

SRE/OOM PRESENTATION

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Scheduling & Pricing WG Meeting
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Albany

Overview

- **The application of certain mitigation measures to a small portion of the NYISO market did not conform to applicable Tariff requirements**
- **Relevant Portion of the NYISO Market :**
 - *Primarily RT mitigation of in-city units committed via SRE or OOM*
- **Period:**
 - *June 1, 2002 to the present*
- **Two types of issues:**
 - *Continuation of mitigation that should have been superseded by newer procedures (Period: June 2, 2002—Jan 31, 2005)*
 - *Failure to apply certain mitigation measures (Period: Feb 1, 2005—Present)*
 - *Result was both over and under-mitigation*

NYISO Actions on November 8th

- **Implementation of the Phase I software change**
 - *The appropriate RT mitigation now in effect for in-city SRE/OOM units for the large majority of the time*
- **Filing with FERC requesting tariff waivers for the historic periods**
 - *Comments due on: 11/29/05*
- **Announcement that billing corrections for in-city SRE/OOM units will be made to implement correct mitigation during the pre-SMD2 period**
 - *Corrections will be made through the Final Bill Close-out process starting in December 2005*

Future Software Enhancements

➤ Phase 2

- *Application of appropriate conduct threshold to in-city SRE/OOM units during unconstrained intervals*
- *Application of appropriate conduct threshold during Thunderstorm Alert (TSA) with no in-city constraints*
- *Requirement specifications finalized November 23, 2005*
- *Implementation targeted for 2nd quarter, 2006*

➤ Phase 3

- *Real-time bid production cost guarantee (BPCG) impact testing*
- *Requirement specifications to be completed in January, 2006*
- *Development schedule to be finalized 1st quarter, 2006*

Initial Period: June 2, 2002—April 30, 2004

- June 2, 2002 was the effective date of the NYISO's Comprehensive Mitigation Measures (“CMM”)
- CMM were to have replaced the former “Con Edison MM” in RT for in-city SRE/OOM units
 - *NYISO's CMM were to employ “conduct and impact” tests with a “proxy impact test” for energy*
 - ▶ The “proxy impact test” was a FERC-accepted price impact test that the NYISO employed because its software was not yet sophisticated enough to perform a “true” impact test.
- Instead the Con Edison MM were continued for in-city SRE/OOM units
 - *Con Edison MM replaced bids with either cost-based or bid-based reference levels for all SRE/OOM. No conduct and impact test was performed*
 - *This resulted in over-mitigation*

Initial Period: (Cont'd)

- **In some instances, default bids were applied to the first hour of operation of an appropriately mitigated OOM unit, but not to subsequent hours that should also have been mitigated**
 - *This resulted in under-mitigation during such periods*
- **The proxy impact test for energy was correctly applied to non-SRE/OOM units in RT**
- **The Con Edison MM were incorporated into the NYISO tariff and continued for DAM mitigation**

Next Period: May 1, 2004—Jan 31, 2005

- **NYISO's March 12, 2004 filing noted the delay in the implementation of SMD2 and requested modification of certain mitigation measures in the interim**
 - *NYISO filing proposed to apply the full conduct and impact test methodology to both the DAM and RT markets*
 - *The request to change the LBMP impact test in the RT market was inadvertent and premature*
 - *FERC approved this request with an effective date of May 1, 2004*
- **Since fully automated RT mitigation was not possible without the deployment of SMD2:**
 - *NYISO continued to use the "proxy impact test" for energy in RT for non-SRE/OOM units*
 - *The Con Edison MM were continued for SRE/OOM units*
- **The full conduct and impact methodology was correctly implemented in the DAM on May 1, 2004**

Post SMD2 Period: Feb 1, 2005--Present

- **SMD2 software was deployed on Feb 1, 2005**
- **The proxy impact test was replaced with full impact test in RT**
- **Application of the Con Edison MM to in-city SRE/OOM units was discontinued**
- **SMD2/RTS software did not apply RT conduct and impact mitigation to the energy bids of in-city OOM units**
- **SMD2/RTS software did not apply the correct conduct threshold to in-city SRE/OOM units during unconstrained hours**
- **The RT BPCG impact test software had not been developed**

Correction Methodology

- **Pre-SMD2 Period**
- **To correct payments to in-city SRE/OOM units erroneously subjected to the Con Edison MM**
 - *Both over- and under-mitigation have been corrected*
- **Corrections are possible because the automatic application of reference bids under the Con Edison MM provides the post-mitigation calculation**
- **Correction methodology was developed in conjunction with the NYISO's IMA**
- **Application of methodology and resultant corrections were validated by the IMA**

Correction Methodology (cont'd)

- **The following approach was used to correct the pre-SMD2 mitigation of SRE/OOM units:**
 - *Identify SRE/OOM units that had been mitigated.*
 - *Perform a conduct test using the applicable LPTs.*
 - *For energy, the proxy impact test was used to determine whether the energy impact test is satisfied.*
 - *Unmitigated BPCG was calculated and compared with actual (mitigated) results to perform the BPCG impact test.*
 - *If the conduct test OR all of the impact tests are not satisfied, the unit's unmitigated bids are restored and a new BPCG is calculated.*

Generator Examples

Gas Turbines

<i>Example Generator</i>	<i>Energy Reference</i>			<i>Energy Conduct</i>	<i>Bid Start Up \$</i>	<i>Reference Start Up \$</i>	<i>Start Up Conduct</i>	<i>BPCG Impact Test</i>	<i>Energy Impact Test</i>	<i>Mitigation</i>
	<i>Energy \$</i>	<i>Reference \$</i>	<i>LPT \$</i>							
GT A	250	125	7.5	Y	500	55	Y	Y	N	Y
GT B	250	125	7.5	Y	500	55	Y	N	N	N
GT C	250	125	7.5	Y	500	55	Y	N	Y	Y

Steam Units Scheduled at Mingen

<i>Example Generator</i>	<i>Bid Ref</i>			<i>Mingen Conduct</i>	<i>Bid Start Up \$</i>	<i>Reference Start Up \$</i>	<i>Start Up Conduct</i>	<i>BPCG Impact Test</i>	<i>Energy Impact Test</i>	<i>Mitigation</i>
	<i>Mingen Rate</i>	<i>Ref Mingen Rate</i>	<i>LPT \$</i>							
Steam A	80	70	7.5	Y	70000	20000	Y	Y	N	Y
Steam B	78	70	7.5	Y	61000	20000	Y	N	Y	Y
Steam C	78	70	7.5	Y	61000	20000	Y	N	N	N

Correction Net Impacts

➤ Jun 2, 2002—April 30, 2004 Period

- *Net impact is a \$2.5 million payment to in-city generators*
 - ▶ Not all generators affected are net beneficiaries
- *Specific impacts will be provided to individual MPs as part of the final bill close-out process*
 - ▶ Starting in December 2005 (for Jun-Jul-Aug 2002)

➤ May 1, 2004—Jan 31, 2005 Period

- *The Independent Market Advisor is completing the validation for this period*

Market Prices Should Not Be Restated

- **Tariff does not authorize retroactive price changes because of erroneous mitigation**
 - *Ref: §4.2.2(d) of MMM*
- **Recalculation of RT prices is not feasible**
- **Lack of price certainty would be disruptive to the marketplace**
- **Any potential price impacts would have been minimal—and would be in both directions**

Minimal Price Impacts

- Jun 2002-Jan 2005: Use of Con Ed MM for OOM units could only have affected prices in very limited instances
- May 2004—Jan 2005: Proxy impact test should closely match the full impact test results
- Feb 2005—Nov 8, 2005: MMP has not observed abnormal pricing levels for in-city energy that can be linked to bidding by SRE or OOM units
- Nov 8, 2005-Implementation of Phase II: Potential for under mitigation in unconstrained hours is low
 - *Phase I will likely cover 98-99% of all intervals for SRE/OOM because:*
 - ▶ Only 1.5% of TSA periods were unconstrained from Feb 1—Aug 31, 2005 and TSAs are less frequent in the Winter.
 - ▶ Only the conduct test for in-city SRE/OOM units during unconstrained intervals is at issue.
 - ▶ When the system is unconstrained, the energy impact test is highly unlikely to warrant mitigation.

DAM Constraint Identification Change

- **Change in the identification of constraints in the DAM was made on Feb 1, 2005**
- **Resulted in fewer constraints being counted in the calculation of the LPT thresholds**
- **Noted during September LPT update**
 - *Thresholds frozen at August levels while cause was being investigated*
 - *Lesser effects in early months because of 12-month average used for updates*
- **Potential impact is minor**
 - *6.3% of the hours during August/September would have been affected*

Waiver Request

- **NYISO filed a clarification/waiver request with FERC on November 8, 2005**
- **NYISO has asked FERC to confirm that §4.2.2(d) of the MMM should not require any re-determination of LBMP's in connection with these mitigation errors and asked FERC to waive any other relevant tariff provisions so as not to require any retroactive changes to market clearing prices.**

Specific Waivers Requested

- **Application of the “proxy impact test” to RT in-city LBMP’s from May 1, 2004 to Jan 31, 2005**
- **Any difference in in-city RT LBMPs that may have resulted from the application of the Con Ed MM vs NYISO Market Mitigation Measures from June 1, 2002 to Jan 31, 2005**
- **Any under mitigation of in-city RT LBMPs that may have resulted from not applying conduct and impact tests to OOM energy bids from February 1, 2005 to Nov 8, 2005**
- **Any under mitigation of in-city RT LBMPs that may have resulted from, or will result from, not applying the LPT conduct test to SRE/OOM and TSA units in unconstrained hours until completion of the Phase II software**
- **Any under mitigation of in-city DAM LBMPs that may have resulted from the change in constraint identification related to in-city constraints from Feb 1, 2005 to November 8, 2005**

Start-Up Conduct Threshold

- **In May 2004, the implementation of RTS-related MMM changes resulted in the application of the following conduct tests for start-up bids from in-city units:**
 - *During constrained hours: 50% threshold is applied*
 - *During unconstrained hours: 200% threshold (same as ROS) is applied*
- **Questions for future MP discussion:**
 - *Would a 50% threshold be more appropriate for in-city units under all circumstances??*
 - *Depending upon the result of further discussion, a Tariff clarification may be proposed.*