

Market Power Assessment of 115kv Implementation

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Agenda

- **Overview of Analysis for Market Power on 115kv facilities**
- **Review Three Concerns Identified**
- **Reliability Committed Resources**
- **Traditional Load Pockets**
- **Uneconomic Overproduction**
- **Next Steps**

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Current Rules and Obligations

Current Economic Withholding Rules

- Outside of a Constrained Area MST 23.3.1.2.1 states the following thresholds for Incremental Energy and Minimum Generation Bids will be used for identifying economic withholding:
 - The lower of a 300% or \$100 MWh increase in bid over reference
 - Bids below \$25 per MWh are exempt.
 - Before mitigation is applied for failing this test a consultation happens with the Generator.
 - Resources failing these thresholds may be subject to default bid mitigation.

Overview of Analysis

Analysis Performed by NYISO

- Performed DAM and RTC market simulations to assess the potential for the exercise of market power with new 115kV constraints included in the market model.
- Hundreds of reruns were performed over dozens of market days where the new 115 kV constraints were included.
- For resources with direct impact on 115kV constraints:
 - Assessed the sensitivity Generators' LBMPs and Revenues across a range of offers
 - Resources were generally treated “ideally” ie - the MW range and Ramp were expanded beyond actual/bid in capability
 - The purpose of this is to capture the full potential for the exercise of market power, even if none would have existed under the market conditions at that time

Concerns Identified

Market Power Concerns Identified

- NYISO's review and analysis identified three areas of potential market power concern for discussion with stakeholders when including new 115kv constraints in the market models
 - Reliability Committed Resources
 - Traditional Load Pockets
 - Uneconomic Overproduction

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Concern 1 – Reliability Committed Resources

Review of Current Mitigation Rules for Reliability Committed Units

- **MST Section 23.3.1.2.3 discusses the current thresholds for reliability commitments not in a Constrained Area. Violation of these thresholds of 10% or \$10/MWh, can result in mitigation. This mitigation occurs after the fact in the settlements process.**
- **Current rules are appropriate given current system conditions**
 - Historically, “Local” 115kV constraints were not modelled
 - Thus, there was no ability to impact the local 115kV pricing outcomes on constraints where Generators would otherwise have had market power (pivotal supplier)
- **The 115kV project introduces a new market paradigm, whereby these resources could be pivotal and have the ability to set price of the new local 115kV constraints.**

NYISO Proposed Solution

- **NYISO proposes to address this issue by modifying the market rules in the following manner:**
 - Modify 23.3.1.2.3.3.ii such that units committed for reliability (outside of NYC) that exceed the Generator's Incremental Energy Bid reference level by the greater of 10% or \$10MWh, and are marked as a Pivotal Supplier, would be mitigated to reference as an input into the pricing software.
 - In this scenario these resources would be the Pivotal Supplier for price setting on these local 115kV constraints and would be able to dictate the outcome of prices.

Specific Facilities

- The VAST majority of reliability commitments to address issues on the 115kV are for voltage issues. As the NYISO cannot model a constraint for voltage in its market software, those commitments are not a concern for exercising market power for price setting.
- NYISO has identified two 115kV facilities which may have commitments for reliability if the thermal constraints were modelled, thus these commitments could have pricing power. Consequently, NYISO proposes to NOT model the following facilities from the list posted on February 21, 2018 until the rules and software to address the market power possibility have been resolved:
 - 26038 - 141 Dunkirk-Gardenville
 - 26037 - 142 Dunkirk-Gardenville
 - It should be noted that these two facilities were already slated to not be modelled at this time, as these lines are not limiting constraints due to line sectionalization with the 68 line open.
- As noted in the NYISO process, new 115kV facilities will be evaluated for market power concerns before they are modelled.

Concern 2 – Traditional Load Pockets

Economic Commitment Load Pocket Concerns

- As the NYISO noted in its whitepaper:
- Import constrained ‘load pockets’ may exist where a limited number of internal resources are capable of resolving 115kV constraints.
This study has identified Gardenville as the one potential import constrained load pocket that may result from binding constraints on the underlying 115kV system; the Gardenville-Cloverbank (141/142 Lines) constraints. Analysis indicates a strong potential sensitivity of offer to price for resources in this load pocket.
- The Gardenville load pocket is the only load pocket market power concern the NYISO has identified to date, outside of Constrained Areas.

Proposed solution

- The NYISO does not intend to model the Gardenville-Cloverbank 141/142 lines in the near future because these lines are not limiting constraints due to line sectionalization with the 68 line open.
- The 68 line is normally open in order to prevent reliability violations that result from the inability to control flows on the 68 line when it is placed in service.
- NYISO suggests to continue monitoring the Gardenville load pocket before proposing market mitigation rules; until such time as they may be warranted.

Concern 3 – Uneconomic Overproduction

Current Uneconomic Production Rules

- MST 23.2.4.1.3 describes Uneconomic production as increasing the output of an Electric Facility to levels that would otherwise be uneconomic in order to cause, and obtain benefits from, a transmission constraint.
- This is further defined in 23.3.1.3 as scheduling energy at 20% less than reference, and causes or contributes to transmission congestion, or the failure to follow real-time dispatch instructions which causes or contributes to congestion, and its output difference exceeds (i) 15 minutes * response rate, or (ii) 100MW for a Generator, or (iii) 200MW for a portfolio.
- These rules are subject to an impact test with an increase of \$100MWh or 200%.

Deficiency with Current Rule

- The 2017 State of the Market report issues a recommendation to, “modify mitigation rules to address deficiencies in the current rule related to uneconomic over-production.”
- In some situations, a resource may have an incentive to overproduce to LOWER prices, which would be profitable when buying out in a two settlement market.
- While this potential area for improvement exists without the modelling of 115kV constraints, this modelling has the potential to further exacerbate this issue.

NYISO Proposal

- The NYISO is not proposing to address this issue as part of the 115kV modelling discussions.
- The NYISO intends to bring forward discussions with stakeholders latter this year to propose enhancements.

Questions?

Feedback?

- Email additional feedback to:
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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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