

# Observations of Uneconomic Production by NYISO's Market Mitigation and Analysis (“MMA”)

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Giacinto Pascazio

Technical Specialist - MMA

**MIWG**

February 20, 2024

# Agenda

- Objective for this meeting
- What is Uneconomic Production and the MMA process
- Bidding behavior that can lead to Uneconomic Production and justification provided by MPs
- Example of bid-mode types with gas balancing considerations
- Next Steps

# Objective for this meeting

- In February 2022, FERC accepted NYISO's proposal to modify existing Mitigation rules pertaining to Uneconomic Production
- Over the past two years, there have been numerous observations of Generators operating in a manner that exceeded the tariff defined conduct thresholds for Uneconomic Production
- NYISO would like to review the current Mitigation Measures and communicate its general expectations of Generator bidding and the Uneconomic Production mitigation measures

# What is Uneconomic Production and the MMA process

# What is Uneconomic Production and the MMA process

- **23.2.4.1.3 of the Market Services Tariff – Attachment H defines Uneconomic Production as increasing the output of an Electric Facility to levels that would not be in the economic interest of the Market Party or its Affiliates in the absence of market power**
- **Conduct is defined as a Generator getting scheduled at an LBMP that is less than the applicable reference level minus the greater of \$25 MWh or 80% of the applicable reference level provided that the LBMP is less than \$25**
- **If Conduct failing offers result in a change in LBMP that exceeds Market Impact Thresholds (the lesser of \$100/MWhr or 200% so long as the change is greater the \$25/MWhr), a Mitigation Consultation is initiated with the Market Party allowing the MP to justify its bids**

# What is Uneconomic Production and the MMA process

- If the MP is able to explain that its behavior was consistent with competitive behavior, no further action is taken
- If MP is unable to explain to the satisfaction of MMA behavior was consistent with competitive behavior, Mitigation is applied
- MMA consults with the Market Mitigation Unit (Potomac Economics) on all Mitigation Consultations
- Uneconomic Production is screened for in both the Day-Ahead and Real-Time Markets
- Uneconomic Production can result in prices lower than the marginal resource's cost of providing energy

# Bidding behavior that can lead to Uneconomic Production

# Bidding behavior that can lead to Uneconomic Production and MP justifications

## ■ Bidding Behavior

- Generators who offer in the Day-Ahead or Real-time markets in a fixed manner, either self-committed fixed or ISO-committed fixed
- Generators who offer self-committed flexible to a MW level above Minimum Generation reference level
- Offering incremental energy that is less than the reference level minus the greater of \$25 or 80% of the reference level

## ■ Examples of Rationale Provided

- Generators were self-scheduling in real-time to run to Day-Ahead Schedule
- Generators were bidding fixed, or reducing offers significantly below marginal costs in real-time to achieve proper gas balancing
- Generators are unable to follow 5-minute dispatch instructions from NYISO or Transmission Owner
- Generators were conducting DMNC testing procedures

## ■ **Absent additional information, these examples do not meet the criteria of operating in a manner that is consistent with competitive behavior**

## ■ **Competitive behavior is interpreted as operating in way to maximize revenue while avoiding losses**

# Bidding behavior that can lead to Uneconomic Production and justification provided by MPs

- There are situations when a Generator bidding in a fixed manner is consistent with competitive behavior. For example:
  - Ramping up in real-time to meet a future Day-Ahead Schedule as stated in startup/shutdown procedure (Technical Bulletin 146)
- In many circumstances - NYISO asserts that a proper competitive alternative would be to offer the costs associated with the MP's objectives, as presented in their justification. For example:
  - Generator DMNC testing – Offer a cost in the Day-Ahead market associated with not performing the test on that market day
  - Generator gas balancing – Offer the cost associated with the sell-back of gas nominated and not used.
  - Offering in the Day-Ahead Market risk associated with gas balancing
  - Generators who are not equipped to automatically follow dispatch instructions will be required to provide justification for not meeting that requirement\* to avoid Uneconomic Production Mitigation
    - \*Section 5.8 of the Market Services Tariff details the requirement

# Example of bid-mode types with gas balancing considerations

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- **Generator A – UOL of 100MW and a MinGen of 50MW**
  - Offer in the DAM is ISO Committed-Flexible and is scheduled to 75MW
    - Generator is marginal at a \$50 bid cost and reference level with a fuel cost of \$10
  - RT bid mode is adjusted to Self Committed-Flexible to 75MW to avoid 50% gas balancing cost associated with unused fuel
  - Loss of a transmission line occurs in RT and LBMPs at that location drop to \$0
  - Based on reference levels (\$50) and RT LBMPs (\$0), this observation fails the conduct test
  - Having a Self Committed-Flexible bid mode in RT to 75MW, the NYISO's economic dispatch process is unable to reduce the output of the Generator from 75MW to the 50MW MG level
  - Had the Generator offered \$25 in RT with a flexible bid mode, RTD would have reduced the output to MinGen resulting in a new RT LBMP of \$25
  - In this example, the cost of gas balancing ( $5\text{MMBTu} * \$5 * 25\text{MW} = \text{<}\$625\text{>}$ ) is offset by the energy buy back ( $25\text{MW} * (\$50 \text{ (DAM LBMP)} - \$25 \text{ (RT LBMP)}) = \$625$ )
  - By offering in RT the cost associated with gas balancing with a flexible bid mode, the Generator had an opportunity for additional energy balancing revenue if the prices fell below \$25 without incurring additional gas balancing costs
  - Any unlikely increase in RT price would be protected by DAMAP

# Summary

- **NYISO's expects Generators to offer in a price sensitive manner to allow the NYISO's economic dispatch process the opportunity to schedule the Generator in a manner that results in LBMPs reflective of the marginal resource's cost of providing Incremental Energy**
- **Generators that offer in a fixed manner above Minimum Generation reference levels, or reduce offers substantially below marginal costs, will continue to be evaluated for potential Uneconomic Production**
- **NYISO is required to mitigate Generators that offer in a manner that exceeds the tariff-specified conduct and impact thresholds if the Market Party is unable to justify its bids**

# Next Steps

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- Evaluate the need for additional documentation in NYISO Manuals stating NYISO's expectations of bidding to schedule and facilitate certain Generator tests
- Market Parties who believe their bids could result in potential Uneconomic Production should contact the NYISO's MMA department in advance
- NYISO will return to MIWG for further discussion

# 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

# Questions?