

Less than 20 MW Constraint Reliability Margin Values

David Edelson

Manager – Operations Performance and Analysis

MIWG

July 18, 2018 Rensselaer, NY

Background

- At the June 13, 2018 MIWG meeting, NYISO presented a proposed tariff update that would permit the use of a non-zero constraint reliability margin (CRM) that is less than 20 MW.
- Market Participants suggested certain modifications to the proposed tariff language. There are also additional clarifications that warrant another review prior to seeking a vote on this proposal at the Business Issues Committee.

Background (Previously presented at the 6/13/18 MIWG meeting)

- NYISO's tariff currently requires use of a minimum value of at least 20 MW for any non-zero CRM value employed in the Day-Ahead and real-time markets (see Section 17.1.4 of Attachment B of the MST).
- As NYISO continues to consider inclusion of certain 115 kV facilities with lower thermal ratings (relative to 230 kV and higher facilities) into its dispatch, a 20 MW CRM can often represent a significant percentage of the facility limits.
 - For instance, many of the 115 kV facilities under consideration for inclusion in the dispatch have post contingency limits of 150 MW or lower. A 20 MW CRM represents 13% of the rating for a 150 MW facility.
 - In MW terms, a facility with a 150 MW post contingency rating and a 20 MW CRM would be secured in the dispatch using a 130 MW limit.
 - By comparison, a typical 345kV circuit has a 1550 MW post contingency rating with a 20 MW CRM representing only ~1% of the rating.
- The NYISO is pursuing a separate project with stakeholders to develop constraint-specific transmission shortage pricing, which may also include associated changes to CRM rules. The implementation timeline of constraint-specific shortage pricing will be dependent on the prioritization and scheduling of that project.
- Until enhancements related to the constraint-specific transmission shortage pricing project can be put in place, NYISO is seeking to revise the tariff to permit use of non-zero CRM values less than 20 MW, where warranted.

Proposal

(Previously presented at 6/13/18 MIWG meeting. Supplemental information highlighted in red)

- NYISO would apply a sub-20 MW CRM value to certain facilities where warranted. The methodology to determine if a sub-20 MW CRM is warranted would be heavily based on the desire to generally keep CRM values at a level representing no more than 10% of a facility's rating.
 - Another factor in determining appropriate CRM values is the degree of expected modeling uncertainty surrounding flows across the facility and the need to account for such uncertainty in operating the facility within reliability criteria.
 - For 115 kV facilities added to the market software earlier this year, as well as any additional 115 kV facilities identified for addition to the market software later this year and in the future, the NYISO intends to generally employ a default CRM value of 10 MW. The NYISO expects a lower CRM value for these facilities to improve market efficiency and better align the market model with actual observed system flows.
 - If necessary, the NYISO may adjust this default CRM value for a particular facility based on operational experience, such as an increased frequency of operator actions taken to manage the facility. This is consistent with the NYISO's current practice of continually assessing CRM values for all facilities.
- The ability to apply a CRM value less than 20 MW will facilitate the continued pricing of smaller 115 kV facility constraints.
- NYISO will continue to apply the existing graduated Transmission Shortage Cost pricing logic to facilities with non-zero CRM values of less than 20 MW.
 - This pricing logic applies to all facilities with a non-zero CRM value and includes a two-step demand curve of up to 20 MW¹
 - The same 20 MW two-step demand curve will be applied to all facilities with non-zero CRM values until enhancements related to the constraint-specific transmission shortage pricing project can be put in place

¹ Two-step demand curve: 5 MW at \$350, 15 MW at \$1,175

Proposed Tariff Revisions

- The NYISO proposes the following revision to Section 17.1.4 of Attachment B to permit the use of non-zero CRM values less than 20 MW (underlined red text was added in response to stakeholder input):
 - *The applicable Transmission Shortage Cost depends on whether a particular transmission Constraint is associated with a transmission facility or Interface that includes a non-zero constraint reliability margin value. The ISO shall establish constraint reliability margin values for transmission facilities and Interfaces. Non-zero constraint reliability margin values established by the ISO ~~shall be~~ are normally equal to ~~or greater than~~ 20 MW. The ISO shall post to its website a list of transmission facilities and Interfaces assigned a constraint reliability margin value other than 20 MW.*
- The website posting referenced in the proposed tariff revision has been maintained as a posting on the NYISO's website since early 2017
- The updated tariff revisions are posted with the meeting material for today's meeting

Next steps

- **August BIC and MC meetings**
 - Seek stakeholder approval to permit use of non-zero CRM values less than 20 MW
- **Seek Board of Directors approval in September**
- **File with FERC**

The Mission of the New York Independent System Operator is to:

- Serve the public interest and
- Provide benefit to stakeholders 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

ISO NEW YORK
INDEPENDENT
SYSTEM OPERATOR