

Tailored Availability Metric

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ICAPWG/MIWG

August 23rd, 2019



Agenda

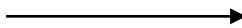
- Recap
- Purpose of Discussion
- Background
- Analysis Options
- Next Steps and Schedule

Recap

2019 Commitment: Q3 Market Design Concept Proposal

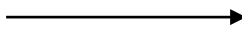
Working Group Meeting

April – July 2019



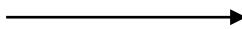
Analysis for availability-based resources that use the EFORd for the derating factor

July 24th, 2019



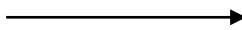
Market Design Concept Proposed for availability-based resources

August 23rd, 2019



Begin discussion of performance-based resources

October 2019



Market Design Concept Proposed for performance-based resources

Topic of Discussion

Recap

- **March 7th, 2019: The NYISO discussed expanding the project scope to include all availability-based and performance-based resources**
 - <https://www.nyiso.com/documents/20142/5375692/Tailored%20Availability%20Metric.pdf/92ef1b5d-0ec3-cee5-df69-e2130934ec0e>
- **May 9th, 2019: The NYISO presented initial analysis for availability-based resources that use the EFORd**
 - <https://www.nyiso.com/documents/20142/6474763/Tailored%20Availability%20Metric%20050919.pdf/2c86f002-0fe5-b3cb-05d8-f118e4dd392f>
- **July 24th, 2019: The NYISO presented the Market Design Concept Proposal for availability-based resources that use the EFORd as their derating factor**
 - As a result of the analysis conducted, the NYISO proposes to weight peak months of the current calculation
 - <https://www.nyiso.com/documents/20142/7674442/Tailored%20Availability%20Metric.pdf/e28df5c2-6994-ba5c-7ca2-05abeba9daeb>

Purpose of Discussion

Purpose of Discussion

- **The purpose of this presentation is to initiate discussion of analysis of performance-based resources**
 - Initial analysis will focus on assessing performance factors of wind and solar resources used to determine their UCAP value
 - Future discussion and analysis will assess Limited Control Run of River Hydro and SCRs

Background

Background

- **The current performance factor for performance-based Installed Capacity Suppliers is based on actual performance over peak periods**
 - For wind and solar resources, performance factors are calculated based on the current 4-hour window
 - Summer Peak Hours: HB 14 – HB 17
 - Winter Peak Hours: HB 16 – HB 19
 - Performance factors for the Summer and Winter Capability Periods are calculated based off of the respective peak months
 - Summer Peak Months: June, July, and August
 - Winter Peak Months: December, January, and February
- **Performance factors are calculated by dividing the output performance by the nameplate capacity of the resource**

Background

- **As a part of the Expanding Capacity Eligibility project, Peak Load Windows were proposed**
 - For resources with duration limitations of less than 1000 MW penetration, a 6 hour Peak Load Window is applicable
 - Summer: HB 13 – HB 18
 - Winter: HB 16 – HB 21
 - For resources with duration limitations equal to or greater than 1000 MW penetration, an 8 hour Peak Load Window is applicable
 - Summer: HB 12 – HB 19
 - Winter: HB 14 – HB 21

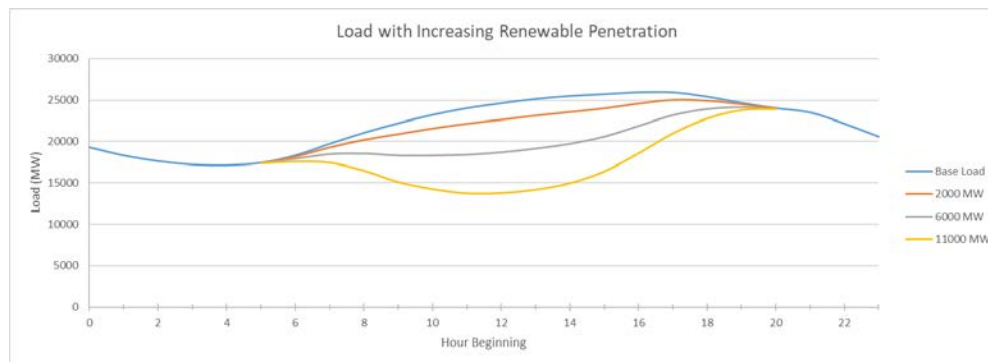
Analysis Options

Analysis Options

- At this time, the NYISO is seeking stakeholder feedback on the proposed analysis of wind and solar resources
- Analysis could assess when Loss of Load Events occur in the 2019 IRM Model
 - Weightings could be developed for Summer and Winter months based off of when these events occur
- The correlation of Loss of Load Events to load forecasts could be measured for respective Summer and Winter months
 - The percentage of load that is associated with LOLE could be reflected within the Peak Load Window
 - Weightings could be developed based off of these values

Analysis Options

- Using the weighting of different durations from the Expanding Capacity Eligibility project, weightings of the hours in the Peak Load Window could be adjusted
 - For example, the top 4 load hours are weighted 90% until the system reaches 2000 MW of penetration, then weighting subsequently shifts to 75%
- Gross and Net load could be analyzed to capture the anticipated penetration of wind and solar resources
 - Weightings could be established based off of shifts in load curves as penetration increases



Next Steps and Schedule



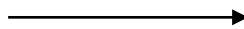
Next Steps

- At the next Working Group meeting, the NYISO will continue discussion of analysis of wind and solar resources and begin discussion of analysis for Limited Control RoR Hydro and SCRs

Schedule

Working Group Meeting

Today's Meeting



September 2019



September 2019



October 2019



Topic of Discussion

Begin discussion of performance-based resources (wind and solar resources)

Discussion of analysis for wind and solar resources; begin discussion of RoR and SCRs

Discussion of analysis for RoR Hydro and SCRs

Market Design Concept Proposed for performance-based resources

Feedback/Questions?

- The NYISO will consider input received during today's Working Group meeting and further input sent in writing to deckles@nyiso.com and econway@nyiso.com

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- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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