New York ISO
Independent System Operator

Dynamic Reserves

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Agenda

- Background
- Review of Outstanding Market Design Issues
- Next Steps

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Background

Background

- **Stakeholders endorsed the Dynamic Reserves design presented at the December 13, 2023 BIC[1]**
- **Concurrent with the 2024 prototyping, the NYISO will continue to discuss specific elements of the Dynamic Reserves market design, as identified in the 12/13/23 BIC presentation**
  - The key additional elements that are slated for discussion this year include:
    - Calculation of DAM Congestion
    - Allocation of the Forecast Reserve Charge
    - Treatment of Bid Load
    - Treatment of DAM Imports
    - Settlements for First and Second Largest Generator
    - Interaction with Transmission Congestion Contracts

1: https://www.nyiso.com/documents/20142/41671891/UPDATED%20-%2020231213%20BIC%20-%20Dynamic%20Reserves%20REPOSTED.pdf/0bc8d5df-6773-8db1-9f99-d91fd1fd0676

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Background (continued)

- The purpose of today's presentation is to review the first five elements, which are items identified by Potomac Economics in MIWG presentations on 11/27/23[2] and 12/4/23[3]
- This presentation will provide a brief summary of both NYISO's and Potomac's proposal/position on each item

2:https://www.nyiso.com/documents/20142/41393553/MMU%20Comments%20re%20Dynamic%20Reserves%20Proposal_11-27-2023.pdf/6b8c9fce-5e44-233e-1545-059f07470 25e

3:https://www.nyiso.com/documents/20142/41570800/MMU%20Comments%20re%20Dynamic%20Reserves%20Proposal_12-04-2023.pdf/41ef7ba4-6d04-9bae-af42-95fa023659ac

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Discussion of Outstanding Issues

Calculation of DAM Congestion Rent (DCR)

- **NYISO's Proposal**
  - The NYISO did not propose any changes to current process for:
    - Collecting DAM Congestion Rents ("DCR"): Under Dynamic Reserves, the congestion component of the LBMP will include the shadow price of energy and reserves constraints. DCR collected will be calculated based on expected flows and the shadow price of binding energy and reserve constraints, as is currently done for energy constraints
    - Collecting reserve charges to LSEs: Reserve charges to LSEs will continue to be collected through Rate Schedule 4 and be calculated on a load-ratio share based on total reserve payments owed to generators
- **Potomac's Proposal**
  - Potomac proposed changes to the collection of reserve charges to LSEs and the calculation of DCR
  - Potomac proposed that the total reserve payments owed to generators should be taken from the total DCR collected, since DCR will include the shadow cost of reserve constraints. Therefore, loads would not be charged for reserves under RS4

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Allocation of the Forecast Reserve Charge

- **NYISO's Proposal**
  - The NYISO proposed a new settlement construct, a Forecast Reserve Charge (FRC), which would be applicable to virtual supply, RT load that did not schedule in the DAM, and imports that do not materialize in RTM. This charge would only apply when there are binding constraints solving to forecast load (*i.e.*, a non-zero forecast reserve shadow price)
  - The revenues from this charge would offset the total reserve charges to LSEs (*i.e.*, offset Rate Schedule 4)
- **Potomac's Proposal**
  - Potomac agrees with the overall concept of the FRC, but provided two proposed changes
  - Potomac proposed changes to how the revenues from the FRC are applied. Potomac proposed that revenues from the FRC are added to the DCR paid to TOs
  - Potomac proposed a change to the formulation to the FRC for LSEs. Potomac proposed that the FRC should be allowed to go negative as a credit to LSEs when their RT schedule < DAM schedule

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Use of Bid Load for the 30-Minute Locational Reserve Constraints

- **NYISO's Proposal**
  - The NYISO proposed that 30-Minute locational reserve constraints will secure the higher of Scheduled (Bid) Load and Forecast Load
- **Potomac's Proposal**
  - Potomac proposed that 30-Minute locational reserve constraints should only consider Forecast Load

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Treatment of DAM Imports

- **NYISO's Proposal**
  - The NYISO proposed that imports will be treated the same as firm, internal generation when solving constraints
  - The NYISO proposed that imports that do not materialize in the RTM (*i.e.*, Actual Imports < DAM Scheduled Imports) will be charged the Forecast Reserve Charge when Forecast Load > Scheduled Load
- **Potomac's Proposal**
  - Potomac proposed that imports should be categorized as Firm or Non-Firm. Only Firm imports should be used to solve Dynamic Reserves constraints

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Settlements with Largest and Second Largest Generator Contingencies

- **NYISO's Proposal**
  - The NYISO proposed that the constraint for the 30-Minute NYCA-wide reserve requirement will be equal to the output of the Largest Generator + Second Largest Generator + max(0,(Forecast Load – Scheduled Load))
  - NYISO did not propose any changes to energy and reserve payments for generators
    - The Nodal Reserve price will include the NYCA clearing price for all NYCA products
- **Potomac's Proposal**
  - Potomac proposed the development of a charge for the generators with largest and second largest energy schedule plus operating reserve schedules to reflect their contribution to the NYCA 10-Minute and 30-Minute contingency reserve requirement

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Next Steps

Next Steps

- **The NYISO will return to MIWG in early February to present NYISO's position and recommendation for each of the five items presented today**
- **The NYISO will return to MIWG in mid March to discuss the interaction with TCCs**
- **The NYISO encourages stakeholders to submit questions, comments, and/or feedback on the five design elements**
- **The NYISO aims to reach consensus with stakeholders through working group discussions and to bring the complete market design to the BIC and the MC by the end of Q2 2024**
  - This timeline will allow NYISO to make any necessary changes to the functional requirements and prototyping to meet the software development (2025) and deployment (2026) deliverables
  - To meet this timeline, the following steps will need to be completed in the first half of 2024:
    - Receive stakeholder feedback on outstanding market design items
    - Prepare additional examples or supporting documentation in response to stakeholder feedback
    - Provide stakeholders with an assessment of market design impacts
    - Draft tariff revisions in response to any additional or modified design elements

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Our Mission & Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

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Questions?