Changes to Two Ancillary Service Mitigation Provisions

Nicole Bouchez, Ph.D.

MIWG
March 2, 2012
NYISO - 10 Krey Blvd, Rensselaer, NY

DRAFT – FOR DISCUSSION PURPOSES ONLY

History

- **MIWG September 16**
  - ***Concept presentation***
- **MIWG February 2**
  - ***Addressed Market Participant comments***
  - ***Revised proposal***
- **MIWG February 17**
  - ***MMU presentation on its recommendations on Ancillary Service Mitigation Rules***
- **Today's MIWG**
  - ***MMA presentation on AS reference levels and mitigation.***
  - ***Consumer Impact Analysis***

Proposed Agenda

- **Brief background on the measures**
- **Issues examined**
- **Summary of Market Power analysis**
- **Issues raised at last MIWG and considered**
  - ***Alternate Steps – use of mechanism from the lifting of the $2.52 BID cap***
  - ***Have MMU evaluation period include a shoulder month***
- **Revised Proposal**
- **Review of Tariff Language**
- **Next Steps**
  - ***BIC March 14***
  - ***MC March 28***

Why are we proposing the change?

- **2010 SOM Recommendation #5**
  - ***Potomac Economics recommends that the NYISO modify two mitigation provisions that may limit competitive 10-minute reserves offers in the day-ahead market.***
- **Potomac Economics opined that changing these mitigation provisions should improve convergence of day-ahead and real-time reserve prices in peak load hours.**
  - ***Better convergence between the DAM and RT allows for a better commitment in the DAM so the least cost set of units is available to address the conditions in Real Time. Supplemental commitments, and especially the commitments of quick start units in real time are inefficient (and costly). If the commitments can be made in the Day Ahead Market instead of in Real Time there will be benefits to consumers, and generators will also be compensated appropriately.***
- **The existing mitigation rules likely lead to inefficiencies in high load periods.**
  - ***The existing rule may not allow generators to fully reflect their costs.***

The Att. H Mitigation Provisions

- **Tariff provision Att. H §23.3.1.4.5:**
  - ***Notwithstanding the foregoing provisions, the reference level for 10-Minute Non-Synchronized reserves shall be the lower of (i) the amount determined in accordance with the provisions of Section 23.3.1.4.1.1, or (ii) $2.52.***
- **Tariff provision Att. H §23.5.3.3**
  - ***In addition, In-City generators must Bid zero ($0) for the availability portion of Day-Ahead Spinning Reserves Bids. The implementation of this mitigation measure will have no effect on the ability of a Generator located in New York City to recover the market-clearing price established by the ISO for the sale of Spinning Reserves.***

Background on the Spinning Reserve tariff measure

- **Section 23.5.3.1 is a reliability based requirement that has as its source NYS Public Service Commission order # 27302 that required defined levels of 10 minute reserve to be located in-city. This rule was the basis for the provision in the Consolidated Edison of NY (Coned) divestiture agreements that were defined in FERC Docket ER98-3169. In this ruling the divested generation was required to be offered for dispatch by the NYISO Security Constrained Dispatch (SCD) program. In the current market terminology this is a requirement that all Spinning Reserve-capable In-City generation must bid as flexible/dispatchable units.**
- **<u>This proposal does not change the must offer requirement.</u>**
- **<u>This proposal does not change the reliability rule implementation.</u>**

Background on the Non-Spinning Reserve Reference Cap

- **The premise for the cap is defined in FERC Docket ER00-3591-000**
  - ***Beginning in January 2000 and continuing into February 2000 and March 2000 the reserve markets were not working as expected and the NYISO filed with FERC to suspend market based pricing in the 10 minute reserves market.***
- **FERC approved the NYISO proposal to limit bids in the non-spinning reserve markets to $2.52, which reflected the highest market clearing price during the initial period of ISO operations, when the market appeared to have been operating competitively.**
- **On September 1, 2000 NYISO submitted FERC Docket ER00-3591 which defined a number of corrective actions that the NYISO was taking to remedy the reserve market issues. In this and other sub-dockets the non-synchronous reserves bid cap was removed but the reference cap remained.**
  - ***Two other significant modifications that were made at the time were the change in the market representation of the Gilboa units which increased the amount of reserves available in the east and the lowering of the east reserve requirement. Both of these actions would have the effect of lowering the reserve market concentration in the east.***

ISSUES EXAMINED

Issues raised at prior MIWG meetings

- **A Consumer Impact Analysis was requested.**
  - ***The CIA is being presented today.***
- **There were requests for more market power analysis.**
  - ***The next slides provide a summary of the Market Power analyses. Further detail is available in the February 2 MIWG presentation material.***
- **Are new/additional mitigation measures needed?**
  - ***MST Att. H contains conduct and impact mitigation measures for both the 10 Minute Spinning Reserve and 10 Minute Non-Spin Reserve markets. The NYISO has modified the proposal to allow the stepped lifting of the two measures and an explicit evaluation by the MMU of any attempt to exercise market power. In addition, the NYISO and the MMU will continue their monitoring activity and should there be any concern with the competitiveness of any market would propose a new mitigation measure.***
    - **An overview of existing Reserve Reference Levels and Ancillary Services Mitigation measures is being presented today.**

Issues raised at prior MIWG meetings (2)

- **Will this change lead to higher prices?**
  - ***We see higher RT prices than DAM prices on some peak days, and it would be appropriate to allow availability bids to boost clearing prices in the DAM on those days to the expected RT prices. Convergence between the DAM and RT is important because commitment decisions are primarily made in the DAM and the closer the DAM is to what happens in RT, the more likely the committed generators can address what happens in real time efficiently (and this will minimize the need for expensive quick start generators).***
  - ***On days when there is not a large price differential between DAM and RT prices, we do not expect higher prices given the competitive nature of the markets. If there is an attempt to exercise market power, the existing conduct/impact mitigation measures would apply. Also, the stepped lifting of the two measures and the explicit evaluation by the MMU of any attempt to exercise market power will provide notice of a market power issue should one appear.***

Issues raised at prior MIWG meetings (3)

- **Will the changes result in additional MMU costs to monitor the markets?**
  - ***Monitoring the markets for competitiveness is part of the duties of the MMU and the findings are reported on in the Annual and Quarterly Reports. The Quarterly Reports "provide timely updates to the annual report, emphasizing issues of concern to the Market Monitoring Unit." (MST 30.10.2) and provide an existing vehicle to identify any new or emerging issues. The NYISO does not believe that the change in these mitigation measures will result in substantial increases to the costs of the MMU.***

MARKET POWER ANALYSIS SUMMARY

Types of Market Power Analysis Previously Presented

- **The NYISO presented three different Market Power metrics at the Feb 2 MIWG:**
  - ***Herfindahl-Hirschman Index (HHI)***
    - **The HHI is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them.**
    - **It *only* measures the size of firms in relation to the industry and does not indicate that a firm (or firms) will or are able to exercise market power.**
  - ***Pivotal Supplier***
    - **A Pivotal Supplier index is a binary variable indicating when the market could not be solved without the contribution of the largest supplier**
    - **If a producer is pivotal, the other suppliers can not meet demand without the largest supplier.**
  - ***Residual Supplier Index (RSI)***
    - **The RSI is a continuous index that looks at the amount of supply from suppliers other than the largest suppliers**
- **Both a summer month (July 2011) and a shoulder month (October 2011) were analyzed**

Summary of Market Power Analysis Results

- **No Pivotal Suppliers were identified in any hours in either the Spinning or Non-Spinning reserve markets**
- **The RSI indicates that in most hours there is an ample supply available without the largest supplier. There is no indication that there is a cause for concern in the Spinning or Non-Spinning 10 Minute Reserve markets.**
- **HHI**
  - ***Over all hours, the mean and median HHI values are reasonable in both months examined.***
  - ***There is some evidence of concentration for spinning reserves in a small number of low load hours (HHI greater than 2500). Based on the Market Power analysis and the work of the MMU, market power problems what would worsen the convergence in low load periods are not expected.***
- **See the February 2, 2012 MIWG presentation for more information on the Market Power analysis.**

Issues raised at the Feb 2 MIWG

- **Two new issues were raised at the last MIWG**
  - ***There was a request for the NYISO to consider an alternative to the stepped lifting of the mitigation measures. The suggestion was to use a mechanism similar to that used when the $2.52 BID cap was lifted.***
  - ***There was a request for the NYISO to consider having the MMU evaluation period include a shoulder month/the period when the HHIs show some indication of market concentration.***

Issues raised at the Feb 2 MIWG (2)

- **A number of concerns were raised about the proposed alternative to the stepped lifting of the mitigation measures including that the proposed alternative could lead to price corrections and uncertainty for instruments that settled on the DAM prices.**
- **The current proposal is an improvement on the existing mitigation measures.**
- **The current proposal requires an explicit evaluation of the competitiveness of the market and whether moving to the next step is expected to improve the convergence of day-ahead and real-time reserve prices before moving to the next step. This appears to provide more consumer protections than the alternate proposal.**
- **Based on these points and the stakeholder discussion at the Feb 2 MIWG, the NYISO believes that the current proposal balances the benefits of the MMU's State of the Market recommendation with the market power concerns expressed by stakeholders in the working group. The proposal will remain to lift the mitigation measure in steps.**

Issues raised at the Feb 2 MIWG (3)

- **The proposal has been modified to require that the evaluation period for continuing to lift the mitigation measures include at least one "shoulder" month.**
  - ***The MMU's evaluation of the first step must include data from at least one of the following months: March, April, September, October.***

Revised Proposal: Non-Spin

- **Stepped removal of the cap on 10 Minute Non-Spin Reference Levels.**
  - ***Rationale for the steps: The gradual lifting would allow the competitiveness of the market to be evaluated along with the need for the lifting of the cap. The steps were chosen based on the evaluation of one NYC Generator's winter natural gas penalty data.***
- **Proposed steps**
  - ***Existing cap on 10 Minute Non-Spin Reference Levels is $2.52.***
  - ***Step 1: $5 cap on 10 Minute Non-Spin Reference Levels.***
  - ***Step 2: $10 cap on 10 Minute Non-Spin Reference Levels***
  - ***Step 3: no cap on 10 Minute Non-Spin Reference Levels***
- **Step 1 would go into effect after filing.**

Revised Proposal: Non-Spin (2)

- **The MMU will evaluate:**
  - ***The competitiveness of the 10 Minute Non-Spin Markets and,***
  - ***Whether moving to the next step is expected to improve the convergence of day-ahead and real-time reserve prices.***
- **The MMU will issue a recommendation to either:**
  - ***Proceed to the next step raising the cap***
  - ***Keep the cap at its existing step***
  - ***Move the cap to its preceding step.***
- **The MMU will evaluate the market as part of its quarterly reports but may issue a recommendation at any time.**
- **The first evaluation should include data from at least one of the following months: March, April, September, or October.**
- **The evaluation of the need/appropriateness of moving from Step 2 to 3 will include the review of up to one year of data.**

Revised Proposal: NYC DAM Spinning Reserves

- **Stepped removal of the requirement that New York City generating units offer 10-minute spinning reserves at $0/MW in the DAM.**
  - ***Rationale: gradually lifting the requirement should minimize shocks and would allow the competitiveness of the market to be evaluated. The first step is approximately the average Real Time price for Eastern Spinning Reserves in 2011, the second step is twice that level.***
- **Proposed Steps**
  - ***Step 1: New York City generating units must offer 10-minute spinning reserves at or below $5/MW***
  - ***Step 2: New York City generating units must offer 10-minute spinning reserves at or below $10/MW***
  - ***Step 3: No dollar bid cap threshold for New York City generating units in the DAM.***

Revised Proposal: NYC DAM Spinning Reserves (2)

- **The MMU will evaluate:**
  - ***The competitiveness of the 10 Minute Spinning Reserves Markets and,***
  - ***Whether moving to the next step is expected to improve the convergence of day-ahead and real-time reserve prices.***
- **The MMU will issue a recommendation to either:**
  - ***Proceed to the next step raising the cap***
  - ***Keep the cap at its existing step***
  - ***Move the cap to its preceding step.***
- **The MMU will evaluate the market as part of its quarterly reports but may issue a recommendation at any time.**
- **The first evaluation should include data from at least one of the following months: March, April, September, or October.**
- **The evaluation of the need/appropriateness of moving from Step 2 to 3 will include the review of up to one year of data.**

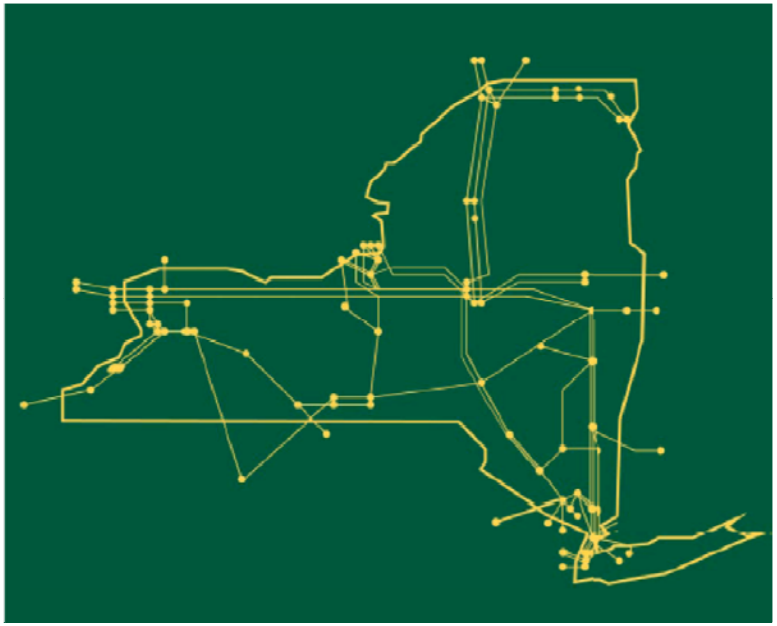
Review of Tariff Language

- **The NYISO would implement these measures similar to the 15 minute scheduling filing (ER11-2547). In other words – through tariff revisions that require subsequent filings with the Commission to activate.**
- **Proposed tariff revisions have been posted with this presentation.**
  - ***Please send any comments on the proposed tariff revisions to NBouchez@nyiso.com by March 5.***

Next Steps

- **Implementation was included in the 2012 BPWG prioritization process for a Q4 deployment.**
- **Proposed schedule:**
  - ***Finalize the proposal today***
  - ***BIC March 14***
  - ***MC March 28***
  - ***BOD May***
  - ***FERC Filing June/July***

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



www.nyiso.com