

# NYISO 2025-2029 ICAP Demand Curve Reset

## Kick Off Meeting

August 24, 2023

# Agenda

1. **Introductions (Analysis Group, Burns & McDonnell)**
2. **DCR Process and Timeline**
3. **Topics to be Addressed, Potential Issues**
4. **Recap of Last DCR**

## 2025-2029 ICAP Demand Curve Reset (DCR)

### Analysis Group (AG)

- Paul Hibbard, Principal
- Dr. Todd Schatzki, Principal
- Joe Cavicchi, Vice President
- Charles Wu, Vice President
- Dr. Daniel Stuart, Associate
- Others with wholesale market and power sector modeling experience

### Burns & McDonnell (B&M)

- Matt Lind P.E. MBA, Director
- Kieran McInerney, Senior Mechanical Engineer
- Chad Swope, Project Delivery Director
- Others with relevant regulatory and engineering experience

## AG/B&M Roles

### Analysis Group Role

- Estimate net energy and ancillary services (“EAS”) revenues for peaking plants
  - Tariff specifies that net EAS be determined under conditions in which the available capacity is equal to the sum of the minimum Installed Capacity requirement and the peaking plant’s capacity
  - ‘Adjustment factors’ are also used in estimating net EAS revenues for the tariff-specified excess conditions (referred to as “level of excess adjustment factors”)
- Develop cost of capital assumptions
- Perform demand curve modeling

### Burns & McDonnell Role

- Identify candidate peaking unit technology options for each Locality and Rest of State (“ROS”)
  - Tariff defines a “peaking unit” as the unit with the technology that results in the lowest fixed costs and highest variable costs among all other units’ technology that are economically viable
- Establish construction cost and specifications of peaking units
  - Tariff requires that DCR assess the current localized levelized embedded cost of a peaking plant in each Locality, the ROS, and any New Capacity Zone
  - Other technologies may also be assessed for informational purposes

## DCR Components

### Part I: Technology Choice and Construction Cost

- Identify peaking units for each Locality and ROS
- Establish cost and specifications of peaking units

### Part II: Estimation of Net Operating Revenues

- Determine method and data
- Estimate net EAS revenues for peaking plants
  - Determination of level of excess adjustment factors

### Part III: Demand Curve Modeling

- Estimate net cost of new entry (CONE) at tariff specified level of excess
- Assess slope, shape and zero crossing point of the ICAP Demand Curves
- Account for proposed enhancements to determine seasonal reference point prices (assuming approval of proposal)

# DCR – High-Level Schedule

## Q4 2023 - Q1 2024

- Discuss DCR principles and framework
- Evaluation of any potential tariff revisions
- Review of net EAS estimation method and data sources
- Initial discussion of DCR assumptions

## Q1 – Q2 2024

- Finalize net EAS modeling
- Finalize DCR method and assumptions
- Peaking unit technology costs
- Review level of excess adjustment factors
- Demand curve model development and discussion

## Q2 – Q3 2024

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

## Q3 – Q4 2024

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

## Relationship to Past DCRs

### Many aspects of the DCR will resemble past resets

- Overall approach to setting the ICAP Demand Curves – the three components
  - Technology choice/construction costs
  - Estimation of net energy and ancillary services revenues
  - Demand curve modeling
- Working with stakeholders through the ICAPWG to receive input on assumptions

### The particulars of the approaches to be taken – methods and application – could differ from past approaches

- Still under review by AG, B&M
- Not anticipating significant methodological changes
- Certain modifications could arise through consultant deliberations and stakeholder input

## Examples of Issues to Discuss

- Peaking plant technology options to screen
  - Fossil fuel fired combustion turbine
  - Fossil fuel fired combustion turbine subsequently retrofitted to operate with a zero-emissions fuel
  - Generation resource that operates using only a zero-emissions fuel
  - Energy storage resources, with the capability of producing energy for 4, 6, or 8 consecutive hours
  - Other potential technology options based on discussion with stakeholders (e.g., hybrid resources like renewable + energy storage)
- Capacity accreditation of peaking plants
- Net EAS model elements for fossil-fired technology options and energy storage/other technologies
- Fuel costs, including selection of natural gas pricing hubs and consideration of gas constraints
- ICAP Demand Curve shape, slope, zero crossing point
- Financial parameters in demand curve model, including amortization period, treatment of subsidies/incentives available to technology options (e.g., tax abatements/credits), and consideration of market risks/conditions
- Annual updating – process and data sources

## Reminder: Last DCR

- Continued annual updating of ICAP Demand Curve parameters, based on the most recent, publicly-available historical information related to market prices and technology specific escalation indices
- Modified the amortization period of fossil-fired peaking plant options to 17 years to reflect New York's Climate Leadership and Community Protection Act
  - Acknowledge that this assumption remains subject to ongoing litigation
- Added a new module to simulate battery storage operations in the net EAS modeling
- Lessons to carry over
  - DCR process is complex – coordinated and continuous deliberation with stakeholders is key to reaching the best outcome
  - Maintain focus on simplicity, transparency, reproducibility/predictability
  - Move development of assumptions earlier; encourage *early* stakeholder engagement on controversial issues
  - Continue focus on key “levers” – EAS revenue estimation, financial assumptions, peaking plant technologies and costs

## Contact

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