

NYISO 2019/2020 ICAP Demand Curve Reset

Overview and Initial Key Considerations
ICAP Working Group

October 11, 2019



Today:

- ICAP Demand Curve Reset (DCR) Process Overview
- 2019/2020 DCR Initial Key Considerations

ICAP Demand Curve Reset Process Overview

ICAP Demand Curve Reset Process

Overview of Process and Approach

- The DCR process includes multiple steps:
 - Review of framework, methods and data
 - Development of factors that underlie calculation of ICAP Demand Curve parameters
 - Review of data, assumptions, and preliminary calculations with stakeholders
 - Determination of final ICAP Demand Curve parameters
 - FERC filing

High-Level Schedule

■ Q4 2019 – Q1 2020

- Discuss DCR principles and framework
- Evaluation of any potential tariff revisions
- Review of net energy and ancillary services (EAS) revenue estimation method and data sources
- Initial discussion of DCR assumptions

■ Q2 – Q3 2020

- Finalize demand curve model
- Final discussions and input
- Draft report
- NYISO staff draft recommendations

■ Q1 – Q2 2020

- Finalize net EAS modeling
- Finalize DCR method and assumptions
- Peaking unit technology assessment and cost estimates
- Review level of excess (LOE) adjustment factors (AF) methodology
- Demand curve model development and discussion

■ Q3 – Q4 2020

- Final report and NYISO final recommendations
- NYISO Board review
- FERC filing

ICAP Demand Curve Reset Process

Overview of Process and Approach

- Review of framework, methods and data sources
 - Assessment includes a review of framework, approaches and data sources used in developing the ICAP Demand Curve parameters
 - Expect to begin with past framework, approaches and data sources to maintain consistency
 - No expected changes to periodicity or annual updating framework
 - Expect approach to gross cost of new entry (Gross CONE), net EAS revenues, and ICAP Demand Curve parameters will be similar to last DCR
 - Will deviate from past practices, data, assumptions if and to the extent improvements are identified or market conditions warrant change
 - Potential key considerations under review are presented below
 - Review of key considerations will be based upon evaluation principles

ICAP Demand Curve Reset Framework

Guiding Principles

- *Economic Principles*— Proposed changes to ICAP Demand Curve processes and parameters should be grounded in economic theory and reflect the structure of, and incentives in, the NYISO-administered markets
- *Accuracy*— ICAP Demand Curve parameters should reasonably reflect the expected cost of new entry in New York with as much certainty as is feasible
- *Transparency*— The DCR calculations and periodic annual updates should be clear and transparent to Market Participants (MPs), and calculation and update methods should be understandable and allow MPs to reasonably develop market expectations
- *Feasibility*— The DCR design and implementation should be practical and feasible from regulatory and administrative perspectives, considering the administrative burden on both the NYISO and MPs
- *Historical Precedent and Performance*— DCR designs should be informed by quantitative analysis based on historical data (to the extent feasible), and should draw from lessons learned with experience in administration of capacity markets. Consistency promotes market stability, reducing financial risk and developers' costs of new entry

ICAP Demand Curve Reset Framework

- For the 2016/2017 DCR, several significant changes were made in DCR framework and analytic methods:
 - **DCR Periodicity** – Changed the period covered by each reset from three to four years
 - **Net EAS Revenue Estimation** – Modified the approach taken to estimating net EAS revenues of the peaking plant to increase the transparency and repeatability of net EAS calculations
 - **Annual Updating** – Updated ICAP Demand Curve parameters annually based on the most recent, publically-available historical information related to market prices and technology-specific escalation indices
- For the 2019/2020 DCR, we do not propose any significant *up-front* changes to the DCR process
 - **Coding Language** – Propose to migrate the net EAS revenues model coding from SAS to R, which is free and publically available

2019/2020 ICAP Demand Curve Reset: Initial Key Considerations

Proposed Tariff Changes

Summary of Stakeholder Proposed Changes

- NYISO requested that MPs submit any DCR process enhancements requiring tariff changes by September 19, 2019
- Proposed changes were submitted by the New York Transmission Owners (NYTOs)
 - Extend the collar to apply to the “next set” of ICAP Demand Curves
 - Last DCR explicitly included a collar only as a transitional mechanism (FERC decision stressed this point); automatically sunsets by operation of tariff after the annual update for the 2020-21 Capability Year ICAP Demand Curves (Services Tariff Sec. 5.14.1.2.2.3)
 - Current collar limits year-to-year changes in the reference point values to -8/+12% (the upper collar value bound for NYC and LI for the 2018/2019 curves, and upper collar value bound only for LI for the 2019/2020 curves)
 - Applies only to ICAP Demand Curves determined through the annual update process (i.e., 2018-19, 2019-20, and 2020-21 Capability Years)

Proposed Tariff Changes

Summary of Stakeholder Proposed Changes

- Overview of proposed changes submitted by the NYTOs (continued):
 - Change method of weighting four component costs in the Gross CONE composite escalation rate (Labor, Materials, Turbine, General/Other)
 - Tariff currently requires that weighting factors be determined in the DCR and remain fixed for the four-year reset period
 - Change cost escalation to account for data revisions in publically available cost indices selected for use
 - Tariff currently requires use of “finalized values” from selected cost indices as of October 1st of each year and applying the calculated composite escalation factor to the Gross CONE values underlying the then currently effective ICAP Demand Curves
 - Change method of applying GDP Deflator for net EAS revenues escalation
 - The current net EAS model logic escalates the historical annual average net EAS revenues from the midpoint of the historic three-year period by applying the then current annual percentage change in the GDP Deflator (“general component” of the composite escalation rate) twice
 - No tariff changes would be required to address this proposal; this can be considered as part of developing the net EAS model for this DCR

Potential Considerations in 2019/2020 DCR

Technical Options and Costs

- 2016/2017 DCR
 - In all zones, gas-fired frame turbine found to be the technology with *the “lowest fixed costs and highest variable costs” among technologies that are “economically viable”*
 - Combined cycle technology evaluated for informational purposes only
 - Issues – dual fuel capability, emission controls, potential impacts of policies on technology considerations (see next slide)
- Consideration of energy storage technology
 - Impacts of tariff-defined peaking unit requirements (i.e., lowest fixed/highest variable among economically viable technologies)
 - Potential challenges:
 - Appropriate technical specifications and operating capability assumptions
 - Approximation of net EAS in light of potential operating modes

Potential Considerations in 2019/2020 DCR

Technology and Gross CONE

- Review of financial parameters in light of on-going energy policy, particularly the Climate Leadership and Community Protection Act (CLCPA)
 - CLCPA has many potential impacts
 - Potential impacts of policies on technology/fuel type considerations
 - Potential impacts of policies on net EAS revenue calculations (next slide), financial parameters (e.g., weighted average cost of capital and/or amortization period)

Potential Considerations in 2019/2020 DCR

Net Energy and Ancillary Services Revenue Estimates

- Review performance of the current Net EAS method
 - New approach with annual updating adopted in the most recent DCR
- Review of method for determining gas prices for each zone, including potential blending of index prices
 - 2016/2017 DCR - balanced consideration of correlation between electricity and fuel prices; market dynamics (to reliably capture investor expectations); liquidity; geography; and precedent/continuity (including approaches used in other NYISO contexts)
- Review of net EAS method and calculations given on-going energy/environmental policies, and potential implications thereof on energy market outcomes
 - Potential impacts of policies on future stream of net EAS revenues to reference technologies

Other Elements of DCR Review and Analysis

Other Considerations to Address in the Course of this DCR

- Financial parameters, including after-tax weighted average cost of capital and amortization period
- Payments in Lieu of Taxes (PILOT) agreements and tax rates
- Accounting for the “prescribed level of excess” when estimating the costs and revenues of peaking plants
 - Consideration of whether an alternative approach is warranted and, if so, the potential options for alternatives
- Zero crossing points and resulting steepness of the ICAP Demand Curves

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