WP}}) - 1)}{ZCPR_z - 1} \right) \right]}$$

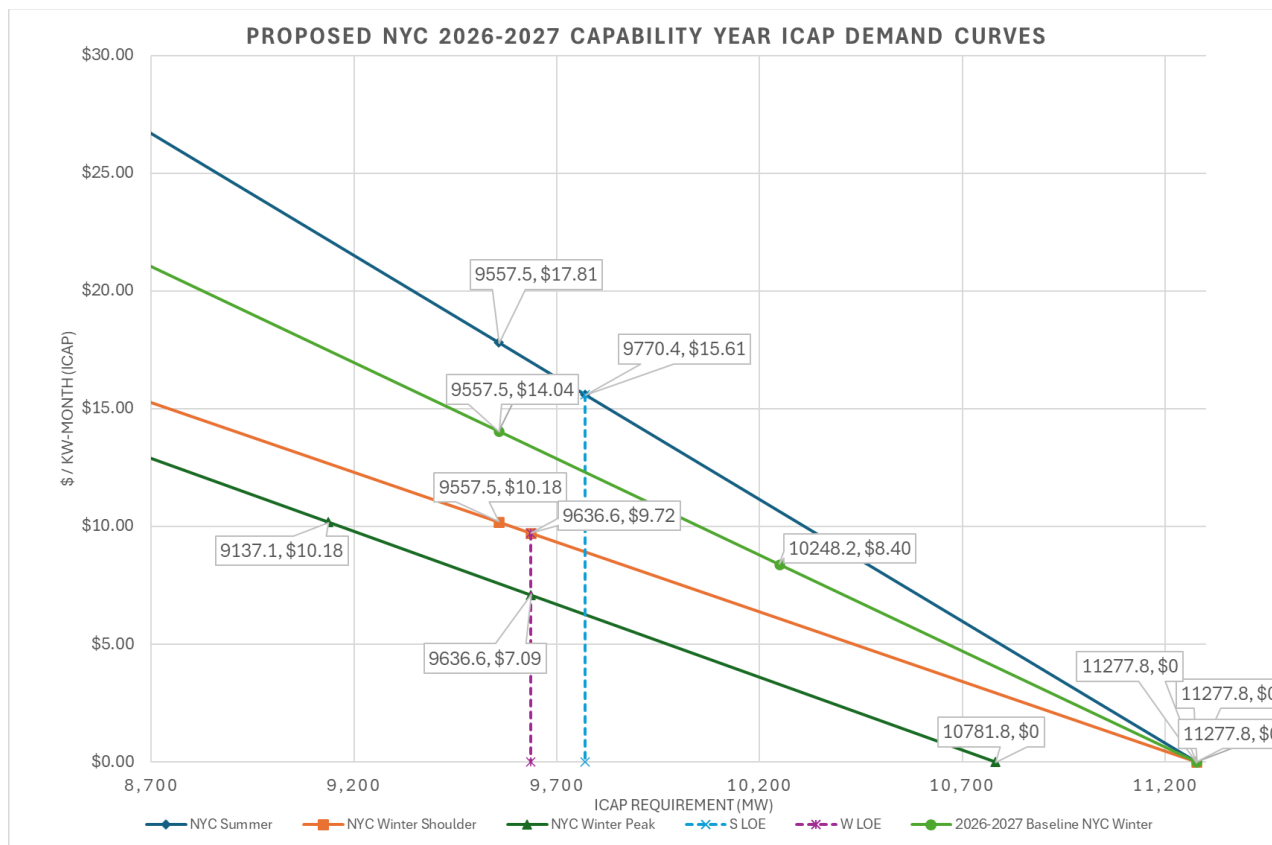
- Where LCR_{WS} represents the Load Zone J LCR during the winter shoulder months (November 2026, March 2027 and April 2027)
- Where LCR_{WP} represents the Load Zone J LCR during the winter peak months (December 2026-February 2027)

2026-2027 Alternative Winter ICAP Demand Curve Parameters*

Parameter	Source	Current Year (2026-2027)			
		F - Capital	G - Hudson Valley (Dutchess)	J - New York City	K - Long Island
Gross Cost of New Entry (\$/kW-Year)	[1]	\$131.94	\$131.80	\$230.10	\$141.57
Net EAS Revenues (\$/kW-Year)	[2]	\$74.24	\$76.62	\$86.03	\$83.99
Annual Reference Value (\$/kW-Year)	[3]=[1]-[2]	\$57.70	\$55.18	\$144.08	\$57.58
ICAP DMNC (MW)	[4]	200	200	200	200
Annual Reference Value	[5]=[3]*[4]	\$11,539	\$11,036	\$28,815	\$11,516
Level of Excess (%)	[6]	100.52%	101.62%	102.23%	103.77%
Ratio of Winter to Summer DMNCs	[7]	101.70%	100.30%	98.60%	107.00%
Summer DMNC (MW)	[8]	200	200	200	200
Winter DMNC (MW)	[9]	200	200	200	200
Assumed Capacity Prices at Tariff Prescribed Level of Excess Conditions					
Summer (\$/kW-Month)	[10]	\$6.25	\$5.98	\$15.61	\$6.24
Winter Shoulder (\$/kW-Month)	[11a]	\$3.37	\$3.22	\$9.72	\$3.36
Winter Peak (\$/kW-Month)	[11b]	\$3.37	\$3.22	\$7.09	\$3.36
Monthly Revenue (Summer)	[12]=[10]*[8]	\$1,250	\$1,196	\$3,122	\$1,248
Monthly Revenue (Winter Shoulder)	[13]=[11a]*[9]	\$673	\$644	\$1,944	\$672
Monthly Revenue (Winter Peak)	[17]=[11b]*[9]	\$673	\$644	\$1,418	\$672
Seasonal Revenue (Summer)	[14]=6*[12]	\$7,501	\$7,173	\$18,730	\$7,485
Seasonal Revenue (Winter)	[15]=3*[13] + 3*[17]	\$4,039	\$3,863	\$10,086	\$4,030
Total Annual Reference Value	[16]=[14]+[15]	\$11,539	\$11,036	\$28,816	\$11,516
ICAP Demand Curve Parameters					
Summer ICAP Monthly Reference Point Price (\$/kW-Month)		\$6.53	\$6.70	\$17.81	\$7.89
Winter ICAP Monthly Reference Point Price (\$/kW-Month)		\$4.13	\$3.69	\$10.18	\$8.36
Summer ICAP Maximum Clearing Price (\$/kW-Month)		\$22.41	\$24.02	\$42.67	\$29.09
Winter ICAP Maximum Clearing Price (\$/kW-Month)		\$14.16	\$13.23	\$21.10	\$30.82
Demand Curve Length		12%	15%	18%	18%

* The ICAP Demand Curve values for the 2026 Summer Capability Period remain unchanged from the results of the annual update for the 2026-2027 Capability Year that were posted on the NYISO's website on 11/14/2025 and reviewed at the 11/17/2025 ICAPWG meeting. The Long Island ICAP Demand Curves remain unchanged from those determined in the annual update.

Proposed NYC Alternative Winter 2026-2027 ICAP Demand Curve



Initial Proposed NYC Alternative Winter ICAP Demand Curve Reference Price Calculations (2/24/2026 ICAPWG)

NYC Revenue Sufficiency Check			
Summer / Winter Shoulder LCR	0.864	A	Recommendation for peak winter months
Winter Peak LCR	0.826	B	
Peak Load	11061.9	C	
Minimum ICAP Requirement Summer/Winter Shoulder	9557.5	$[D]=[A]*[C]$	
Minimum ICAP Requirements Winter Peak Months	9137.1	$[E]=[B]*[C]$	
ICAP Reference Price - Summer	\$17.81	[F]	Current Summer 2026 Value
ICAP Reference Price - Winter Shoulder	\$8.81	[G]	Previously Proposed Winter 2026-2027 Value
ICAP Reference Price - Winter Peak	\$8.81	[H]	Previously Proposed Winter 2026-2027 Value
Slope Summer	-0.010354	$[I] = - [F] / 118\% * [D]$	
Slope Winter Shoulder	-0.0051211	$[J] = - [G] / 118\% * [D]$	
Slope Winter Peak	-0.0053567	$[K] = - [H] / 118\% * [E]$	
MCP at LOE - Summer	\$15.61	$[L] = [F] + ([D] * 102.3\%) - [D] * [I]$	
MCP at LOE - Winter Shoulder	\$8.41	$[M] = [G] + [J] * ([D] * (1 + (98.6\% - 1) + (102.3\% - 1) - [D])$	
MCP at LOE winter peak	\$6.13	$[N] = [H] + [K] * ([D] * (1 + (98.6\% - 1) + (102.3\% - 1) - [E])$	
Annual Revenue	\$27,453.67	$[O] = 6 * (200 * [L]) + 3 * (200 * [M]) + 3 * (200 * [N])$	
% of ARV	95.3%	$ARV = 28,815 / [O]$	

Adjusted Proposed NYC Alternative Winter ICAP Demand Curve Reference Price Calculations

NYC Revenue Sufficiency Check			
Summer / Winter Shoulder LCR	0.864	A	Recommendation for peak winter months
Winter Peak LCR	0.826	B	
Peak Load	11061.9	C	
Minimum ICAP Requirement Summer/Winter Shoulder	9557.5	$[D]=[A]*[C]$	
Minimum ICAP Requirements Winter Peak Months	9137.1	$[E]=[B]*[C]$	
ICAP Reference Price - Summer	\$17.81	[F]	Current Summer 2026 Value
ICAP Reference Price - Winter Shoulder	\$10.18	[G]	Updated Alternative Winter 2026-2027 Value
ICAP Reference Price - Winter Peak	\$10.18	[H]	Updated Alternative Winter 2026-2027 Value
Slope Summer	-0.010354	$[I] = - [F] / 118\% * [D]$	
Slope Winter Shoulder	-0.0059197	$[J] = - [G] / 118\% * [D]$	
Slope Winter Peak	-0.0061921	$[K] = - [H] / 118\% * [E]$	
MCP at LOE - Summer	\$15.61	$[L] = [F] + (([D] * 102.3\%) - [D]) * [I]$	
MCP at LOE - Winter Shoulder	\$9.72	$[M] = [G] + [J] * ([D]*(1 + (98.6\%-1) + (102.3\%-1) - [D])$	
MCP at LOE winter peak	\$7.09	$[N] = [H] + [K] * ([D]*(1 + (98.6\%-1) + (102.3\%-1) - [E])$	
Annual Revenue	\$28,814.23	$[O] = 6 * (200 * [L]) + 3 * (200 * [M]) + 3 * (200 * [N])$	
% of ARV	100.0%	$ARV = 28,815 / [O]$	

Our Mission and 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

