BSM Enhancements

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Agenda

- **Introduction**
  - Background
  - Objective
- **Proposals**
  - BSM Forecast Enhancements
  - Escalation Factor and Inflation Rate in Buyer-Side Mitigation
- **Draft Tariff Language**
- **Closing**
  - Next Steps

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Background

- At the May 17 Business Issues Committee ("BIC"), the NYISO presented two Buyer-side Mitigation ("BSM") Enhancement Proposals:
  - BSM Forecast Enhancements
  - Escalation Factor and Inflation Rate in BSM
- Both Motions passed without opposition
- Today, the NYISO has combined the two proposals. A notice regarding the combination was posted on May 19 with the BIC materials.

Objective

Today's presentation seeks to:

- review the NYISO's proposal
- review draft tariff language
- present a draft motion for stakeholder consideration

BSM Forecast Proposal

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History

Date	Event
2013	In FERC docket ER13-1380 (to create the G-J locality), the Market Monitoring Unit and several other parties sought tariff revisions to address how mothballed units were treated in the capacity and energy forecast used to buyer-side mitigation determinations. FERC determined that such an enhancement was outside the scope of the docket but it encouraged the NYISO to work with stakeholders on the issue.
Dec. 2014 – Oct. 2016	The NYISO developed a precursor to this proposal with input from stakeholders at the following ICAP Working Group meetings: December 12, 2014, March 18, 2015, May 18, 2016, July 6, 2016, August 10, 2016, September 7, 2016, and October 27th, 2016.
December 14, 2016	The NYISO presented to and discussed the prior proposal with BIC. The BIC voted on a Motion and Amended Motion relating to the approval of the NYISO's proposal. Both Motions failed with 43.21% and 49.78% affirmative votes, respectively. Following the failure of the Motions, there seemed to be stakeholder consensus that the BSM forecast tariff provisions merited enhancement. Stakeholders expressed a desire that the NYISO continue its efforts and return to Stakeholders with a revised proposal.
April 19, 2017	The NYISO returned to the ICAP Working Group with a revised proposal, developed with the extensive input of stakeholders, including both Load-side and Supplier-side caucuses.
May 17, 2017	The NYISO presented the revised proposal and draft tariff language to the Business Issues Committee. The motion passed without opposition.

Categorical Treatment

Included in the Forecast

Existing Units

- Generators and UDR projects in the most-recently published Gold Book
- Includes Forced Outage and Inactive Reserve units

Additional Units

- Mothball, ICAP Ineligible Forced Outage ("IIFO") & Retired units (& UDRs in similar conditions)
- Must have CRIS*
- Must either:
  a) show positive indicators of repair
  b) Have an NPV>$0 in the 'inclusion test'

Excluded from the Forecast

Excluded Units

- Transferred CRIS*
- Expired CRIS*
- Units having submitted a Generation Deactivation Notice, provided they do not meet (a) or (b)
- Mothball, IIFO, and Retired units that do not meet (a) or (b)

*ERIS only units are captured for net E&AS

NPV 'Inclusion' Test

The inclusion/exclusion of some units will depend on the proposed "Net Present Value Analysis"

- This analysis will utilize the same data as used in Physical Withholding analysis, which is collected as part of the RMR process
- It will evaluate whether an investment in a unit that could return to service would have a positive Net Present Value
  - ✓ If the NPV > $0 the unit will be included. Otherwise, it will be excluded.

NPV 'Inclusion' Test (*continued*)

Key features and assumptions of the Net Present Value Analysis include:

- The analysis will consider the entry of new Class Year projects, but will afford the returning unit the opportunity to recover some (or all) of its investment costs ahead of the new Class Year projects' entry
- Units that return will remain in service for as long as they continue to recover their Going Forward Costs ("GFCs")
- Units that had a Catastrophic Failure, and some Retired units (those that have been dismantled or have been rendered permanently inoperable,) will not be considered

Exceptions

Existing Units that submitted a Generation Deactivation Notice

- Included if the NYISO has not yet completed its Generation Deactivation Assessment
- Included (for the length of the Need) if the NYISO has found a Generator Deactivation Reliability Need but hasn't yet identified a solution
- Can be included beyond the Need if they pass the inclusion test

Long-term Partial Derates

- May be evaluated under the NPV provisions to see if a repair is economic and likely

Public Information

- The NYISO may reflect some types of reliable public information in its forecast, regardless of how a unit would have otherwise been treated
- There are additional NYISO postings associated with this provision

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Escalation & Inflation Proposal

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History

Date	Event
Oct 2016 – Apr 2017	The NYISO presented several alternatives on how to apply escalation and inflation in BSM at ICAPWGs.
May 17, 2017	The NYISO reviewed the revised proposal and draft tariff language to the BIC. The motion passed unanimously.
Today	The NYISO will review the proposal for how to apply escalation and inflation in BSM rules and present proposed tariff revisions and a proposed motion.

NYISO's Proposal for Inflation in BSM Determinations

Use the most recently published ten year projections for inflation from the Survey of Professional Forecasters (or if no longer available, a similar suitable source) to identify:

- Examined Facility Unit Net CONE projected for a MSP, and
- The price on the ICAP Demand Curve projected for a MSP
    - Provides a transparent and reasonable forecast for future inflation expectations

NYISO's Proposal for Adjusting New Entrants' Offer Floors to Year of Entry Dollars

If a unit enters into service prior to the first Capability Year of the MSP the NYISO will use the same long-run projection for inflation that has been proposed on the previous slide* to deflate the entrants' Offer Floor

- Provides consistency between BSM tests (i.e., same value used during BSM determinations)
- Uses forecasted inflation to reasonably predict what future inflation would be

** Same Long-run projection for inflation from the Survey of Professional Forecasters (or if no longer available, a similar suitable source) that was used at the time of determination*

Combined Draft Tariff Language

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Draft Tariff – New Language

- 23.4.5.7.3.7 Adjusting New Entrants' Offer Floors to Year of Entry Dollars
- 23.4.5.7.4 Inflation in BSM Determinations
  - As a result of combining both sets of tariff revisions in one proposal, certain revisions proposed to this section are now placed in Section 23.4.5.7.15.3.4
- 23.4.5.7.15, and 15.1-15.3 Introduction
  - Introduction, "positive indicator," "demonstrating with reasonable certainty," and general rules for BSM Forecast assumptions
- 23.4.5.7.15.4 Existing Units
- 23.4.5.7.15.5 Additional Units
- 23.4.5.7.15.6 Excluded Units
- 23.4.5.7.15.7 Exceptions
- 23.4.5.7.15.8 Net Present Value Analysis
- Dispersed across 23.4.5.7 – updates to cross-references and removals of replaced language

Next Steps

- If motion is approved by stakeholders, Board of Directors review
- If directed by Board, FERC Filing

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The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- 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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Appendix

- Description of Survey of Professional Forecasters Long-run Projection for Inflation
- Examples of adjusting Offer Floors to Year of Entry Dollars

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Survey of Professional Forecasters Long-Run Projections for Inflation – Q1 2017*

Median Short-Run and Long-Run Projections for Inflation (Annualized Percentage Points)								
	Headline CPI		Core CPI		Headline PCE		Core PCE	
	Previous	Current	Previous	Current	Previous	Current	Previous	Current
Quarterly								
2017:Q1	2.2	2.5	2.2	2.4	1.8	2.0	1.8	1.8
2017:Q2	2.2	2.3	2.2	2.2	1.9	2.0	1.8	1.9
2017:Q3	2.2	2.3	2.2	2.1	1.9	2.0	1.9	1.9
2017:Q4	2.2	2.5	2.2	2.2	2.0	2.1	1.9	1.9
2018:Q1	N.A.	2.4	N.A.	2.3	N.A.	2.1	N.A.	2.0
Q4/Q4 Annual Averages								
2017	2.2	2.4	2.2	2.2	1.9	2.0	1.9	1.9
2018	2.2	2.3	2.2	2.3	2.0	2.0	1.9	2.0
2019	N.A.	2.3	N.A.	2.2	N.A.	2.0	N.A.	2.0
Long-Term Annual Averages								
2016-2020	2.13	N.A.	N.A.	N.A.	1.90	N.A.	N.A.	N.A.
2017-2021	N.A.	2.30	N.A.	N.A.	N.A.	2.03	N.A.	N.A.
2016-2025	2.22	N.A.	N.A.	N.A.	2.00	N.A.	N.A.	N.A.
2017-2026	N.A.	2.30	N.A.	N.A.	N.A.	2.10	N.A.	N.A.

* https://www.phil.frb.org/research-and-data/real-time-center/survey-of-professional forecasters/2017/survq117

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Survey of Professional Forecasters Long-Run Projections for Inflation – Q1 2017 *(continued)*

- Headline inflation includes all aspects within an economy that experiences inflation. Core inflation removes components that can exhibit large amounts of volatility from month to month
- Consumer Price Index (CPI) and Personal Consumption Expenditures (PCE) are the two common measures for inflation
- The NYISO would take the average of the expected long-term annual averages for Headline CPI and Headline PCE inflation over the next 10 years
  - For Example, if Headline CPI = 2.30% and Headline PCE = 2.10% then the NYISO would use the average = 2.20%

Examples: Adjusting Offer Floors to Year of Entry Dollars

- **Assume a Class Year 2017 generator is determined to have an Offer Floor in the first Capability Year of the MSP (i.e., year 2020) = $10.00/kW-month**
- **Assume long-run forecast for inflation = 2.0%**
- **Assume most recent Demand Curve inflation rate = 1.5%**
  - Example 1: Assume the generator enters into service in 2019 (i.e., 1 year prior to first Capability Year of the MSP)
    - NYISO deflates the Offer Floor from 2020 dollars to 2019 dollars using the long-run forecast for inflation of 2.0%
    - Offer Floor 2019 = $10.00/(1+2.0%)
    - Offer Floor 2019 = $9.80/kW-month
  - Example 2: Assume the generator enters service in 2021 (i.e., 1 year after first Capability Year of the MSP)
    - NYISO inflates the Offer Floor from 2020 dollars to 2021 dollars using the most recent Demand Curve inflation rate of 1.5%
    - Offer Floor 2021 = $10.00*(1+1.5%)
    - Offer Floor 2021 = $10.15/kW-month