New York ISO
Independent System Operator

Notice of Potential Market Problem:
Discussion on Demand Curve Reset Net Energy Ancillary Service (Net EAS) Model Gas Pricing Logic

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WebEx

Agenda

- Background
- Status of Assessment
- Timing Considerations
- Upcoming Capacity Market Auction
- Next Steps

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Background

- Every four years, the NYISO and its stakeholders undertake a comprehensive review to determine the necessary inputs and assumptions for developing the ICAP Demand Curves for the four-year period covered by the reset. This process is commonly referred to as the ICAP Demand Curve reset (DCR)
- The ICAP Demand Curves are developed based on the estimated cost to construct and operate a hypothetical new capacity supply resource in various locations throughout New York. This cost is then offset by an estimate of the potential revenues the hypothetical resource could earn from participating in the NYISO-administered energy and ancillary services markets. The resulting net value determines the revenue the hypothetical resource would need to receive from the capacity market to obtain sufficient revenues to support market entry under the system conditions specified for use in the DCR
- The estimated energy market revenue earnings are determined using a historic commitment and dispatch model that is developed as part of the DCR and incorporated as part of the NYISO's filing to FERC seeking acceptance of the result of the DCR. The model utilizes the most recent three years of historic market and cost data to estimate the potential revenues earnings for a hypothetical new resource. This model is commonly referred to as the Net EAS Model

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Background

- As part of the ongoing 2021-2025 DCR, certain stakeholders raised concerns about the gas pricing alignment logic contained in the Net EAS Model for the 2021-2025 period
  - Specifically, the model included logic that shifts forward by one day the gas price published for a specific date by S&P. This logic was based on an understanding that the gas prices published by S&P represented the "trade day" price (or the day before the generator would take delivery of and use the gas to produce electricity)
  - The NYISO has since confirmed that the data published by S&P represents the "flow day" price (or the day the generator would take delivery of and use the gas to produce electricity)
  - As part of the NYISO Staff Final Recommendations issued September 9, 2020, the NYISO has proposed to remove this pricing alignment logic from the Net EAS Model for the 2021-2025 period
- The logic of the 2017-2021 DCR Net EAS Model includes this same gas price alignment logic and produces the same pricing misalignment that the NYISO has proposed to eliminate from the Net EAS Model for the 2021-2025 DCR
- The NYISO has identified a potential Market Problem associated with this discrete aspect of the Net EAS Model for the 2017-2021 DCR. The 2017-2021 DCR includes the ICAP Demand Curves for the 2017/2018 through 2020/2021 Capability Years (May 1, 2017 through April 30, 2020)

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Status of Assessment

Reference Point Price Re-Calculation: Overview

- **The NYISO has completed the process of developing and validating revised reference point prices**
  - The process involves recalculating 2017/2018 Capability Year reference points, and then applying 3 years of annual updates while accounting for the collaring mechanism applicable for the 2017-2021 reset period.
  - Analysis Group updated the original 2017-2021 DCR Net EAS Model to remove the original gas pricing alignment logic.
  - The NYISO has completed its review of the updated model and revised results
    - The revised model has correctly removed the prior gas pricing date alignment logic.
    - The results show both increases and decreases over the four year horizon.
    - These results highlight that the misalignment of gas prices do not have a biased/unidirectional impact on reference point prices.
    - Changes in reference point prices presented herein do not reflect potential changes to the clearing prices which would need to account for available supply offers, applicable requirements and the nesting of capacity zones.
  - The revised version of the Net EAS Model is posted with today's meeting material

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Reference Point Price Re-Calculation: Observations

- Net Energy and Ancillary Services revenues generally accrue in a few, highly profitable situations
- Initial scenario that raised concerns for the 2021-2025 DCR was related to incoming cold weather over Martin-Luther Martin Luther King, Jr. holiday weekend.
  - Original model applied Friday's lower gas prices throughout the holiday weekend, resulting in large revenues
  - Revised model applies higher Tuesday gas prices throughout the weekend, significantly reducing or eliminating the revenues
- Identified contrasting scenario in the 2017-2021 DCR historic dataset where cold weather broke at the end of the week (prior to or over the weekend)
  - Original model applied Friday's high gas price throughout the weekend resulting in minimal revenues
  - Revised model utilized Monday's lower gas price and observed revenues accruing over multiple days
- Scenarios identified in the 2017-2021 DCR historic dataset with significant revenues from real-time operation
  - Revised model did not provide resource with Day-Ahead schedule
  - Resource was available for real time operation, which included operational events that led to shortage pricing conditions
- Each scenario does not necessarily occur in all years. Random nature of events drive some years to show increased revenues, while other years show reduced revenues.

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Net EAS Re-Calculation Results

Net EAS ($/kW-yr)		Original	Rerun	Delta
F - Capital	2017-2018	$34.84	$36.01	$1.17
G - Hudson Valley (Dutchess)	2017-2018	$39.42	$40.31	$0.89
J - New York City	2017-2018	$53.94	$57.01	$3.07
K - Long Island	2017-2018	$101.69	$101.40	($0.29)
F - Capital	2018-2019	$28.13	$29.90	$1.77
G - Hudson Valley (Dutchess)	2018-2019	$28.56	$28.88	$0.32
J - New York City	2018-2019	$34.79	$37.03	$2.24
K - Long Island	2018-2019	$71.30	$73.15	$1.85
F - Capital	2019-2020	$31.48	$30.45	($1.03)
G - Hudson Valley (Dutchess)	2019-2020	$31.81	$30.46	($1.35)
J - New York City	2019-2020	$35.32	$34.53	($0.79)
K - Long Island	2019-2020	$65.20	$65.23	$0.03
F - Capital	2020-2021	$29.27	$26.30	($2.97)
G - Hudson Valley (Dutchess)	2020-2021	$28.71	$25.81	($2.90)
J - New York City	2020-2021	$30.39	$27.87	($2.52)
K - Long Island	2020-2021	$56.23	$54.19	($2.04)

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Reference Point Re-Calculation Results

Reference Point Prices ($/kW-mo)		Original	Rerun	Delta
F - Capital	2017-2018	$9.08	$8.96	($0.12)
G - Hudson Valley (Dutchess)	2017-2018	$14.84	$14.74	($0.10)
J - New York City	2017-2018	$18.61	$18.23	($0.38)
K - Long Island	2017-2018	$12.72	$12.76	$0.04
F - Capital	2018-2019	$10.04	$9.86	($0.18)
G - Hudson Valley (Dutchess)	2018-2019	$16.42	$16.38	($0.04)
J - New York City (collared)	2018-2019	$20.84	$20.42	($0.42)
K - Long Island (collared)	2018-2019	$14.25	$14.29	$0.04
F - Capital	2019-2020	$9.83	$9.94	$0.11
G - Hudson Valley (Dutchess)	2019-2020	$16.59	$16.75	$0.16
J - New York City	2019-2020	$21.95	$22.05	$0.10
K - Long Island (collared)	2019-2020	$15.96	$16.01	$0.05
F - Capital	2020-2021	$10.65	$10.96	$0.31
G - Hudson Valley (Dutchess)	2020-2021	$17.67	$18.00	$0.34
J - New York City	2020-2021	$23.31	$23.63	$0.32
K - Long Island (collared)	2020-2021	$17.88	$17.93	$0.06

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Timing Considerations

- **November Spot Auction**
  - Certification close October 22
  - Offer window closes October 27
  - Auction results post October 29
- **NYISO anticipates returning on October 9 to discuss our findings, including the following:**
  - The NYISO's view of whether remedial action is appropriate for the 2020-2021 Winter Capability Period; and
  - In the event the NYISO concludes that such remedial action is appropriate, the potential regulatory approach for taking such action.

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Upcoming Capacity Market Auctions

- **Winter 2020/2021 Strip Auction**
  - Six-month, voluntary two-sided auction
  - Bid/Offer window closes September 30
  - Auction results post October 2
- **NYISO will proceed with the auction as scheduled without any modifications**

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Stakeholder Communication

- **September 18, 2020**
  - NYISO issued Potential Market Problem Notice
- **September 22, 2020**
  - Initial discussion to review Potential Market Problem at ICAPWG
- **September 25, 2020**
  - Discussion of tariff compliance and NYISO's conclusion that the issue at hand does not constitute a tariff violation
  - Update on quality review and preliminary reference point price re-calculations
- **September 30, 2020**
  - Update on quality review and reference point price re-calculations

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Next Steps

- **Continue to evaluate whether any remedial action may be appropriate for the 2020/2021 Winter Capability Period**
  - As previously discussed, the NYISO has already proposed to correct this matter going forward for the 2021-2025 reset period
- **Continue Market Problem assessment and quantify the impact**
- **Feedback can be provided via email to Robb Pike at rpike@nyiso.com**
  - The NYISO requests that any additional feedback be provided no later than Friday, October 2, 2020.
    - Specifically, the NYISO is interested in receiving any additional feedback regarding the appropriateness of any remedial action for the 2020/2021 Winter Capability Period
- **Return October 9, 2020 to discuss findings and any remedial action plan, if determined to be necessary.**

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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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Appendix

ICAP Market Annual Parameters Timeline

- Every four years, perform the DCR to calculate reference prices and establish ICAP Demand Curves for NYCA and each Locality for the first year of the four-year reset period and establish set of rules and practices for performing the annual updates to determine the reference prices and ICAP Demand Curves for years 2 through 4 of the reset period
- Each November, complete annual update and establish reference prices and ICAP Demand Curves for NYCA and each Locality for upcoming Capacity Year (May – April)
  - The various steps to conduct the annual update are undertaken over the course of September-November
- Each December, the NYSRC approves the Installed Reserve Margin (IRM) and NYISO establishes the Peak Load Forecast for upcoming Capacity Year (May – April)
- Each January, the Operating Committee approves the Locational Minimum Installed Capacity Requirements (LCRs) for each Locality for upcoming Capacity Year (May – April)

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