Uneconomic Production

Zachary Stines

Supervisor, Mitigation Performance & Analysis

MIWG

October 8, 2019, NYISO



DRAFT – FOR DISCUSSION PURPOSES ONLY

©COPYRIGHT NYISO 2017. ALL RIGHTS RESERVED

Agenda

- Current Uneconomic Production Rules
- Limitations of Current Rules
- Opportunities for Enhancements





Current Market Rules



DRAFT – FOR DISCUSSION PURPOSES ONLY © COPYRIGHT NYISO 2017. ALL RIGHTS RESERVED.

MST Attachment H

- Section 23.2.4.1.3
 - Defines Uneconomic Production & Uninstructed Deviation
- Section 23.3.1.3.1.1
 - Defines thresholds for conduct
- Section 23.3.2.1
 - Defines thresholds for impact
- Section 23.4.3.3.2
 - Defines penalty for uninstructed deviation



Uneconomic Production

 "Uneconomic production from an Electric Facility, that is, 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"

- MST Attachment H: 23.2.4.1.3



Conduct and Impact

Conduct

• Energy scheduled at an LBMP that is less than 20% of the applicable reference level and causes or contributes to transmission congestion

Impact

- Increase of 200% or \$100/MWh in hourly price
- Increase of 200% in BPCG, or 50% for Constrained area



Potential Enhancements

- SOM Recommendation 2017-3
- Ensure mitigation measures appropriately address all uneconomic production situations
 - There is a mitigation measure for uninstructed deviation from base points

60.2017, ALL RIGHTS RESERVED

Limitations of Current Rules



DRAFT – FOR DISCUSSION PURPOSES ONLY © COPYRIGHT NYISO 2017. ALL RIGHTS RESERVED.

Example

- Generator receives DA schedule and then Self Commits Fixed in RT to DA schedule
- Causes reliability issue due to over-generation within area and results in negative prices
- Operators are required to take action and derate the unit (*i.e.*, OOM)
- Conduct is met, but Impact may not be since hourly RT prices are required to increase by 200% or \$100/MWh; BPCG impact unlikely to be relevant
- Effects:
 - Generator may benefit from buying out of Day-Ahead Schedule at negative real-time prices
 - Market Party may benefit from higher prices on opposite side of constraint
 - Insufficient ramifications to the generator that is negatively impacting reliability



Limitations

Impact Thresholds

- Requires a price <u>increase</u> of 200% or \$100/MWh, or 200% increase in BPCG (50% in NYC)
- Impact is not always met since bids are low and often the primary result is suppressed prices

Existing Mitigation Measures

- Additional detail and clarity could enhance the current measures
- Require the market party to cause and obtain benefits of congestion
- Do not account for situations when uneconomic production results in operational issues



Opportunities for Enhancements



DRAFT - FOR DISCUSSION PURPOSES ONLY © COPYRIGHT NYISO 2017. ALL RIGHTS RESERVED.

Potential Enhancements

- Increased detail and clarity for specific uneconomic production impact thresholds and mitigation measures
 - Section 23.3.2.1 Impact Thresholds
 - Section 23.4.2 Default Bid insufficient to address selfcommitment
- Review of the requirement that an Electric Facility has to obtain benefits for uneconomic production to occur
 - Section 23.2.4.1.3
- Develop rules to address when uneconomic production results in reliability issues



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



www.nyiso.com