

Attachment IV

28 Reserved for future use~~Attachment M-1—Operating Protocol For The Implementation Of Commission Opinion No. 476—(DOCKET NO. EL02-23-000 (Phase II))~~

~~28.1.1—This “Operating Protocol” establishes procedures for the planning, operation, control, and scheduling of energy by the New York Independent System Operator, Inc. (NYISO), PJM Interconnection, LLC (PJM), Consolidated Edison Company of New York (ConEd) and Public Service Electric and Gas Company (PSE&G) (collectively, the “parties”), pursuant to contracts dated May 22, 1975 (as amended May 9, 1978) and May 8, 1978 between ConEd and PSE&G. The 1975 contract is referred to herein as the 400 MW contract and the 1978 contract is referred to as the 600 MW contract. The two contracts are referred to collectively as the “600/400 MW contracts.”~~

~~28.1.2—This Operating Protocol shall be used by the NYISO and PJM in preparing to operate, and operating in real-time, to the hourly flow of energy between them pursuant to the 600/400 MW contracts as established by this Operating Protocol.~~

~~28.1.3—During system emergencies, the appropriate emergency procedures of the NYISO and PJM, if necessary, shall take priority over the provisions of this Operating Protocol. The NYISO and PJM dispatchers shall have the authority to implement their respective emergency procedures in whatever order is required to ensure overall system reliability. Without limiting the foregoing, the order of load relief measures and contract reductions when there is an emergency on the PJM system will be:~~

- ~~•—Reduction of the 400 MW contract¹~~
- ~~•—Calling of Emergency Load Response~~
- ~~•—Voltage reduction~~
- ~~•—Reduction of the 600 MW contract²~~
- ~~•—Load shedding~~

~~In addition, if PJM declares an emergency condition that arises from outages on the PSE&G system the NYISO and PJM may agree to deliver up to 400 MW to Goethals for re-delivery to Hudson via the NYISO’s system. Such emergency re-deliveries shall not be considered in the calculation of the Real-Time Market~~

¹—~~If ConEd converts the 400 MW contract to firm transmission service (by purchasing PJM firm transmission service, with a credit for payments ConEd has made to PSE&G for non-firm transmission service), then the 400 MW contract will be treated in the same manner as the 600 MW contract.~~

²—~~The 600 MW contract shall be reduced in the same manner as all other firm transactions in PJM.~~

~~Desired Flow under Appendices 1 and 3 of this Operating Protocol.~~

~~28.1.4 All aspects of this Operating Protocol are subject to the dispute resolution procedures of PJM and the NYISO.~~

~~28.1.5 Because the procedures in this Operating Protocol are new, the parties will review all aspects of this Operating Protocol on a periodic basis, initially monthly and, after a six month period, annually, to determine if modifications are required to effectuate the Commission's Opinion No. 476 in Docket No. EL02-23-000 (Phase II).~~

~~28.1.6 All aspects of this Operating Protocol are subject to, and this Operating Protocol may need to be revised or extinguished in order to accommodate, the outcome of ongoing Commission and Federal court proceedings addressing FERC Docket No. EL02-23, including all sub-dockets thereof. This Operating Protocol implements the directives set forth in the Commission Opinion No. 476 without resolving issues that are still pending before the Commission or that have been appealed to the Federal courts.~~

~~28.1.7 Attached and included as part of this Operating Protocol are the following appendices:~~

~~Appendix 1 Process Flow~~

~~Appendix 2 Transmission Constraints and Outages Associated with the Contracts~~

~~Appendix 3 The Day-Ahead Market and Real-Time Market Desired Flow Calculation~~

~~Appendix 4 Market Monitoring Procedures and Information Sharing Procedures~~

~~Appendix 5 Impairments Impacting Delivery~~

~~Appendix 6 Operation of the PARs~~

~~Appendix 7 Distribution of Flows Associated with Implementation of Day-Ahead and Real-Time Market Desired Flows~~

~~Appendix 8 References~~

~~Appendix 9 Comparison of Contracts~~

~~Appendix 10 Definitions~~

Appendix 1—Process Flow

Two-Day-ahead Actions:

1. ~~PJM shall post constraint forecast information indicating if there is the potential for off-cost operations, two-days prior to the operating day by 9 pm. (<http://oasis.pjm.com/doc/projload.txt>—sample at Figure 1 in Appendix 8) or a comparable website.~~
2. ~~PJM shall analyze transmission and generation outages in accordance with Appendix 2B to determine if the 600/400 MW contract flow is expected to be feasible under a security constrained dispatch in PJM. If any portion of the flow is not expected to be feasible under a security constrained dispatch, PJM will determine what portion of the flow is expected to be feasible and post that information on the PJM OASIS. This advance notification is not binding on any party.~~
3. ~~The NYISO shall post transmission outages on its OASIS, or a comparable website, to identify outages that impact the transfer capability of the ISO Secured Transmission System.³~~

Day Ahead Scheduling:

4. ~~ConEd shall submit a contract election (NY-DAE) in the NYISO's Day Ahead Market for the 600/400 MW contracts prior to 5:00 a.m.~~
5. ~~The NYISO shall establish New York (aggregate ABC interface and aggregate JK interface) Desired Flow (NYDF) schedules for NYISO Day Ahead Market using the NY-DAE identified in (4).~~
6. ~~The NYISO shall establish the distribution of flows for the NYISO DAM in accordance with Appendix 7.~~
7. ~~The NYISO shall run the New York Day Ahead Market with NYDF schedules determined in (5 and 6).~~
8. ~~The NYISO shall post DAM results by the deadline established in its market rules (currently prior to 11:00 a.m.). The NYISO shall provide NYDF schedules and post nodal prices for the JK (Ramapo), BC (Farragut) and A (Goethals) pricing points on the NYISO OASIS, or a comparable website. (<http://www.nyiso.com/oasis/index.html>—sample at Figure 2 in Appendix 8).~~
9. ~~ConEd shall submit a contract election (PJM-DAE) in the PJM Day Ahead Market prior to 12 noon;~~

³ ~~The ISO Secured Transmission System is defined in the NYISO's Transmission and Dispatching Operations Manual.~~

~~See <http://www.nyiso.com/services/documents/manuals/pdf/oper_manuals/trans_disp.pdf>.~~

- a) ~~ConEd shall submit a contract election for the 600-MW contract.~~
 - b) ~~ConEd shall submit a contract election for the 400-MW contract. For the 400-MW contract, ConEd shall specify whether it is willing to pay congestion (WPC) under the following options:⁴~~
 - i) ~~ConEd is not willing to pay congestion for any portion of the 400-MW~~
 - ii) ~~ConEd willing to pay congestion up to \$25~~
 - iii) ~~ConEd willing to pay congestion with no redispatch cost limit~~
10. ~~PJM shall establish the PJM (aggregate ABC interface and aggregate JK interface) Desired Flow (PJ MDF) schedules for PJM Day Ahead Market using PJM-DAE identified in (9).~~
11. ~~PJM shall establish the distribution of flows for the PJM DAM in accordance with Appendix 7.~~
12. ~~PJM shall run the PJM Day Ahead Market with the PJ MDF schedules determined in (11). The amount of the PJM-DAE which clears will become the PJM Day Ahead Schedule amount (PJM-DAS). The PJM-DAS may be reduced from the PJM-DAE based on ConEd's WPC specification or infeasibility under the PJM security-constrained dispatch.~~
13. ~~PJM Day Ahead results shall be posted by the deadline established in PJM's market rules (currently at 4:00 p.m.), and shall identify the PJM-DAS. The PJM posting will include nodal prices for the JK (Waldwick), BC (Hudson) and A (Linden) pricing points, or a comparable website. (<https://esuite.pjm.com/mui/index.htm> sample at Figure 3 in Appendix 8.)~~

~~If there is congestion in the PJM Day Ahead Market:~~

14. ~~If there is congestion in PJM that affects the portion of the wheel that is associated with the 600-MW contract, PJM shall re-dispatch and PSE&G shall pay for re-dispatch. PSE&G shall be provided Fixed Transmission Rights (FTRs) in an amount equal to the PJM-DAS.~~
15. ~~If there is congestion in PJM that affects the portion of the wheel that is associated with the 400-MW contract, PJM shall re-dispatch for the portion of the 400-MW contract for which ConEd specified it was willing to pay congestion, and ConEd shall pay for the re-dispatch.⁵ ConEd will be credited back for any congestion charges paid in the hour to the extent of any excess congestion revenues collected by PJM that remain after congestion credits are paid to all other~~

⁴ ~~ConEd may submit a series of bids totaling up to 400-MW that employ several or all of the pricing options described in (9).~~

⁵ ~~Settlements will be based on the differences in prices between the JK and ABC pricing points.~~

~~firm transmission customers. Such credits to ConEd shall not exceed congestion payments owed or made by it.⁶~~

~~In-Day Operations:~~

~~16. Aggregate ABC and aggregate JK Real-Time Market Desired Flow (RTMDF) calculations shall be made in real time, continuous throughout the operating day, by the NYISO and PJM.~~

~~17. The desired distribution of flows on the A, B, C, J, and K lines for the in-day markets shall be established by PJM and the NYISO in accordance with Appendix 7.~~

~~18. If neither PJM nor the NYISO are off cost, or if both are off cost, aggregate actual ABC interface flows shall be within +/- 100 MW of the aggregate RTMDF for the ABC interface and aggregate actual JK interface flows shall be within +/- 100 MW of the aggregate RTMDF for the JK interface.⁷~~

~~19. ConEd shall have the option to request a modification in the Real Time Market from its Day Ahead Market election (NY_DAE and PJM_DAE) for each hour.⁸~~

~~a) ConEd must request a Real Time election (RTE) modification through NYISO at least 75 minutes prior to the dispatch hour (or a shorter notice period that is agreed upon by the NYISO and PJM.).~~

~~b) The NYISO shall notify PJM of the RTE.~~

~~c) ConEd shall settle with PJM for balancing market costs for deviations between PJM-DAS and RTE. Con-Ed shall settle with the NYISO for balancing market costs for deviations between NY_DAE and RTE.~~

⁶ ~~_____ If ConEd converts the 400 MW contract to firm transmission service (by purchasing PJM firm transmission service, with a credit for payments ConEd has made to PSE&G for non-firm transmission service), then ConEd congestion credits instead will be determined in the same manner as the credits provided to all other PJM firm transmission customers.~~

⁷ ~~_____ PJM and NYISO will operate in accordance with the bandwidth requirements of Step 18 to the extent practicable (utilizing PARs, curtailment of third party transactions, and re-dispatch, consistent with the other provisions of the Operating Protocol) recognizing relevant operating conditions that are beyond the control of PJM and NYISO or that are not anticipated by this Operating Protocol. Deviations will be accounted for with in-kind payback using the Auto-Correction Factor described in Appendix 3 to this Operating Protocol. The Auto-Correction Factor shall be the sole and exclusive remedy available to any person or entity for any under- or over-delivery of power pursuant to the 600/400 MW transactions, unless such under- or over-delivery is the result of gross negligence or intentional misconduct.~~

⁸ ~~_____ At all times, however, the ConEd election under the 600/400 MW contracts must be the same in PJM and NYISO in In-Day Operations. Absent an in-day change in the election by ConEd, the ConEd Real-Time election shall be the PJM-DAS.~~

Note—Actions identified in steps 18 and 19 that are taken will be logged, and PSE&G and ConEd will be notified of PAR moves related to these steps.

~~If there is In-Day congestion:~~

20. ~~If PJM is off-cost or is expected to go off-cost for two or more consecutive hours in maintaining the RTMDF, and the NYISO is not off-cost, then PJM and NYISO shall consult with each other and shall redirect up to 300 MW (in a mutually agreed upon amount and in mutually agreed upon increments) from the PJM system onto the NYISO system; provided, however, that PJM and the NYISO verify that allowing actual aggregate interface flows to deviate from the RTMDF will not result in violation of applicable PJM or NYISO reliability criteria. The process of modifying actual interface flows in incremental adjustments will continue until~~

a) ~~PJM is no longer off-cost, or~~

b) ~~The NYISO is about to go off-cost (i.e., the NYISO expects that it will have to redispatch in response to transmission constraints in order to maintain the RTMDF), or~~

c) ~~300 MW have been redirected.~~

21. ~~If the NYISO is off-cost or expected to go off-cost for two or more consecutive hours in maintaining the RTMDF, and PJM is not off-cost, then PJM and the NYISO shall consult with each other and shall redirect up to 300 MW (in a mutually agreed upon amount and in mutually agreed upon increments) from the NYISO system onto the PJM system; provided, however, that PJM and NYISO verify that allowing actual aggregate interface flows to deviate from the RTMDF will not result in violation of applicable PJM or NYISO reliability criteria. The process of modifying actual interface flows in incremental adjustments will continue until~~

a) ~~The NYISO is no longer off-cost, or~~

b) ~~PJM is about to go off-cost (i.e., PJM expects that it will have to redispatch in response to transmission constraints in order to maintain the RTMDF), or~~

c) ~~300 MW have been redirected.~~

~~Appendix 2—Transmission Constraints and Outages Associated with the Contracts~~

~~A. Constraints~~

The following transmission constraints are identified as potential constraints that may result in off-cost operation due to transfers associated with the 600/400 MW contracts. The constraints included in this listing should be considered representative of the kinds of constraints that may exist within PJM or the NYISO. If such transmission constraints are limiting, then the affected ISO/RTO may be subject to

~~off-cost operation due to transfers associated with the 600/400 MW contracts. Other constraints, not listed here, may arise that could cause either ISO/RTO to operate off-cost. This list may be revised by NYISO/PJM to reflect system changes or security monitoring technique changes in their respective Control Areas.~~

~~NYISO~~

- ~~● UPNY-Con Ed Interface~~
- ~~● Dunwoodie-South Interface~~
- ~~● Dunwoodie-Rainey 345kV~~
- ~~● Rainey-Farragut 345kV~~
- ~~● Sprainbrook-W49th Street 345kV~~
- ~~● W49th Street-Farragut 345kV~~
- ~~● Ramapo-Ladentown 345kV~~
- ~~● Ramapo-Buchanan 345kV~~
- ~~● Buchanan-Millwood 345kV~~
- ~~● Buchanan-Eastview 345kV~~
- ~~● Millwood-Eastview 345kV~~
- ~~● Eastview-Sprainbrook 345kV~~
- ~~● East Fishkill-Pleasantville 345kV~~
- ~~● Pleasantville-Dunwoodie 345kV~~
- ~~● Pleasant Valley-East Fishkill 345kV~~
- ~~● Linden-Goethals 230 kV A-2253 Par~~
- ~~● Farragut-Hudson 345kV B-3402 Par~~
- ~~● Farragut-Hudson 345 kV C-3403 Par~~
- ~~● Waldwick-South Mahwah 345 kV K-3411~~

● ~~Waldwick-South Mahwah 345 kV J-3410~~

PJM

● ~~ATHENIA 230 KV ATHENIA 220-2 XFORMER~~

● ~~ATHENIA 230 KV ATHENIA 220-1 XFORMER~~

● ~~BAYWAY 138 KV BAYWAY Z-1352~~

● ~~BRANCHBU 500 KV BRANCHBU 500-1 XFORMER~~

● ~~BRANCHBU 500 KV BRANCHBU 500-2 XFORMER~~

● ~~DEANS 500 KV DEANS 500-1 XFORMER~~

● ~~DEANS 500 KV DEANS 500-2 XFORMER~~

● ~~DEANS 500 KV DEANS 500-3 XFORMER~~

● ~~HUDSON 230 KV HUDSON HUDSON2 XFORMER~~

● ~~INTERFACE EAST~~

● ~~ATHENIA-ERUTHERF S-1345 138 KV~~

● ~~BAYONNE-MARION L-1338 138 KV~~

● ~~BAYONNE-PVSC I-1335 138 KV~~

● ~~BERGEN-ERUTHERF R-1344 138 KV~~

● ~~BERGEN-HOMESTEAD F-1306 138 KV~~

● ~~BRUNSWIC-EDISON H-1360 138 KV~~

● ~~EDISON-MEADOWRD Q-1317 138 KV~~

● ~~EDISON-MEADOWRD R-1318 138 KV~~

● ~~LINDEN-NORTHAV T-1346 138 KV~~

● ~~PLAINSBU-TRENTON D-1330 138 KV~~

● ~~ADAMS-BENNETTS X-2224-3 230 KV~~

● ~~ATHENIA-CLIF PS K-2263 230 KV~~

- ~~ATHENIA-SADDLEBR Q-2217 230 KV~~
- ~~BERGEN-HOBOKEN R-2270 230 KV~~
- ~~BERGEN-LEONIA T-2272 230 KV~~
- ~~BRANCHBU-FLAGTOWN C-2203 230 KV~~
- ~~BRANCHBU-READINGT M-2265 230 KV~~
- ~~CEDARGRO-CLIF PS K-2263-3 230 KV~~
- ~~CEDARGRO-ROSELAND B-2228 230 KV~~
- ~~CEDARGRO-ROSELAND F-2206 230 KV~~
- ~~GOETHALS-LINDEN A-2253 230 KV~~
- ~~GREYSTON-PORTLAND S1007 230 KV~~
- ~~HAWTHORN-HINCHMAN N-2266 230 KV~~
- ~~HILLSDAL-NEWMILFR V-2222 230 KV~~
- ~~HILLSDAL-NEWMILFR V-2222 230 KV~~
- ~~HOBOKEN-NEWPS R-2270 230 KV~~
- ~~LEONIA-NEWMILFR T-2272 230 KV~~
- ~~ROSELAND-WHIPpany A-941 230 K~~
- ~~BRANCHBU-RAMAPO 5018 500 KV~~
- ~~GOETHALS-LINDEN 230 KV A-2253 PAR or Circuit~~
- ~~HUDSON-FARRAGUT 345 KV B-3402 PAR or Circuit~~
- ~~HUDSON-FARRAGUT 345 KV C-3403 PAR or Circuit~~
- ~~WALDWICK-FAIRLAWN 230 KV O-2267 PAR or Circuit~~
- ~~WALDWICK-HAWTHORNE 230 KV E-2257 PAR or Circuit~~
- ~~WALDWICK-HILLSDALE 230 KV F-2258 PAR or Circuit~~
- ~~WALDWICK-SOUTH MAHWAH 345 KV K-3411~~
- ~~WALDWICK-SOUTH MAHWAH 345 KV J-3410~~

~~B. Outages~~

~~The NYISO and PJM will identify critical outages that may impact redispatch costs incurred for the delivery of energy, under the 600/400 MW contracts. Identified outages may have the following consequences:~~

~~The outage of any A, B, C, J, or K facility will result in the NY-DAE, PJM-DAE, and/or RTE (as appropriate) being limited to a value no greater than the remaining thermal capability of the most limiting of the ABC interface or the JK interface. The remaining thermal capability of either the ABC interface or the JK interface may be limited by other facilities directly in series with the A, B, C, J, or K lines.~~

- ~~1. 600 MW Contract – It is not anticipated that one primary facility outage will preclude PJM from providing redispatch for the 600 MW contract. However, combinations of two or more outages of the facilities, listed below, could preclude PJM from accommodating all or part of the 600 MW delivery, even with redispatch. In this case, PJM will provide notification to NYISO.~~
- ~~2. 400 MW Contract – The outage of one or more of the facilities in the following list, may impact redispatch costs regarding, or the delivery of all or portions of the 400 MW contract:~~

~~Branchburg-Ramapo 500 kV 5018~~

~~South Mahwah-Waldwick J 345 kV J-3410/69~~

~~South Mahwah-Waldwick K 345 kV K-3411/70~~

~~Hudson-Farragut B-3402~~

~~Hudson-Farragut C-3403~~

~~Linden-Goethals 230 kV A-2253~~

~~Athenia-NJT Meadows-Essex-Hudson 230 kV C-2281-P-2216-A-2227~~

~~New Milford-Leonia-Bergen-Penhorn-Hudson 230 kV T-2272-X-2250~~

~~Waldwick-Hillsdale-New Milford 230 kV F-2258-V-2222~~

~~Waldwick-Fairlawn 230 kV O-2267~~

~~Waldwick-Hawthorne-Hinchman's Ave Cedar Grove 230 kV E-2257—N-2266—
M-2239—L-2238~~

~~Roseland Cedar Grove Clifton-Athenia B 230 kV B-2228~~

~~Roseland Cedar Grove Clifton-Athenia K 230 kV F-2206—K-2263~~

~~Linden-Bayway 230 kV H-2234~~

~~Linden-Minue Street R 230 kV R-2218~~

~~Linden-Minue Street G 230 kV G-2207~~

~~Roseland-Whippany A-941~~

~~Branchburg-Readington-Roseland M-2265—U-2221~~

~~Roseland-Montville-Newton-Kittatinny E-2203—N-2214—T-2298~~

~~Deans—Aldene W-2249~~

~~In addition, the forced or maintenance outage of one or more of the following generators may impact redispatch costs regarding, or the delivery of all or portions of the 400-MW contract provided that any such maintenance outage is approved by PJM. Otherwise, each of these generators will be considered to be available to support the 600/400-MW contracts under a security constrained dispatch in PJM's Day-Ahead and Real-Time Markets.~~

~~Hudson #1~~

~~Hudson #2~~

~~Bergen #1~~

~~Bergen #2~~

~~Linden #1~~

~~Linden #5, 6, 7, & 8~~

~~PJM will provide notification⁹ of all outages by posting these outages (transmission only) on the PJM OASIS (<http://oasis.pjm.com/inform.html>). At a minimum, PJM will identify critical scheduled outages by the first day of the month prior to the month of the start of the outage.~~

~~NYISO will provide notification of all outages by posting these outages (transmission only) on the NYISO OASIS (<http://www.nyiso.com/oasis/index.html>). NYISO will identify critical scheduled outages by the first day of the month prior to the month of the start of the outage.~~

~~PJM and the NYISO will review and revise, as necessary, the list of primary and secondary facilities contained in this Appendix 2 on an annual basis.~~

Appendix 3—The Day Ahead Market and Real Time Market Desired Flow Calculation

~~The following shall be the formula for calculating Day Ahead Market (DAM) and Real Time Market (RTM) desired flows:~~

$$\text{NYDF}_{ABC} = [\text{NY DAE}] + [A] * [\text{PJM NYISO DAM Schedule}] + [B] * [\text{OH NYISO DAM Schedule}] + [C] * [\text{West PJM DAM Schedule}] + [D] * [\text{DAM Lake Erie Circulation}]$$

$$\text{NYDF}_{JK} = [\text{NY DAE}] - [A] * [\text{PJM NYISO DAM Schedule}] - [B] * [\text{OH NYISO DAM Schedule}] - [C] * [\text{West PJM DAM Schedule}] - [D] * [\text{DAM Lake Erie Circulation}]$$

$$\text{PJMDf}_{ABC} = [\text{PJM DAE}] + [A] * [\text{PJM NYISO DAM Schedule}] + [B] * [\text{OH NYISO DAM Schedule}] + [C] * [\text{West PJM DAM Schedule}] + [D] * [\text{DAM Lake Erie Circulation}]$$

$$\text{PJMDf}_{JK} = [\text{PJM DAE}] - [A] * [\text{PJM NYISO DAM Schedule}] - [B] * [\text{OH NYISO DAM Schedule}] - [C] * [\text{West PJM DAM Schedule}] - [D] * [\text{DAM Lake Erie Circulation}]$$

$$\begin{aligned} \text{RTMDfABC} = & [\text{RTE}] + [A] * [\text{PJM NYISO RTM Schedule}] + [B] * [\text{OH NYISO RTM Schedule}] \\ & + [C] * [\text{West PJM RTM Schedule}] + [D] * [\text{RTM Lake Erie Circulation}] + \text{Auto Correction Factor} \end{aligned}$$

$$\text{RTMDfJK} = [\text{RTE}] - [A] * [\text{PJM NYISO RTM Schedule}] - [B] * [\text{OH NYISO RTM Schedule}]$$

⁹ ~~PJM can also provide the option of automated email outage notification through the PJM eDart tool.~~

$$\text{---}[C] * [\text{West PJM RTM Schedule}] \text{---} [D] * [\text{RTM Lake Erie Circulation}] + \text{Auto-Correction Factor}$$

- ~~The DAM and RTM desired flows will be limited to the facility rating.~~
- ~~The Auto-Correction Factor component of the desired flow is the on-peak and off-peak aggregations of MW deviation in a calendar day to be included in a subsequent day's on-peak or off-peak period as applicable and agreed upon by PJM and NYISO. The Auto-Correction Factor "pays-back" MW in kind during a subsequent day on-peak or off-peak period as agreed upon by NYISO and PJM. On-peak aggregation shall be paid back in a subsequent day on-peak period. Off-peak aggregation shall be paid back in a subsequent day off-peak period.~~
- ~~The Auto-Correction Factor shall not apply to under deliveries over the A, B, and C Feeders that occur during the first hour following a thunderstorm alert.~~
- ~~The Auto-Correction Factor shall be the sole and exclusive remedy available to any person or entity for any under or over delivery of power pursuant to the 600/400 MW transactions, unless such under or over delivery is the result of gross negligence or intentional misconduct.~~

A	13 %	Adjustment for NYISO-PJM Schedule
B	0 %	Adjustment for OH-NYISO Schedule
C	0 %	Adjustment for West-PJM Schedules
D	0 %	Adjustment for Lake Erie Circulation

~~Other impacts will be part of the real time bandwidth operation — not the desired flow calculation. These impacts will be reviewed by PJM and the NYISO on an annual basis.~~

~~The above distribution factors (A, B, C, D) will be used in the calculation unless otherwise agreed by PJM and the NYISO based upon operating analysis conducted in response to major topology changes or outages referenced in Appendix 2. Such modifications will be posted by PJM and the NYISO.~~

~~Appendix 4—Market Monitoring and Information Sharing Procedures~~

~~A. General Principles~~

~~The NYISO and PJM and their Market Monitoring Units shall, to the extent compatible with their respective tariffs and with any other market monitoring procedures that they have filed with the Commission:~~

- ~~1. Conduct such investigations as may be necessary to ensure that gaming, abuse of market power, or similar activities do not take place with regard to power transfers under the 600/400 MW contracts;~~
- ~~2. Conduct investigations that go into the region of the other ISO jointly with the NYISO, PJM and both Market Monitoring Units;~~
- ~~3. Inform each other of any such investigations; and~~
- ~~4. Share information related to such investigations, as necessary to conduct joint investigations, subject to the requirements of Section C, below.~~

~~The responsibilities of the Market Monitoring Unit that are addressed in Section A of Appendix 4 to the Operating Protocol for the Implementation of Commission Opinion No. 476 (Appendix M-1 to the ISO Services Tariff) are also addressed in Section 30.4.6.5.2 of Attachment O.~~

~~B. Information Regarding Transactions Associated with the 600/400 MW Contracts~~

~~1. General Information~~

- ~~a. The NYISO and PJM Market Monitoring Units shall have made available to them by their respective ISOs the Day Ahead and Real-Time elections made by ConEd in both Control Areas under this protocol.~~
- ~~b. The NYISO and PJM Market Monitoring Units shall have available to them such data on transmission conditions in both the Day Ahead and Real-Time markets in both PJM and NYISO, as is publicly available and posted on the ISOs' internet sites.~~

~~2. Information Available upon Request~~

- ~~a. On a case-by-case basis, as documented in writing as being necessary to an investigation or to determine if an investigation is necessary or appropriate, the~~

~~NYISO and PJM shall make available to each other, and to each of their Market Monitoring Units, generator outages and deratings in both the Day Ahead and Real-Time markets.~~

- ~~b. On a case-by-case basis, as documented in writing as being necessary to an investigation or to determine if an investigation is necessary or appropriate, the NYISO and PJM shall make available to each other, and to each of the Market Monitoring Units, the specific FTRs or TCCs in the PSE&G zone or the ConEd Transmission District, respectively, held by ConEd, PSE&G, and any of their affiliates.~~

~~3. Information Needed To Conduct a Joint Investigation~~

~~The sharing of information that is necessary or appropriate to facilitate a joint investigation by the PJM and NYISO, and/or by their Market Monitoring Units shall be governed by the terms and conditions of the ISOs' respective tariffs, operating agreements, and other procedures that they have filed with the Commission, and shall be subject to the limitations in Section C, below.~~

~~C. Protection of Confidential Information~~

- ~~1. This Appendix does not present an independent basis for, and shall not be construed to authorize or require the disclosure of, confidential, proprietary or privileged information that the NYISO or PJM are otherwise prohibited from disclosing under applicable laws, regulations, tariffs, or other market monitoring procedures that they have filed with the Commission.~~
- ~~2. The NYISO's or its Market Monitoring Unit's disclosure of "Protected Information" to PJM, or to its Market Monitoring Unit are subject to the provisions of Section 30.6.6 of Attachment O. PJM's, or its Market Monitoring Unit's disclosure of "confidential information" to the NYISO, or to its Market Monitoring Unit, is subject to the provisions of Section 18.17.5 of the PJM Operating Agreement.~~
- ~~3. If the NYISO or PJM, or either of their Market Monitoring Units receives a demand for the disclosure of confidential information that it received under this Appendix 4, it shall notify the other so that the other will have an opportunity to take any legal steps required to protect the information.~~

Appendix 5—Impairments Impacting Delivery

The procedures for identifying and remedying impairments shall be handled on a planning basis. The impairment process is not directly applicable to DAM or RT operations under the 600/400 MW contracts.

EXISTING IMPAIRMENTS

- ~~PJM and the NYISO are not aware of any existing impairments that would preclude provision of transmission service under the 600 MW contract. There should not be any impairment on the 400 MW contract based on available redispatch options.~~

NOTIFICATION PROCEDURES

- ~~ConEd and PSE&G shall notify the NYISO and PJM respectively under their existing ISO/RTO interconnection procedures when interconnecting new generation facilities to their transmission systems.~~

PROCEDURES FOR DETERMINATION OF FUTURE IMPAIRMENTS

- ~~The procedures to be used by the NYISO and PJM for the determination of future impairments shall be in accordance with:~~
 - ~~The PJM Regional Transmission Expansion Planning Process;~~
 - ~~The NYISO Comprehensive Reliability Planning Process; and~~
 - ~~The Northeast ISO/RTO Planning Coordination Protocol executed by PJM, the NYISO and ISO New England Inc.~~
- ~~The Northeast ISO/RTO Planning Coordination Protocol contains provisions for the coordination of interconnection requests received by one ISO/RTO that have the potential to cause impacts on an adjacent ISO/RTO to include the handling of firm transmission service.~~
- ~~The Northeast ISO/RTO Planning Coordination Protocol has provisions for notification, development of screening procedures, and coordination of the study process between the ISO/RTOs.~~
- ~~The Northeast ISO/RTO Planning Coordination Protocol also provides that all analyses performed to evaluate cross-border impacts on the system facilities of one of the ISOs/RTOs will be based on the criteria, guidelines, procedures or standards applicable to those facilities.~~

- ~~Future planning studies by the ISOs/RTOs shall include 1,000 MW⁴⁰ of firm delivery from the NYISO at Waldwick and 1,000 MW of re-delivery from PJM at the Hudson and Linden interface independent of the amount of off-cost operation that is required to meet reliability criteria. For PJM load deliverability planning studies, which simulate a capacity emergency situation, the system shall be planned to include 1,000 MW of firm delivery from the NYISO at Waldwick and 600 MW of re-delivery from PJM at the Hudson and Linden interface.~~

~~Nothing in this Operating Protocol shall modify any planning-related obligations of ConEd or PSE&G set forth in the 600/400 MW contracts.~~

Appendix 6 — Operation of the PARs

General

~~This procedure outlines the steps taken to coordinate tap changes on the PARs in order to control power flow on selected transmission lines between New York and New Jersey. The facilities are used to provide transmission service and to satisfy the 600/400 MW contracts, other third party uses, and to provide emergency assistance as required. These tie lines are part of the interconnection between the PJM and NYISO. These PAR operations will be coordinated with the operation of other PAR facilities including the 5018 PARs. The 5018 PAR will be operated taking into account this Operating Protocol. The ties are controlled by PARs at the following locations:~~

- ~~Waldwick (F-2258, E-2257, O-2267)~~
- ~~Goethals (A-2253)~~
- ~~Farragut (C-3403, B-3402)~~

~~This appendix addresses the operation of the PARs at Waldwick, Goethals, and Farragut as these primarily impact the delivery associated with the 600/400 MW contracts between PSE&G and ConEd.~~

⁴⁰ ~~1,000 MW will also be included in the FTR simultaneous feasibility analysis.~~

PJM and the NYISO will work together to maintain reliable system operation, and to implement the RTMDF within the bandwidths established by this Operating Protocol while endeavoring to minimize the tap changes necessary to implement these contracts.

RTMDF calculations will be made for the 'ABC Interface', and the 'JK Interface'. Desired line flow calculations will be made for A, B, and C lines (initial assumption is balanced each $\frac{1}{3}$ of the ABC Interface), and for the J and K lines (initial assumption is balanced each $\frac{1}{2}$ of the JK Interface).

Normal Operations

The desired flow calculation process is a coordinated effort between PJM and the NYISO. PJM and the NYISO have the responsibility to direct the operation of the PARs to ensure compliance with the requirements of the Operating Protocol. However, one of the objectives of this procedure is to minimize the movement of PARs while implementing the requirements of the 600/400 MW contracts. PJM and the NYISO will employ a ± 100 MW bandwidth at each of the ABC and JK Interfaces to ensure that actual flows are maintained at acceptable levels.

PJM and the NYISO have operational control of the PARs and direct the operation of the PARs, while PSE&G and ConEd have physical control of the PARs. The ConEd dispatcher sets the PAR taps at Goethals and Farragut at the direction of the NYISO. The PSE&G dispatchers set the PAR taps at Waldwick at the direction of PJM.

Tap movements shall be limited to 400 per month based on 20 operations (per PAR) in a 24-hour period. If, in attempting to maintain the desired bandwidth, tap movements exceed these limits, then the bandwidth shall be increased in 50 MW increments until the tap movements no longer exceed 20 per day, unless PJM and the NYISO agree otherwise.

Emergency Operations

If an emergency condition exists in either the NYISO or PJM, the NYISO dispatcher or PJM dispatcher may request that the ties between New York and New Jersey be adjusted to assist directing power flows in the respective areas to alleviate the emergency situation. The taps on the PARs at Waldwick, Goethals, and Farragut may be moved either in tandem or individually as needed to mitigate the emergency condition. Responding to emergency conditions in either the NYISO or PJM overrides any requirements of this Operating Protocol and the appendices hereto.

PAR Movement Scenarios

Case 1 — Aggregate actual flow on the JK interface (at Waldwick) or the ABC interface (at Farragut and Goethals) is higher or lower than RTMDF, but within the bandwidth.

No action taken. Flows will continue to be monitored, but action will only be taken if the flows get above or below the bandwidth.

Case 2 — Aggregate actual flow on the JK interface (at Waldwick) or the ABC interface (at Farragut and Goethals) is higher or lower than the RTMDF, and outside the bandwidth.

PJM and the NYISO will coordinate the following procedures:

- PJM shall determine the Waldwick PAR tap change(s) that change the aggregate actual flow to be within the bandwidth, considering the impact that the proposed tap changes have on the NYISO. If the PJM analysis indicates that the tap changes can be made without causing an actual or contingency constraint in the NYISO that would result in NYISO off-cost operation, PJM will inform the NYISO of the proposed PAR moves, obtain the NYISO's concurrence, and direct PSE&G to implement the PAR tap changes.
- The NYISO shall determine the Farragut and Goethals PAR tap change(s) that change the aggregate actual flow to be within the bandwidth, considering the impact that the proposed tap changes have on PJM. If the NYISO analysis indicates that the tap changes can be made without an actual or contingency constraint in PJM that would result in PJM off-cost operation, the NYISO will inform PJM of the proposed PAR moves, obtain PJM concurrence, and direct ConEd to implement the PAR tap changes.
- If PJM is off-cost or expected to go off-cost in maintaining the RTMDF and the NYISO is not off-cost, then PJM/NYISO shall agree to allow actual aggregate interface flows to deviate from the RTMDF in order to re-direct up to 300 MW from the PJM system onto

~~the NYISO system. The process of modifying actual interface flows in incremental adjustments will continue until 1) PJM is no longer off cost; or 2) the NYISO is about to go off cost (i.e., the NYISO expects that it will have to redispatch in response to transmission constraints in order to maintain the RTMDF).~~

- ~~● If the NYISO is off cost or expected to go off cost and PJM is not off cost in maintaining the RTMDF, then PJM/NYISO shall agree to allow actual aggregate interface flows to deviate from the RTMDF in order to re-direct up to 300 MW from the NYISO system onto the PJM system. The process of modifying actual interface flows in incremental adjustments will continue until 1) NYISO is no longer off cost; or 2) PJM is about to go off cost (i.e., PJM expects that it will have to redispatch in response to transmission constraints in order to maintain the RTMDF).~~
- ~~● If the ABC actual interface flows cannot be maintained within the interface desired flow range due to the following system conditions: (1) insufficient PAR angle capability resulting from any of the A, B, C, J, or K PARs being at their maximum tap setting, and (2) PJM's inability to redispatch in response to transmission constraints to support ABC deliveries to New York, then PJM and the NYISO shall consider using other available facilities, including the other PARs, to create flow capability to permit the necessary tap changes to bring the actual flow within the tolerances of the desired flow calculation, provided that this can be done without creating additional redispatch costs in either the NYISO or PJM. If after such actions have been taken, including the use of other facilities, and ABC/JK actual interface flows still cannot be maintained within the interface desired flow range, then an adjustment to the desired flow calculation (a desired flow offset, with the amount agreed to by PJM and the NYISO) shall be made such that both the ABC and JK actual interface flows are within +/- 100 MW of the ABC and JK interface RTMDF respectively.~~
- ~~● If the JK actual interface flows cannot be maintained within the interface desired flow range due to the following system conditions: (1) insufficient PAR angle capability resulting from any of the A, B, C, J, or K PARs being at their maximum tap setting, and (2) the NYISO's inability to re-dispatch in response to transmission constraints to support JK deliveries to PJM then PJM and NYISO shall consider using other available facilities, including the other PARs to create flow capability to permit the necessary tap changes to bring the actual flow within the tolerances of the desired flow calculation, provided that this can be done without creating additional redispatch costs in either the NYISO or PJM. If after such actions have been taken, including the use of other facilities, and ABC/JK actual interface flows still cannot be maintained within the interface desired flow range, then an adjustment to the desired flow calculation (a desired flow offset, with the amount agreed to by PJM and NYISO) shall be made such that both the ABC and JK actual interface flows are within +/- 100 MW of the ABC and JK interface RTMDF respectively.~~

~~**Case 3**—If PJM or NYISO analysis reveals that future system conditions (within the next several hours) may reasonably be expected to require that a PAR will need to change by more than 3 taps in order to remain within the bandwidth, then PJM and NYISO shall consider pre-positioning the system to address these future conditions. Both PJM and the NYISO must agree to any decision to re-position the taps to address expected future conditions.~~

~~PJM and the NYISO will coordinate with each other and may mutually agree to position the respective PARs on each system to be within two tap changes in anticipation of changes to RTMDF for the next several hours to ensure that the PARs are positioned such that they are able to meet the anticipated RTMDF.~~

~~**Appendix 7—Distribution of Flows Associated with Implementation of Day Ahead and Real Time Market Desired Flows**~~

~~In general, the ability to maintain the ABC / JK actual interface flows at their corresponding ABC/JK Day Ahead and Real Time Market Desired Flow (RTMDF) values should not be impacted by individual line flow constraints. The Operating Protocol will ordinarily be considered satisfied if the ABC/JK actual interface flows are each equal to the desired flow values plus or minus the 100 MW bandwidth.~~

~~The initial estimate of individual line flow distribution for the ABC / JK interfaces shall be based on an equal flow assumption among the lines comprising the interface. Under outage conditions of the A, B, C, J, or K lines, the initial estimate of individual line flow distribution shall be based on an assumption that flows should be equalized among those remaining lines comprising the interface. Further, the ISOs shall adjust (from RTMDF) the flow distribution for ABC (move flow from the A line to the B and C lines) upon the NYISO's request, provided that the adjustment shall not exceed 125 MW if PJM is off cost or is expected to be off cost. Con Ed shall not be responsible for balancing charges resulting from changes in the individual line flow distribution between the PJM Day Ahead and Real Time Markets.~~

~~For example:~~

~~If the ABC interface RTMDF is 900 MW, then the initial estimate of line flow on A is $1/3 * 900 = 300$ MW, B is $1/3 * 900 = 300$ MW, and C is $1/3 * 900 = 300$ MW.~~

~~If the J, K interface RTMDF is 900 MW, then the initial estimate of line flow on J is $1/2 * 900 = 450$ MW, K is $1/2 * 900 = 450$ MW.~~

~~However, if the ABC/JK actual interface flows cannot be maintained within the 100 MW bandwidth of desired flows due to the following system conditions: 1) insufficient PAR angle capability and an inability to redispatch in response to transmission constraints in PJM; or 2) upon implementing a NYISO request to adjust the distribution of flow on the A line (move flow from the A line to the B and C lines) in excess of 125 MW as described above, then the actual ABC and/or JK interface flow shall be adjusted to be as close as feasible to the interface desired flow values for each of the JK and ABC interfaces.~~

~~For example:~~

~~Assume the ABC interface RTMDF = 900 MW, then the initial estimate of line flow on A is $1/3 * 900 = 300$ MW, B is $1/3 * 900 = 300$ MW, and C is $1/3 * 900 = 300$ MW.~~

~~Further assume that the NYISO requests that the distribution of flow over the A line be limited to 100 MW, then the resulting system conditions are an actual ABC interface flow of 825 MW with individual PAR flows of A=100 MW, B=362.5 MW, C=362.5 MW.~~

~~In this example, the actual ABC interface flow is as close as feasible to the ABC RTMDF assuming off-cost operation in the PJM area and the NYISO request that the distribution of flow over the A line be limited to 100 MW, which is in excess of the 125 MW distribution adjustment ($300 \text{ MW} - 100 \text{ MW} = 200 \text{ MW}$). PJM and the NYISO's obligations under this Operating Protocol will be deemed to be satisfied even though the ABC/JK actual interface flows are not equal to the RTMDF plus or minus the 100 MW bandwidth.~~

Appendix 8 — References

Updated as of: 10-24-2004 10:51
 Constrained operations ARE expected in the AP, PS, AE, DPL, and AEP areas on 10/25/04.
 Constrained operations ARE expected in the AP, PS, AE, DPL, and AEP areas on 10/26/04.
 NM

Data updated as of: WED OCT 27 10:15:09 2004.

MID ATLANTIC REGION HOUR ENDING INTEGRATED FORECAST LOAD MW

Date	1	2	3	4	5	6	7	8	9	10	11	12
10/27/04 am	24791	23698	23421	23265	23025	25907	31500	32660	32750	32918	32917	32968
pm	32713	32757	32501	32356	32482	32701	33765	34200	33423	31865	29236	26713
10/28/04 am	24328	23579	23250	23275	23984	26377	30222	32053	32252	32246	32314	32206
pm	31898	31893	31694	31782	32903	35000	34976	34343	33370	31513	28932	26396
10/29/04 am	25230	24114	23665	23500	23988	25974	29827	32323	32803	33001	33218	32847
pm	32495	32214	31826	31552	31521	31712	33071	33250	32437	31164	29227	27001
10/30/04 am	24407	23397	22777	22500	22547	23129	24300	25677	27552	28963	29643	29589
pm	29145	28648	28157	27831	27983	28563	29336	30000	29511	28545	27050	25281
10/31/04 am	22887	21757	21085	20795	20766	21187	22000	23080	24665	25994	26696	26955
pm	26981	26773	26545	26538	27026	27976	29172	30072	29790	28615	26718	24669
11/01/04 am	22770	22014	21673	21780	22409	24567	28402	30889	31726	32184	32529	32488
pm	32334	32249	31985	31905	32250	33030	34087	34719	33926	31993	29221	26574
11/02/04 am												
pm												

AP HOUR ENDING INTEGRATED FORECAST LOAD MW

Date	1	2	3	4	5	6	7	8	9	10	11	12
10/27/04 am	4824	4723	4646	4663	4784	5134	5705	6057	6027	6010	6012	5952

Figure 1—PJM Constraints

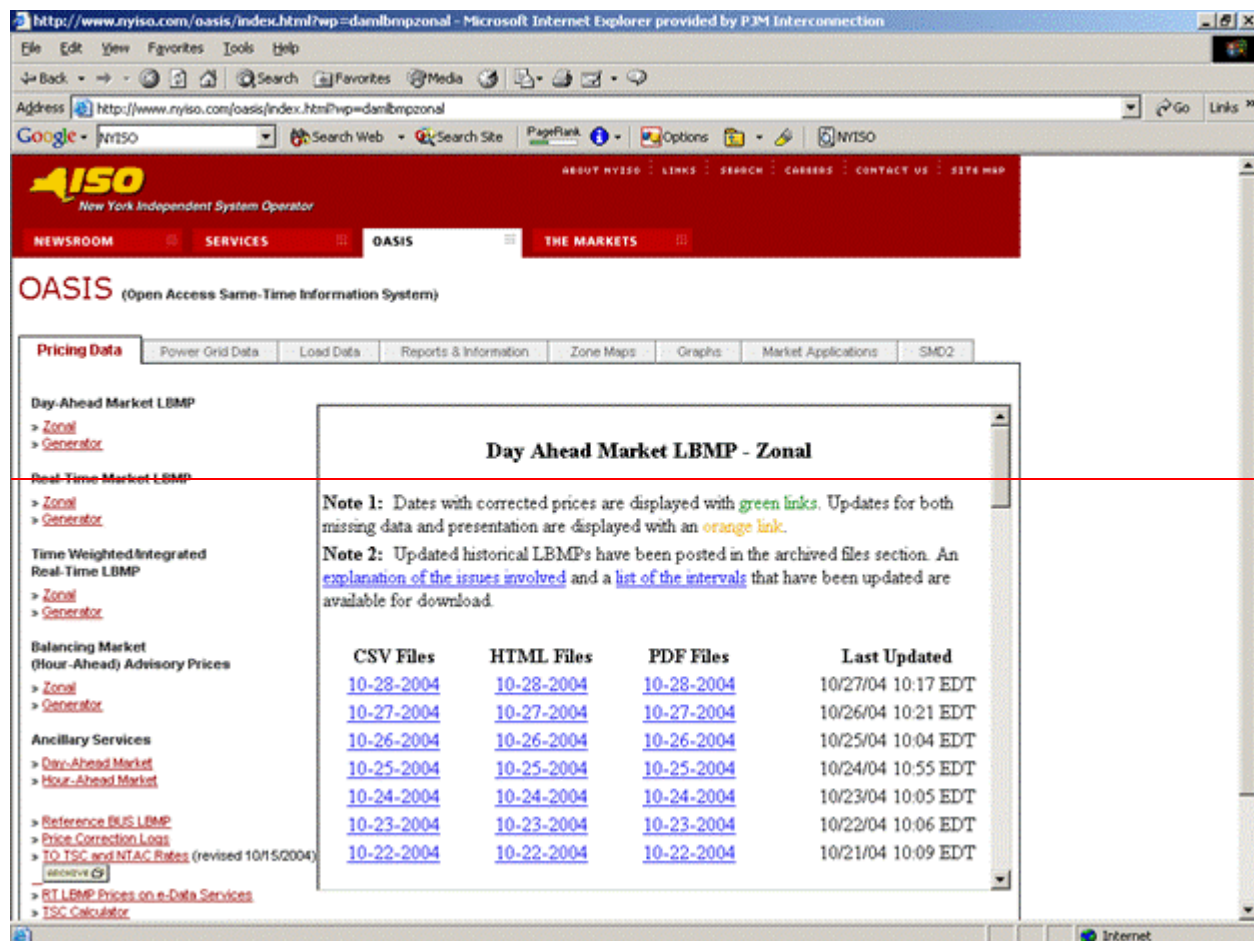


Figure 2—NYISO Day Ahead Results

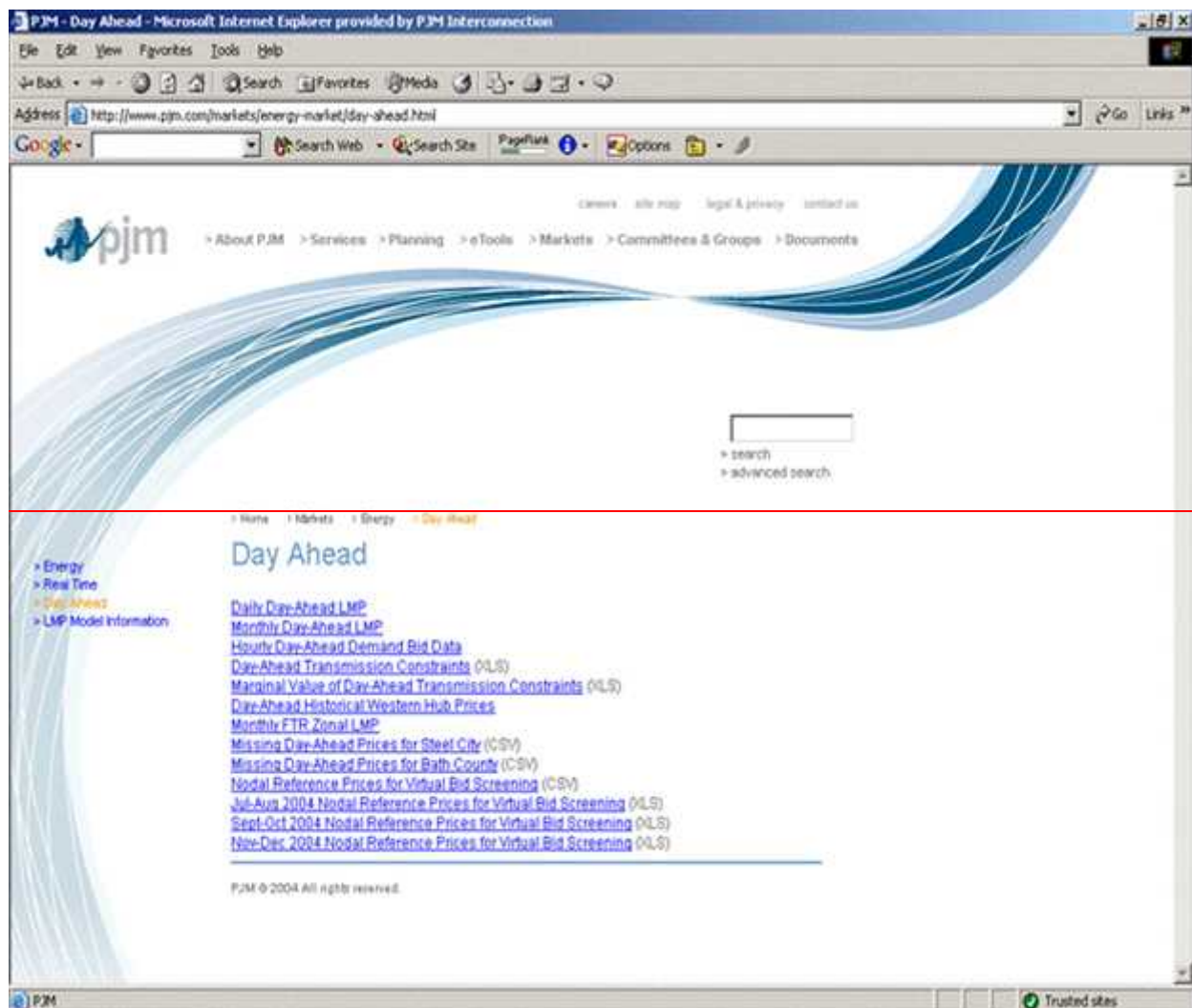


Figure 3—PJM Day Ahead Market Results

Appendix 9—Comparison of Contracts

	Delivery Priority	PJM Redispatch Required	Day Ahead Market Submittal	Day Ahead Market Congestion Charges	FTRs	Real Time Contract Schedule	Balancing Market Settlements
600 MW Contract	Firm	PJM redispatch required.	ConEd may submit up to 600 MW as DA Market transaction (fixed hourly MW schedule of up to 600 MW each hour)	PSEG pays DA Market congestion costs for amount of 600 MW contract scheduled in DA Market. Congestion charge = $(LMP_{ABC} - LMP_{JK}) * DA\ MW$	PSEG receives up to 600 MW FTR with source of JK and sink of ABC. (hourly FTR MW level will equal hourly DA MW scheduled on 600 MW contract)	ConEd may request RT election which deviates from DA election.	ConEd receives/pays real time LMP /LBMP differential between JK and ABC for real-time MW amount scheduled below/above MW amount cleared in Day Ahead Market in both PJM and NY.
400 MW Contract	If ConEd is willing to pay congestion (WPC) then contract priority is above all other WPC transactions but below firm. If not then same priority as non-firm, non-WPC. If ConEd converts to firm transmission service then the contract shall be treated as firm.	PJM redispatch required to the extent that ConEd is willing to pay congestion (less credits back to ConEd.)	ConEd may submit up to 400 MW as DA Market transaction (fixed hourly MW amount of up to 400 MW each hour and/or 'WPC' of up to \$25)	ConEd pays DA Market congestion costs for amount of 400 MW contract cleared in the DA Market. Congestion charge = $(LMP_{ABC} - LMP_{JK}) * DA\ MW$	No FTRs Allocated. ConEd receives credit for DA congestion charges paid. The manner in which credits are allotted depends on whether ConEd converts the 400 MW contract to firm service	ConEd may request RT election which deviates from DA election.	ConEd receives/pays real time LMP/LBMP differential between JK and ABC for real-time MW amount scheduled below/above MW amount cleared in Day Ahead Market in both PJM and NY.

Appendix 10—Definitions

1. ~~Off cost—the weighted LMP of JK is less than the weighted LMP of ABC by more than \$5 and/or the weighted nodal pricing of Ramapo is less than the weighted nodal pricing of the aggregate of Farragut and Goethals by more than \$5 (with a reasonable expectation of the appropriate cost differential continuing for at least two consecutive hours).~~
2. ~~New York ISO Day Ahead Election (NY DAE)—election by ConEd—submitted in the NYISO Day Ahead Market prior to 5 a.m.~~
3. ~~NY Desired Flow (NYDF)—desired flow calculation by NYISO based on NY DAE for input to NYISO Day Ahead Market.~~
4. ~~PJM Day Ahead Market Election (PJM DAE)—election by the ConEd—submitted in the PJM Day Ahead Market prior to 12 noon.~~
5. ~~Willing To Pay Congestion (WPC)—an election made by ConEd based on willingness to pay congestion costs.~~
6. ~~PJM Desired Flow (PJ MDF)—desired flow calculation by PJM based on PJM DAE for input to PJM Day Ahead Market.~~
7. ~~ConEd Real Time election (RTE)—option by ConEd to request Real Time Market modification from its Day Ahead Market election.~~
8. ~~Real Time Market Desired Flow (RT MDF)—Desired flow for real time operations.~~
9. ~~Impairments—Conditions determined during the NYISO’s and PJM’s respective planning analyses that will cause implementation of the 600/400 MW contracts to result in violations of established reliability criteria.~~
10. ~~Emergency Load Response—Emergency Load Response is the reduction of load by participants in the PJM Emergency Load Response Program in response to a request by PJM for load reduction following the declaration of Maximum Emergency Generation.~~
11. ~~Pricing points—aggregate nodal points for the ABC interface and JK interface at the respective locations in both PJM and NYISO regions. These points will be defined and posted.~~

30.4 Market Monitoring Unit

30.4.1 Mission of the Market Monitoring Unit

The Market Monitoring Unit's goals are (1) to ensure that the markets administered by the ISO function efficiently and appropriately, and (2) to protect both consumers and participants in the markets administered by the ISO by identifying and reporting Market Violations, market design flaws and market power abuses to the Commission in accordance with Sections 30.4.5.3 and 30.4.5.4 below.

30.4.2 Retention and Oversight of the Market Monitoring Unit

The Board shall retain a consulting or other professional services firm, or other similar entity, to advise it on the matters encompassed by Attachment O and to carry out the responsibilities that are assigned to the Market Monitoring Unit in Attachment O. The Market Monitoring Unit selected by the Board shall have experience and expertise appropriate to the analysis of competitive conditions in markets for electric capacity, energy and ancillary services, and financial instruments such as TCCs, and to such other responsibilities as are assigned to the Market Monitoring Unit under Attachment O, and must also have sufficient resources and personnel to be able to perform the Core Functions and other assigned functions.

The Market Monitoring Unit shall be accountable to the non-management members of the Board, and shall serve at the pleasure of the non-management members of the Board.

30.4.3 Market Monitoring Unit Ethics Standards

The Market Monitoring Unit, including all persons employed thereby, shall comply at all times with the ethics standards set forth below. The Market Monitoring Unit ethics standards set forth below shall apply in place of the standards set forth in the ISO's OATT Attachment F Code

of Conduct, and/or the more general policies and standards that apply to consultants retained by the ISO.

30.4.3.1 The Market Monitoring Unit and its employees must have no material affiliation with any Market Party or Affiliate of any Market Party.

30.4.3.2 The Market Monitoring Unit and its employees must not serve as an officer, employee, or partner of a Market Party.

30.4.3.3 The Market Monitoring Unit and its employees must have no material financial interest in any Market Party or Affiliate of a Market Party. Ownership of mutual funds by Market Monitoring Units and their employees that contain investments in Market Parties or their Affiliates is permitted so long as: (a) the fund is publicly traded; (b) the fund's prospectus does not indicate the objective or practice of concentrating its investment in Market Parties or their Affiliates; and (c) the Market Monitoring Unit/Market Monitoring Unit employee does not exercise or have the ability to exercise control over the financial interests held by the fund.

30.4.3.4 The Market Monitoring Unit and its employees are prohibited from engaging in transactions in the markets administered by the ISO, other than in the performance of duties under the ISO's Tariffs. This provision shall not, however, prevent the Market Monitoring Unit, or its employees, from purchasing electricity, power and Energy as retail customers for their own account and consumption.

30.4.3.5 The Market Monitoring Unit and its employees must not be compensated, other than by the ISO, for any expert witness testimony or other commercial

services, in connection with any legal or regulatory proceeding or commercial transaction relating to the ISO or to the markets that the ISO administers.

30.4.3.6 The Market Monitoring Unit and its employees may not accept anything that is of more than *de minimis* value from a Market Party.

30.4.3.7 The Market Monitoring Unit and its employees must advise the Board in the event they seek employment with a Market Party, and must disqualify themselves from participating in any matter that could have an effect on the financial interests of that Market Party until the outcome of the matter is determined.

30.4.3.8 If the Market Monitoring Unit or any of its employees provide services to entities other than the ISO, the Market Monitoring Unit shall provide to the ISO's Board, and shall regularly update, a list of such entities and services. When the Market Monitoring Unit issues an opinion, report or recommendation to, for or addressing the ISO or the markets it administers that relates to, or could reasonably be expected to affect, an entity (other than the ISO) to which the Market Monitoring Unit or its employees provide services, the Market Monitoring Unit shall inform the ISO's Board of the opinion, report or recommendation it has issued, and that its opinion, report or recommendation relates to, or could reasonably be expected to affect, an entity to which the Market Monitoring Unit or its employees provide services.

30.4.4 Duties of the Market Monitoring Unit

The Market Monitoring Unit shall advise the Board, shall perform the Core Functions specified in Section 30.4.5 of Attachment O, and shall have such other duties and responsibilities

as are specified in Attachment O. The Market Monitoring Unit may, at any time, bring any matter to the attention of the Board that the Market Monitoring Unit may deem necessary or appropriate for achieving the purposes, objectives and effective implementation of Attachment O.

The Market Monitoring Unit shall not participate in the administration of the ISO's Tariffs, except for performing its duties under Attachment O. The Market Monitoring Unit shall not be responsible for performing purely administrative duties, such as enforcement of late fees or Market Party reporting obligations, that are not specified in Attachment O. The Market Monitoring Unit may (i) provide, or assist the ISO's efforts to develop, the inputs required to conduct mitigation, and (ii) assist the ISO's efforts to conduct "retrospective" mitigation (*see* Order 719 at PP. 369, 375) that does not change bids or offers (including physical bid or offer parameters) at or before the time such bids or offers (including physical bid or offer parameters) are considered in the ISO's market solution.

30.4.5 Core Market Monitoring Functions

The Market Monitoring Unit shall be responsible for performing the following Core Functions:

30.4.5.1 Evaluate existing and proposed market rules, tariff provisions and market design elements and recommend proposed rule and tariff changes to the ISO, to the Commission's Office of Energy Market Regulation staff, and to other interested entities, including the New York Public Service Commission, and participants in the ISO's stakeholder governance process. Provided that:

30.4.5.1.1 The Market Monitoring Unit is not responsible for systematic review of every tariff and market rule; its role is monitoring, not audit.

30.4.5.1.2 The Market Monitoring Unit is not to effectuate its proposed market design itself.

30.4.5.1.3 The Market Monitoring Unit's role in recommending proposed rule and Tariff changes is advisory in nature, unless a Tariff provision specifically concerns actions to be undertaken by the Market Monitoring Unit itself.

30.4.5.1.4 The Market Monitoring Unit must limit distribution of issues or concerns it identifies, and its recommendations to the ISO and to Commission staff in the event it believes broader dissemination could lead to exploitation. Limited distributions should include an explanation of why further dissemination should be avoided at that time.

30.4.5.2 Review and report on the performance of the wholesale markets to the ISO, the Commission, and other interested entities such as the New York Public Service Commission and participants in its stakeholder governance process on at least a quarterly basis, and issue a more comprehensive annual state of the market report. The Market Monitoring Unit may issue additional reports as necessary.

30.4.5.2.1 In order to perform the Core Functions, the Market Monitoring Unit shall perform daily monitoring of the markets that the ISO administers. The Market Monitoring Unit's daily monitoring shall include monitoring of virtual bidding.

30.4.5.2.2 The Market Monitoring Unit shall submit drafts of each of its reports to the ISO for review and comment sufficiently in advance of the report's issuance to provide an effective opportunity for review and comment by the ISO. The Market Monitoring Unit may disregard any suggestions with which it disagrees.

The ISO may not alter the reports prepared by the Market Monitoring Unit, nor dictate the Market Monitoring Unit's conclusions.

30.4.5.3 Identify and notify the Commission staff of instances in which a Market Party's or the ISO's behavior may require investigation, including, but not limited to, suspected Market Violations.

30.4.5.3.1 Except as provided in Section 30.4.5.3.2 below, in compliance with § 35.28(g)(3)(iv) of the Commission's regulations (or any successor provisions thereto) the Market Monitoring Unit shall submit a non-public referral to the Commission in all instances where it has obtained sufficient credible information to believe a Market Violation has occurred. Once the Market Monitoring Unit has obtained sufficient credible information to warrant referral to the Commission, the Market Monitoring Unit shall immediately refer the matter to the Commission and desist from further investigation of independent action related to the alleged Market Violation, except at the express direction of the Commission or Commission staff. The Market Monitoring Unit may continue to monitor for repeated instances of the reported activity by the same or other entities and shall respond to requests from the Commission for additional information in connection with the alleged Market Violation it has referred.

30.4.5.3.2 The Market Monitoring Unit is not required to refer the actions (or failures to act) listed in this Section 30.4.5.3.2 to the Commission as Market Violations, because they have: (i) already been reported by the ISO as a Market Problem under Section 3.5.1 of the ISO Services Tariff; and/or (ii) because they pertain to actions or failures that: (a) are expressly set forth in the ISO's Tariffs; (b) involve

objectively identifiable behavior; and (c) trigger a sanction or other consequence that is expressly set forth in the ISO Tariffs and that is ultimately appealable to the Commission. The actions (or failures to act) that are exempt from mandatory referral to the Commission are:

- 30.4.5.3.2.1 failure to meet a Contract or Non-Contract CRIS MW Commitment pursuant to Sections 25.7.11.1.1 and 25.7.11.1.2 of Attachment S to the ISO OATT that results in a charge or other a sanction under Section 25.7.11.1.3 of Attachment S of the ISO OATT;
- 30.4.5.3.2.2 Black Start performance that results in reduction or forfeitures of payments under Rate Schedule 5 to the ISO Services Tariff;
- 30.4.5.3.2.3 any failure by the ISO to meet the deadlines for completing System Impact Studies, or any failure by a Transmission Owner to meet the deadlines for completing Facilities Studies, under Sections 3.7 and 4.5 of the ISO OATT that results in the filing of a notice and/or the imposition of sanctions under those provisions;
- 30.4.5.3.2.4 failure of a Market Party to comply with the ISO's creditworthiness requirements set forth in Attachment K of the ISO Services tariff, or other action, that triggers sanctions under Section 7.5 of the ISO Services Tariff or Section 2.7.5 of the ISO OATT, specifically: (i) failure of a Market Party to make timely payment under Section 7.2.2 of the ISO Services Tariff or Section 2.7.3.2 of the ISO OATT that triggers a sanction under Sections 7.5.3(i) or 7.5.3(iv) of the ISO Services Tariff, or Sections 2.7.5.3(i), 2.7.5.3(iv), or 2.7.5.4 of the ISO OATT; (ii) failure of a Market Party to comply with a demand for additional credit support

under Section 26.6 of Attachment K of the ISO Services Tariff that triggers a sanction under Section 7.5.3(i) of the ISO Services Tariff or Section 2.7.5.3(i) of the ISO OATT; (iii) failure of a Market Party to cure a default in another ISO/RTO market under Sections 7.5.3(iii) of the ISO Services Tariff, or Section 2.7.5.3(iii) of the ISO OATT that triggers a sanction under either of those tariff provisions; (iv) failure of a Market Party that has entered into a Prepayment Agreement with the ISO under Appendix K-1 to Attachment K to the ISO Services Tariff to make payment in accordance with the terms of the Prepayment Agreement that triggers a sanction under the Prepayment Agreement or 7.5.3(i) of the ISO Services Tariff; and (v) failure of a Market Party to make timely payment on two occasions within a rolling twelve month period under Section 7.5.3(iv) of the ISO Services Tariff, or Section 2.7.5.3(iv) of the ISO OATT that triggers a sanction under either of those provisions.

30.4.5.3.2.5 bidding in a manner that results in a penalty under Section 23.4.3.3.4 of the Market Mitigation Measures.

30.4.5.3.2.6 submission of inaccurate fuel type information into the Day-Ahead Market that results in a penalty under Section 23.4.3.3.3 of the Market Mitigation Measures.

30.4.5.3.2.7 submission of inaccurate fuel type and/or fuel price information into the Real-Time Market that results in a penalty under Section 23.4.3.3.4 of the Market Mitigation Measures.

To the extent the above list enumerates specific Tariff provisions, the exclusions specified above shall also apply to re-numbered and/or successor provisions thereto. The Market

Monitoring Unit is not precluded from referring any of the activities listed above to the Commission.

30.4.5.4 Identify and notify the Commission staff of perceived market design flaws that could be effectively remedied by rule or tariff changes.

30.4.5.4.1 In compliance with § 35.28(g)(3)(v) of the Commission's regulations (or any successor provisions thereto) the Market Monitoring Unit shall submit a referral to the Commission when the Market Monitoring Unit has reason to believe that a market design flaw exists, that the Market Monitoring Unit believes could effectively be remedied by rule or tariff changes.

30.4.5.4.1.1 If the Market Monitoring Unit believes broader dissemination of the possible market design flaw, and its recommendation could lead to exploitation, the Market Monitoring Unit shall limit distribution of its referral to the ISO and to the Commission. The referral shall explain why further dissemination should be avoided.

30.4.5.4.1.2 Following referral of a possible market design flaw, the Market Monitoring Unit shall continue to provide to the Commission additional information regarding the perceived market design flaw, its effects on the market, any additional or modified observations concerning the Market Monitoring Unit's proposed market rule or tariff change, any recommendations made by the Market Monitoring Unit to the ISO, its stakeholders, Market Parties or state public service commissions regarding the perceived market design flaw, and any actions taken by the ISO regarding the perceived market design flaw.

30.4.6 Market Monitoring Unit Responsibilities Set Forth Elsewhere in the ISO's Tariffs

30.4.6.1 Supremacy of (Attachment O)

Provisions addressing the Market Monitoring Unit, its responsibilities and its authority, have been centralized in Attachment O. However, provisions that address the Market Monitoring Unit can also be found in the Market Mitigation Measures that are set forth in Attachment H to the ISO Services Tariff, and elsewhere in the ISO's Tariffs. In the event of any inconsistency between the provisions of Attachment O and any other provision of the ISO OATT, the ISO Services Tariff, or any of their attachments and schedules, with regard to the Market Monitoring Unit, its responsibilities and its authority, the provisions of Attachment O shall control.

30.4.6.2 Market Monitoring Unit responsibilities set forth in the Market Mitigation Measures

30.4.6.2.1 The ISO and its Market Monitoring Unit shall monitor the markets the ISO administers for conduct that the ISO or the Market Monitoring Unit determine constitutes an abuse of market power but that does not trigger the thresholds specified in the Market Mitigation Measures for the imposition of mitigation measures by the ISO. If the ISO identifies or is made aware of any such conduct, and in particular conduct exceeding the thresholds for presumptive market effects specified in Section 23.3.2.3 of the Market Mitigation Measures, it shall make a filing under § 205 of the Federal Power Act, 16 U.S.C. § 824d (1999) ("§ 205") with the Commission requesting authorization to apply appropriate mitigation measures. Any such filing shall identify the particular conduct the ISO believes warrants mitigation, shall propose a specific mitigation

measure for the conduct, shall incorporate or address the recommendation of its Market Monitoring Unit, and shall set forth the ISO's justification for imposing that mitigation measure. The Market Monitoring Unit's reporting obligations are specified in Sections 30.4.5.3 and 30.4.5.4 of Attachment O. *See* Market Mitigation Measures Section 23.1.2.

30.4.6.2.2 The ISO and the Market Monitoring Unit shall monitor the ISO Administered Markets for other categories of conduct, whether by a single firm or by multiple firms acting in concert, that have material effects on prices or guarantee payments in an ISO Administered Market. *See* Market Mitigation Measures Section 23.2.4.4.

30.4.6.2.3 If (i) the ISO determines, following consultation with the Market Party and review by the Market Monitoring Unit, that the Market Party or its representative has, over a time period of at least one week, submitted inaccurate fuel type or fuel price information that was, taken as a whole, biased in the Market Party's favor, *then* the ISO shall cease using the fuel type and fuel price information submitted to the ISO's Market Information System along with the Generator's Bid(s) to develop reference levels for the affected Generator(s) in the relevant (Day-Ahead or real-time) market for the durations specified in Sections 23.1.4.7.8.1, 23.3.1.4.7.8.2, and 23.3.1.4.7.8.3 of the Mitigation Measures. *See* Section 23.3.1.4.7.8 of the Market Mitigation Measures

30.4.6.2.4 When it has the capability to do so, the ISO shall determine the effect on prices or guarantee payments of questioned conduct through the use of sensitivity analyses performed using the ISO's SCUC, RTC and RTD computer models, and

such other computer modeling or analytic methods as the ISO shall deem appropriate following consultation with its Market Monitoring Unit. *See* Market Mitigation Measures Section 23.3.2.2.1.

30.4.6.2.5 Pending development of the capability to use automated market models, the ISO, following consultation with its Market Monitoring Unit, shall determine the effect on prices or guarantee payments of questioned conduct using the best available data and such models and methods as they shall deem appropriate. *See* Market Mitigation Measures Section 23.3.2.2.2.

30.4.6.2.6 If through the application of an appropriate index or screen or other monitoring of market conditions, conduct is identified that (i) exceeds an applicable threshold, and (ii) has a material effect, as specified above, on one or more prices or guarantee payments in an ISO Administered Market, the ISO shall, as and to the extent specified in Attachment O or in Section 23.3.3.2 of the Market Mitigation Measures, contact the Market Party engaging in the identified conduct to request an explanation of the conduct. If a Market Party anticipates submitting bids in a market administered by the ISO that will exceed the thresholds specified in Section 23.3.1 of the Market Mitigation Measures for identifying conduct inconsistent with competition, the Market Party may contact the ISO to provide an explanation of any legitimate basis for any such changes in the Market Party's bids. If a Market Party's explanation of the reasons for its bidding indicates to the satisfaction of the ISO that the questioned conduct is consistent with competitive behavior, no further action will be taken. Market Parties shall ensure that the information they submit to the ISO, including but not

limited to fuel price and fuel type information, is accurate. Except as set forth in Section 23.3.1.4.7.7 of the Market Mitigation Measures, the ISO may not retroactively revise a reference level to reflect additional fuel costs if a Market Party or its representative did not timely submit accurate fuel cost information. Unsupported speculation by a Market Party does not present a valid basis for the ISO to determine that Bids that a Market Party submitted are consistent with competitive behavior, or to determine that submitted costs are appropriate for inclusion in the ISO's development of reference levels. Consistent with Sections 30.6.2.2 and 30.6.3.2 of the Plan, the Market Party shall retain the documents and information supporting its Bids and the costs it proposes to include in reference levels. A preliminary determination by the ISO shall be provided to the Market Monitoring Unit for its review and comment, and the ISO shall consider the Market Monitoring Unit's recommendations before the ISO issues its decision or determination to the Market Party. Upon request, the ISO shall consult with a Market Party or its representative with respect to the information and analysis used to determine reference levels under Section 23.3.1.4 of the Market Mitigation Measures for that Market Party's Generator(s). If cost data or other information submitted by a Market Party indicates to the satisfaction of the ISO that the reference levels for that Market Party's Generator(s) should be changed, revised reference levels shall be proposed by the ISO, communicated to the Market Monitoring Unit for its review and comment and, following the ISO's consideration of any recommendation that the Market Monitoring Unit is able to timely provide, communicated to the Market Party, and implemented by the ISO

as soon as practicable. Changes to reference levels addressed pursuant to the terms of Section 23.3.3.1.4 of the Market Mitigation Measures shall be implemented on a going-forward basis commencing no earlier than the date that the Market Party's consultation request is received. *See* Market Mitigation Measures Sections 23.3.3.1.1 through 23.3.3.1.5.

30.4.6.2.7 With regard to a Market Party's request for consultation that satisfies the requirements of Sections 23.3.3.3.1.4 and 23.3.3.3.1.7 of the Market Mitigation Measures, and consistent with the duties assigned to the ISO in Section 23.3.3.3.1.7.1 of the Market Mitigation Measures, a preliminary determination by the ISO regarding the Market Party's consultation request shall be provided to the Market Monitoring Unit for its review and the ISO shall consider the Market Monitoring Unit's recommendations in reaching its decision. *See* Market Mitigation Measures Section 23.3.3.3.1.7.1 and 23.3.3.3.1.7.2.

30.4.6.2.8 Reasonably in advance of the deadline for submitting offers in an External Reconfiguration Market and in accordance with the deadlines specified in ISO Procedures, the Responsible Market Party for External Sale UCAP may request the ISO to provide a projection of ICAP Spot Auction clearing prices for a Mitigated Capacity Zone over the Comparison Period for the External Reconfiguration Market. Prior to completing its projection of ICAP Spot Auction clearing prices for a Mitigated Capacity Zone over the Comparison Period for the External Reconfiguration Market, the ISO shall consult with the Market Monitoring Unit regarding such price projection. *See* Market Mitigation Measures Section 23.4.5.4.3.

30.4.6.2.9 Prior to reaching its decision regarding whether the presumption of control of Unforced Capacity has been rebutted, the ISO shall provide its preliminary determination to the Market Monitoring Unit for review and comment. *See* Market Mitigation Measures Section 23.4.5.5.

30.4.6.2.10 Any proposal or decision by a Market Participant to retire or otherwise remove an Installed Capacity Supplier from a Mitigated Capacity Zone Unforced Capacity market, or to de-rate the amount of Installed Capacity available from such supplier, may be subject to audit and review by the ISO if the ISO determines that such action could reasonably be expected to affect Market-Clearing Prices in one or more ICAP Spot Market Auctions for a Mitigated Capacity Zone subsequent to such action. Such an audit or review shall assess whether the proposal or decision has a legitimate economic justification or is based on an effort to withhold Installed Capacity physically in order to affect prices. The ISO shall provide the preliminary results of its audit or review to the Market Monitoring Unit for its review and comment. *See* Market Mitigation Measures Section 23.4.5.6.

30.4.6.2.11 When evaluating a request by a Developer or Interconnection Customer pursuant to Section 23.4.5.7 of the Market Mitigation Measures, the ISO shall seek comment from the Market Monitoring Unit on matters relating to the determination of price projections and cost calculations. As required by Section 23.4.5.7.8 of Attachment H to this Services Tariff, the Market Monitoring Unit shall prepare a written report confirming whether the ISO's Offer Floor and exemption determinations and calculations conducted pursuant to Section

23.4.5.7.2 of the Market Mitigation Measures were conducted in accordance with the terms of the Services Tariff, and if not, identifying the flaws inherent in the ISO's approach. This report shall be presented concurrent with the ISO's posting of its mitigation exemption determinations. Pursuant to Section 23.4.5.7.7 of the Market Mitigation Measures, the ISO shall also consult with the Market Monitoring Unit when evaluating whether any existing or proposed Generator or UDR project in a Mitigated Capacity Zone, except New York City, shall be exempted from an Offer Floor under that Section. Prior to the ISO making an exemption determination pursuant to Section 23.4.5.7.7, the Market Monitoring Unit shall provide the ISO a written opinion and recommendation. The Market Monitoring Unit shall also provide a public report on its assessment of an ISO determination that an existing or proposed Generator or UDR project is exempt from an Offer Floor under Section 23.4.5.7.7. *See* Market Mitigation Measures Section 23.4.5.7.

30.4.6.2.12 The ISO and its Market Monitoring Unit shall monitor the Spinning Reserves and 10-Minute Non-Synchronized reserves markets the ISO administers for competitiveness and for conduct that the ISO or the Market Monitoring Unit determine constitutes an abuse of market power. The Market Monitoring Unit shall evaluate and recommend adjustments to the reference level maximum used in Section 23.3.1.4.5 of the Market Mitigation Measures and to the Bid maximum used in Section 23.5.3.3 of the Market Mitigation Measures. The scope of the Market Monitoring Unit's evaluation shall include, but not be limited to, an analysis of: (i) the competitiveness of each reserves market and whether there is

conduct that the ISO or the Market Monitoring Unit determine constitutes an abuse of market power; and (ii) how an adjustment to the reference level maximum/Bid maximum is expected to impact the convergence of day-ahead and real-time prices. *See* Market Mitigation Measures Sections 23.3.1.4.5 and 23.5.3.3.

30.4.6.3 Market Monitoring Unit responsibilities set forth in the ISO Services Tariff

30.4.6.3.1 The ICAP Demand Curve periodic review schedule and procedures shall provide an opportunity for the Market Monitoring Unit to review and comment on the draft request for proposals, the independent consultant's report, and the ISO's proposed ICAP Demand Curves. *See* ISO Services Tariff Section 5.14.1.2.5.

30.4.6.3.2 The new capacity zone periodic review shall provide an opportunity for the Market Monitoring Unit to review and comment on the NCZ Study, and any proposed NCZ tariff revisions. *See* ISO Services Tariff Sections 5.16.1.3 and 5.16.4.

30.4.6.4 Market Monitoring Unit responsibilities set forth in the Rate Schedules to the ISO Services Tariff.

30.4.6.4.1 Responsibilities related to the Regulation Service Demand Curve

In order to respond to operational or reliability problems that arise in real-time, the ISO may procure Regulation Service at a quantity and/or price point different than those specified in Section 15.3.7 of Rate Schedule 3 to the ISO Services Tariff. The ISO shall post a notice of any such purchase as soon as reasonably possible and shall report on the reasons for such purchases at the next meeting of its Business Issues Committee. The ISO shall also immediately initiate an investigation to determine whether it is necessary to modify the quantity and price points

specified above to avoid future operational or reliability problems. The ISO will consult with its Market Monitoring Unit when it conducts this investigation.

If the ISO determines that it is necessary to modify the quantity and/or price points specified above in order to avoid future operational or reliability problems it may temporarily modify them for a period of up to 90 days. If circumstances reasonably allow, the ISO will consult with its Market Monitoring Unit, the Business Issues Committee, the Commission, and the PSC before implementing any such modification. In all circumstances, the ISO will consult with those entities as soon as reasonably possible after implementing a temporary modification.

After the first year the Regulation Service Demand Curve is in place, the ISO shall perform periodic reviews, subject to the scope requirement specified in Section 15.3.7 of Rate Schedule 3 to the ISO Services Tariff, and the Market Monitoring Unit shall be given the opportunity to review and comment on the ISO's periodic reviews of the Regulation Service Demand Curve. *See* Section 15.3.7 of Rate Schedule 3 to the ISO Services Tariff.

30.4.6.4.2 Responsibilities related to the Operating Reserves Demand Curves

In order to respond to operational or reliability problems that arise in real-time, the ISO may procure any Operating Reserve product at a quantity and/or price point different than those specified in Section 15.4.7 of Rate Schedule 4 to the ISO Services Tariff. The ISO shall post a notice of any such purchase as soon as reasonably possible and shall report on the reasons for such purchases at the next meeting of its Business Issues Committee. The ISO shall also immediately initiate an investigation to determine whether it is necessary to modify the quantity and price points specified above to avoid future operational or reliability problems. The ISO will consult with its Market Monitoring Unit when it conducts this investigation.

If the ISO determines that it is necessary to modify the quantity and/or price points specified in Section 15.4.7 of Rate Schedule 4 to the ISO Services Tariff in order to avoid future operational or reliability problems it may temporarily modify them for a period of up to 90 days. If circumstances reasonably allow, the ISO will consult with its Market Monitoring Unit, the Business Issues Committee, the Commission, and the PSC before implementing any such modification. In all circumstances, the ISO will consult with those entities as soon as reasonably possible after implementing a temporary modification.

After the first year the Operating Reserves Demand Curves are in place, the ISO shall perform periodic reviews, subject to the scope requirement specified in Section 15.4.7 of Rate Schedule 4 to the ISO Services Tariff, and the Market Monitoring Unit shall be given the opportunity to review and comment on the ISO's periodic reviews of the Operating Reserve Demand Curves. *See* Section 15.4.7 of Rate Schedule 4 to the ISO Services Tariff.

30.4.6.5 Market Monitoring Unit responsibilities set forth in the Attachments to the ISO Services Tariff (other than the Market Mitigation Measures).

30.4.6.5.1 Responsibilities related to Transmission Shortage Cost

The ISO may periodically evaluate the Transmission Shortage Cost to determine whether it is necessary to modify the Transmission Shortage Cost to avoid future operational or reliability problems. The ISO will consult with its Market Monitoring Unit after it conducts this evaluation.

If the ISO determines that it is necessary to modify the Transmission Shortage Cost in order to avoid future operational or reliability problems the resolution of which would otherwise require recurring operator intervention outside normal market scheduling procedures, in order to avoid among other reliability issues, a violation of NERC Interconnection Reliability Operating Limits or System Operating Limits, it may temporarily modify it for a period of up to 90 days,

provided however the ISO shall file such change with the Commission pursuant to § 205 of the Federal Power Act within 45 days of such modification. If circumstances reasonably allow, the ISO will consult with its Market Monitoring Unit, the Business Issues Committee, the Commission, and the PSC before implementing any such modification. In all circumstances, the ISO will consult with those entities as soon as reasonably possible after implementing a temporary modification and shall explain the reasons for the change. *See* Section 17.1.4 of Attachment B to the ISO Services Tariff.

~~30.4.6.5.2 Responsibilities under Appendix 4 to the Operating Protocol for the Implementation of Commission Opinion No. 476 (the “Operating Protocol”)~~

~~The ISO and PJM and their Market Monitoring Units shall, to the extent compatible with their respective tariffs and with any other market monitoring procedures that they have filed with the Commission:~~

~~30.4.6.5.2.1—Conduct such investigations as may be necessary to ensure that gaming, abuse of market power, or similar activities do not take place with regard to power transfers under the 600/400 MW contracts;~~

~~30.4.6.5.2.2—Conduct investigations that go into the region of the other ISO jointly with the ISO, PJM and both Market Monitoring Units;~~

~~30.4.6.5.2.3—Inform each other of any such investigations; and~~

~~30.4.6.5.2.4—Share information related to such investigations, as necessary to conduct joint investigations, subject to the requirements of Section C of Appendix 4 to the Operating Protocol and Section 30.6.6 of Attachment O.~~

~~See Section A of Appendix 4 to Attachment M-1 to the ISO Services Tariff.~~

30.4.6.6 Market Monitoring Unit responsibilities set forth in the ISO OATT

30.4.6.7 Market Monitoring Unit responsibilities set forth in the Rate Schedules to the ISO OATT

30.4.6.8 Market Monitoring Unit responsibilities set forth in the Attachments to the ISO OATT

30.4.6.8.1 Responsibilities related to implementing new scheduling path prohibitions

If the ISO, acting in consultation with its Market Monitoring Unit, identifies transmission scheduling paths that are being used to schedule External Transactions in a manner that is not consistent with the manner in which power is actually expected to flow, the ISO may submit a compliance filing in FERC Docket No. ER13-780 proposing to expand the list of prohibited scheduling paths included in Section 16.3.3.8 of the ISO OATT. The ISO's compliance filing will include, or be accompanied by, a discussion of the Market Monitoring Unit's position regarding the ISO's proposal to add a new prohibited scheduling path or new prohibited scheduling paths. The Market Monitoring Unit's position may be explained in the ISO's filing letter, be set forth in an accompanying affidavit, or be submitted by the Market Monitoring Unit as a companion filing or as comments on the ISO's compliance filing in Docket No. ER13-780. *See* Section 16.3.3.8 of Attachment J to the ISO OATT.

30.4.6.8.2 Responsibilities related to the draft Reliability Needs Assessment

Following the Management Committee vote, the draft Reliability Needs Assessment (RNA), with working group, Operating Committee, and Management Committee input, will be forwarded to the ISO Board for review and action. Concurrently, the draft RNA will be provided to the Market Monitoring Unit for its review and consideration of whether market rules changes are necessary to address an identified failure, if any, in one of the ISO's competitive markets. *See* Section 31.2.3.2 of Attachment Y to the ISO OATT.

30.4.6.8.3 Responsibilities related to the draft Comprehensive Reliability Plan

Following the Management Committee vote, the draft Comprehensive Reliability Plan (CRP), with working group, Operating Committee, and Management Committee input, will be forwarded to the ISO Board for review and action. Concurrently, the draft CRP will also be provided to the Market Monitoring Unit for its review and consideration of whether market rule changes are necessary to address an identified failure, if any, in one of the ISO's competitive markets. *See* Section 31.2.7.2 of Attachment Y to the ISO OATT.

30.4.6.8.4 Responsibilities related to the draft Congestion Analysis and Resource Integration Study

Following the Management Committee vote, the draft Congestion Analysis and Resource Integration Study (CARIS), with Business Issues Committee and Management Committee input, will be forwarded to the ISO Board for review and action. Concurrently, the draft CARIS will be provided to the Market Monitoring Unit for its review and consideration. *See* Section 31.3.2.2 of Attachment Y to the ISO OATT.

30.4.6.8.5 Responsibilities related to the draft Public Policy Transmission Planning Report

The ISO will provide the draft Public Policy Transmission Planning Report to the Market Monitoring Unit for its review and consideration of any impact on the ISO-administered markets of regulated transmission solutions proposed to satisfy a Public Policy Transmission Need. *See* Sections 31.4.9 and 31.4.10.1 of Attachment Y to the ISO OATT. The Market Monitoring Unit's evaluation will be provided to the Management Committee before the Management Committee's advisory vote. *See* Section 31.4.10.1 of Attachment Y. Following the Management Committee vote, the draft Public Policy Transmission Planning Report, with Business Issues Committee and Management Committee input, will be forwarded to the ISO Board for review

and action. Concurrent with the submission to the ISO Board of the draft Public Policy Transmission Planning Report, the Market Monitoring Unit's evaluation will be provided to the ISO Board. *See* Section 31.4.10.2 of Attachment Y to the ISO OATT.

30.4.6.9 Market Monitoring Unit responsibilities set forth in other documents that have been formally filed with the Commission.

30.4.7 Availability of Data and Resources to Market Monitoring Unit

- 30.4.7.1 The ISO shall ensure that the Market Monitoring Unit has sufficient access to ISO resources, personnel and market data to enable the Market Monitoring Unit to carry out its functions under Attachment O. Consistent with Section 30.6.1 of Attachment O, the Market Monitoring Unit shall have complete access to the ISO's databases of market information.
- 30.4.7.2 Any data created by the Market Monitoring Unit, including but not limited to reconfiguration of the ISO's data, will be kept within the exclusive control of the Market Monitoring Unit. The Market Monitoring Unit may share the data it creates, subject to the limitations on distribution of and obligation to protect the confidentiality of Protected Information that are contained in Attachment O, the ISO Services Tariff, and the ISO's Code of Conduct.
- 30.4.7.3 Where data outside the ISO's geographic footprint would be helpful to the Market Monitoring Unit in carrying out its duties, the Market Monitoring Unit should seek out that data (with assistance from the ISO, where appropriate).