New York ISO
Independent System Operator

2021-2025 ICAP Demand Curve Reset: NYISO Staff Final Recommendations

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ICAPWG/MIWG

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Background

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Background

- **Every four years, the NYISO initiates a process, referred to as the ICAP Demand Curve reset (DCR), to review the parameters, methodologies and assumptions that determine the ICAP Demand Curves for the years covered by the reset**
  - This process results in the adoption of new demand curves that are used to determine the ICAP Spot Market Auction clearing prices in each Locality and the NYCA
- **Consistent with tariff requirements, an independent consultant performs a study on the parameters, methodologies and assumptions used in setting the ICAP Demand Curves and delivers a report with recommendations to set new curves for the period covered by the reset**
  - Analysis Group (AG), together with its subcontracted engineering consulting firm Burns & McDonnell (Burns), were selected to serve as the independent consultant for this reset

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Background

- **After reviewing the independent consultant's recommendations, the NYISO staff issues its own recommendations to stakeholders and the NYISO Board of Directors (Board)**
  - The Board then reviews both recommendations, along with written and oral comments from stakeholders, before determining the final parameters to file with FERC
- **Today we will be discussing the NYISO staff's Final Recommendations**
  - A report containing the NYISO staff's Final Recommendations is posted with today's meeting materials
  - Stakeholders will have until close of business on October 9, 2020 to provide written comments to the Board
  - Oral presentations to the Board are currently scheduled to occur on October 19, 2020

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NYISO Staff Final Recommendations

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NYISO Staff Final Recommendations

- **In general, NYISO staff concurs with the independent consultant's recommendations, except:**
  - NYISO staff recommends different gas hub pricing for Load Zone C
  - NYISO staff recommends revisions to the methodology of translating annual gross cost of new entry (CONE) values to monthly values for use in calculating the maximum clearing prices for each ICAP Demand Curve
- **NYISO staff has coordinated with Analysis Group to revise the logic for the gas price applied to a given electric market in the net Energy and Ancillary Services (EAS) revenues model**
  - The update net EAS revenue offset results in NYISO staff's Final Recommendations and the independent consultant's Final Report reflect this update to the model
- **NYISO staff's Final Recommendations include additional information regarding certain of the consultant's recommendations/assumptions**
  - Owner's development costs
  - Estimated costs of gas interconnections outside New York City
  - Land lease cost within New York City
- **NYISO staff's Final Recommendations and the independent consultant's Final Report reflect updates to include the appropriate dataset for the 2021/2022 ICAP Demand Curves**
  - Net EAS revenue estimates and winter-to-summer (WSR) updated to reflect data for the period September 1, 2017 through August 31, 2020
  - Updated escalation of capital cost estimates to 2021 dollars based on the most recent data available

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NYISO Staff's Proposed 2021/2022 ICAP Demand Curve Reference Prices

Proposed 2021/2022 ICAP Demand Curve Reference Prices ($/kW-mo)						
	Load Zone (Locality)	**Central (NYCA)**	**Capital**	**LHV (Dutchess)**	**LHV (Rockland) (G-J)**	**N.Y.C. (NYC)**	**Long Island (LI)**
NYISO Staff Draft Report Values:	**$7.74**	**$8.90**	**$13.84**	**$12.83**	**$21.36**	**$18.56**
Gas Price Matching Corrections:	*+$0.02*	*+$0.26*	*+$0.36*	*+$0.37*	*+$0.38*	*+$0.61*
Zone C Gas Hub Update (Niagara):	*+$0.47*	-	-	-	-	-
Net EAS Revenue Recalculation:	*+$0.52*	*+$0.51*	*+$0.69*	*+$1.35*	*+$0.92*	*+$0.92*
Gross CONE & WSR Recalculation:	*-$0.13*	*-$0.15*	*+$0.02*	*+$0.02*	*-$0.30*	*-$0.49*
NYISO Staff Final Report Values:	**$8.62**	**$9.52**	**$14.91**	**$14.57**	**$22.36**	**$19.60**
% Delta to Draft Report Values:	*11.3%*	*6.9%*	*7.7%*	*13.6%*	*4.7%*	*5.6%*
2020-2021 Capability Year Values:		**$10.65**	**$17.67**		**$23.31**	**17.88***

** The $17.88/kW-mo value for Long Island reflects the impact of the transitional collar mechanism that will not apply going forward. Absent the collar, the Long Island value for 2020/2021 would have been $21.13/kW-mo.*

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Load Zone C Gas Hub

- **Additional analysis conducted by the Market Monitoring Unit (MMU) suggested that purchases of gas from TGP Zone 4 (200L) may not be readily accessible during certain winter months due to pipeline constraints**
  - In their comments on NYISO staff's Draft Recommendations, the MMU recommended using the Niagara gas index from December to March when the TGP Zone 4 (200L) pipeline is more likely to become constrained and a generator located in Load Zone C may be unable to realize the price of gas on TGP Zone 4 (200L)
- **NYISO staff concurs with the MMU's recommendation to use TGP Zone 4 (200 L) for April to November and Niagara for December to March for Load Zone C**

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Load Zone C Gas Hub (cont.)

	Consultant	NYISO Staff
Technology	GE 7HA.02	GE 7HA.02
Dual Fuel	No	No
SCR Included	No	No
Gas Hub	TGP Z4 (200L)	TGP Z4 (200L) & Niagara
Load Zone	C	C
Net EAS Revenue	$36.67	$32.92
Reference Price	$8.22	$8.62
Zero Crossing Point	112%	112%

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Gas Price Use Logic

- **In their comments on NYISO staff's Draft Recommendations, several stakeholders raised concerns with how the coincident fuel prices were applied in the model that estimates net EAS revenues for the peaking plant**
  - As originally developed, the model shifted the reported gas prices for a particular date one day forward in order to align the gas price date with the date on which the gas would be utilized to generate electricity
  - AG and NYISO staff have both engaged in discussions with the data vendor to better understand the gas pricing data published, and confirmed that the date listed by the vendor for a particular gas price represents the flow date for gas
- **The net EAS revenues model has since been updated to apply the gas prices published for a particular date as the applicable gas price for the same electricity market day**
  - Consistent with the updated logic, the model uses the next available day on which a gas price is published as the applicable price for any day for which a price is not published
    - For example, for a non-holiday weekend, the gas price published on Monday is the price used for Saturday, Sunday, and Monday

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Regular Data Updates

- **Net EAS Revenues:**
  - The net EAS revenue offset is calculated using various market data covering a three-year rolling period
  - NYISO staff's Final Recommendations and the independent consultant's Final Report have been updated to reflect use of market data for the period September 1, 2017 through August 31, 2020 for the 2021/2022 ICAP Demand Curves
- **Gross CONE & WSR:**
  - Consistent with the net EAS revenues offset updates, the WSR has been updated to reflect market data for the period September 1, 2017 through August 31, 2020 for the 2021/2022 ICAP Demand Curves
  - The escalation of capital cost estimates to 2021 dollars has also been updated to reflect the most current available data

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Maximum Clearing Price Calculation

- **NYISO staff proposes to enhance the methodology for translating annual gross CONE values to monthly values to better align the methodologies used to calculate the reference point and maximum clearing prices**
  - The NYISO proposes to modify the methodology for translating the annual gross CONE values to monthly values by applying a similar methodology to that used in the translation of annual net CONE values to monthly reference points
  - The proposed methodology accounts for seasonal differences in capacity, using the WSR and percent of capacity at tariff-prescribed level of excess conditions to translate the annual gross CONE values to monthly values, which are then multiplied by 1.5 to determine the maximum clearing price for each ICAP Demand Curve
    - Additional information is included in the Appendix

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Additional Supporting Information in NYISO Final Recommendations

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Additional Supporting Information

- **In response to prior stakeholder requests, NYISO staff's Final Recommendations also include additional information regarding certain of the independent consultant's recommendations/assumptions**
  - Gas interconnection costs outside NYC
  - Land lease costs for NYC
  - Owner's development costs
- **Additional details are provided regarding the data relied on in developing the estimated linear cost estimate of $250,000 per inch diameter per mile for gas interconnections outside NYC**
  - Burns assessed linear costs for six recent pipeline projects with cost ranging from $100,000 - $500,000 per inch diameter per mile
  - The average linear cost for these projects was approximately $260,000 per inch diameter per mile; excluding consideration of the lowest and highest cost projects produces an average cost for the remaining projects of approximately $240,000 per inch diameter per mile

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Additional Supporting Information (cont.)

- **Further information regarding the data and range of lease cost values observed in NYC are provided in support of the assumed annual lease cost of $270,000 per acre**
  - The lease cost values observed demonstrated a high level of variability for potentially representative sites within NYC
  - Additional details regarding the data evaluated and range of lease costs observed are provided in Appendix C of NYISO staff's Final Recommendations
- **A comparison of total owner's development costs from the last reset to Burns' estimate for the current reset**
  - The engineering consultant from the last reset categorized costs in a manner that differs from the categorization and methodology used by Burns for this DCR
    - As a result of the differing methodologies, a line-by-line comparison of the owner's development cost estimates is likely to inadvertently result in misleading outcomes
  - A comparison conducted by Burns of its total owner's cost and the estimate from last reset demonstrated a difference of 0.3% after accounting for inflation of the 2016 cost estimates
    - Additional details regarding the cost comparison is provided in Appendix D of NYISO staff's Final Recommendations

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Remaining DCR Schedule

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Remaining DCR Schedule

- **Stakeholders will have until close of business on October 9, 2020 to provide written comments to the Board**
  - Please submit comments to Mark Seibert (mseibert@nyiso.com) and Ryan Patterson (rpatterson@nyiso.com)
  - Note that there is no page limit applicable to such comments
- **Oral presentations to the Board are scheduled to occur on October 19, 2020**
- **The NYISO will file with FERC the DCR outcomes as approved by the Board on or before November 30, 2020**

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Appendix

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Maximum Clearing Price Calculation

- **Existing Maximum Clearing Price Calculation**
  - $Maximum\ Clearing\ Price = \frac{gross\ CONE}{12} * 1.5$
- **Proposed Maximum Clearing Price Calculation**
  - $Maximum\ Clearing\ Price = \frac{gross\ CONE}{12} * WSR * LOE * 1.5$

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Our mission, in collaboration with our 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 policymakers, stakeholders and investors in the power system

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