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Independent System Operator

2021-2025 ICAP Demand Curve Reset: Level of Excess Adjustment Factors Methodology

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Agenda

- Background
- Level of Excess Adjustment Factors (LOE-AFs) Methodology
- Next Steps

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Background

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Background

- **The DCR requires that net Energy and Ancillary Services revenue earnings for each peaking plant reflect the tariff prescribed level of excess conditions (i.e., applicable minimum requirement, plus the MW value of the peaking plant)**
  - Adjustments to historic market prices to account for the tariff prescribed level of excess conditions for the DCR are addressed through the use of level of excess adjustment factors (LOE-AFs)
  - LOE-AFs are established as part of the DCR and remain fixed for the four year reset period
- **This presentation will discuss further details regarding the proposed methodology for determining LOE-AFs**

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Background

- **As part of the last reset, a comprehensive set of revisions to the process were implemented, including revising the methodology for estimating potential net Energy and Ancillary Services (EAS) revenues earned by the hypothetical peaking plants**
  - The revised methodology uses historic data over a three year period to estimate the likely projected annual net EAS revenue of each hypothetical peaking plant
  - The DCR requires that net EAS revenue estimates reflect the prescribed level of excess conditions used for the reset
- **The historic prices used for estimating net EAS revenues reflect "as found" conditions and adjustments are needed to account for the tariff-prescribed level of excess conditions assumed for the DCR**
  - This adjustment is accomplished through the use of "scaling factors" that are referred to as LOE-AFs
  - The LOE-AFs are determined as part of the DCR and remain fixed for the four year reset period

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Process for Developing LOE-AFs

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LOE-AF Methodology

- **During the last reset, GE Energy Consulting (GE) was contracted to perform a series of MAPS runs to simulate market clearing prices under various levels of excess to assist in developing the LOE-AFs**
  - For the purposes of the DCR, GE performed two sets of MAPS runs: one run was modeled on the as-found system and one run modeled the system at the prescribed level of excess
    - The runs were conducted using the base case from the Congestion Assessment and Resource Integration Studies (CARIS) analysis
    - The result of MAPS runs are hourly energy clearing prices by zone
  - Using the two different runs, the independent consultant developed a series of ratios that reflect the price differences between the system at the prescribed level of excess and as-found
  - Those ratios were then used to scale historic hourly market clearing prices in the net EAS revenue model to estimate the net EAS revenue that hypothetical peaking plants could earn under prescribed level of excess conditions

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LOE-AF Process

- **In its January 30, 2020 presentation, Analysis Group proposed to use the same methodology for determining LOE-AFs that was utilized in the last reset**
  - The 2019 CARIS Phase 1 base case is the most recent CARIS database available and is proposed for use in this DCR
    - Posted with today's meeting material is a matrix of assumptions for the 2019 CARIS Phase 1 base case that was previously presented at ESPWG on August 6, 2019
  - Consistent with the last reset, GE will be engaged to perform the necessary MAPS runs to produce data to be used by Analysis Group is determining the LOE-AFs
- **For purposes of developing preliminary results, two sets of MAPS runs will be conducted:**
  - The first set will include the as-found system along with a run at the prescribed level of excess assuming a 300 MW peaking unit
    - 300 MW reflects the average peaking plant size of the units under consideration
- **Additional runs will be performed at a later date to determine LOE-AFs specific to the prescribed level of excess conditions for the specific peaking plant options proposed for each ICAP Demand Curve**
  - The more refined analysis will be conducted prior to issuance of the independent consultant's draft report
  - Additional modeling runs will also be conducted to provide information used in connection with the procedures for determining Locational Minimum Installed Capacity Requirements (LCRs)

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Next Steps

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Next Steps

- Please provide any feedback regarding the proposed LOE-AFs methodology by March 17, 2020
  - Please send written feedback to rpatterson@nyiso.com
- It is currently anticipated that preliminary results of the LOE-AF analysis will be presented by Analysis Group in April 2020

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- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

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Questions?

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