Attachment I

35.20   Schedules A and B

Schedule A - Description Of Interconnection Facilities

The NYISO – PJM Coordination Agreement covers the PJM – NYISO *Interconnection Facilities* under the *Operational Control* of the NYISO and PJM. For *Operational Control* purposes, the point of demarcation for each of the *Interconnection Facilities* listed below is the point at which each *Interconnection Facility* crosses the PJM-New York State boundary, except as noted below.

The PJM-NYISO *Interconnection* contains twenty-three (23) alternating current ("AC") *Interconnection Facilities,* seven (7) of which form one (1) AC pseudo-tie[1]; and further contains one (1) HVDC *Interconnection Facility.* These are tabulated below:

NY/PJM AC *Interconnection Facilities*:

PJM	NYISO	Designated	(kV)	Common Meter Point
Branchburg	Ramapo	5018	500	Ramapo
Closter	Sparkill	751	69	Closter
E. Sayre	N. Waverly	956	115	E. Sayre
E. Towanda	Hillside	70	230	Hillside
Erie East	South Ripley	69	230	South Ripley
Franklin	Sugar Loaf	SJ	115	Sugar Loaf
Franklin	Sugar Loaf	SD	115	Sugar Loaf
Harings Corners	Burns	702	138	Harings
Harings Corners	Nanuet	45	34	Harings
Harings Corners	W. Nyak	701	69	Harings
Homer City	Watercure	30	345	Homer
Homer City	Stolle Road	37	345	Homer
Hudson	Farragut	C3403	345	Farragut
Hudson	Farragut	B3402	345	Farragut
Linden	Goethals	A2253	230	Goethals
Montvale	Pearl River	491	69	Montvale
Montvale	Blue Hill	44	69	Montvale
Montvale	Blue Hill	43	69	Montvale
RECO	NYISO	AC Pseudo-Tie	Various	O&R EMS
Sayerville	Newbridge	HVDC-Tie	500	New Bridge
S. Mahwah	Hilburn	65	69	S. Mahwah
S. Mahwah	S. Mahwah	138/345	138/345	S. Mahway
S. Mahwah	Ramapo	51	138	S. Mahwah
Tiffany	Goudey	952	115	Goudey
Warren	Falconer	171	115	Warren

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[1]   WEQ-007 "Inadvertent Interchange Payback Standards," North American Energy Standards Board (NAESB), on-line at www.naesb.org.

Schedule B - Other Existing Agreements:

1.0   Lake Erie Emergency Redispatch (LEER)

2.0   RAMAPO PHASE ANGLE REGULATOR OPERATING PROCEDURE prepared by the NYPP/PJM Circulation Study Operating Committee.

3.0   Operating Protocol for the Implementation of Commission Opinion No. 476, Docket No. EL02-23-000 (Phase II), New York Independent System Operator, Inc., FERC Electric Tariff, Original Vol. No. 2, Attachment M-1.

4.0   Northeastern ISO/RTO Coordination of Planning Protocol

5.0   Inter Control Area Transaction Agreement.

6.0   Procedures to Protect for Loss of Phase II Imports (effective January 16, 2007, pursuant to Order issued January 12, 2007, in FERC Docket No. ER07-231-000).

7.0   Unscheduled Transmission Service Agreement, PJM Interconnection L.L.C, Rate Schedule No. 30, Effective Date January 1, 2001.

Schedule C - Operating Protocol for the Implementation Of Con Ed – PJM Transmission Service Agreements

1.1 This "Operating Protocol" establishes procedures for the planning, operation, control, and scheduling of energy between the New York Independent System Operator, Inc. ("NYISO") and PJM Interconnection, L.L.C. ("PJM") (collectively, the "Parties"), associated with two Long-term Firm Point-to-Point Transmission Service Agreements ("TSAs") entered into by Consolidated Edison Company of New York ("ConEd") and PJM, dated April 18, 2008, executed in connection with the rollover of contracts dated May 22, 1975 (as amended May 9, 1978) and May 8, 1978 between ConEd and Public Service Electric & Gas Company ("PSE&G"). The TSA designated Original Service Agreement No. 1874 is referred to herein as the 400 MW transaction and the TSA designated Original Service Agreement No. 1873 is referred to as the 600 MW transaction. The two contracts are referred to collectively as the "600/400 MW transactions."

1.1.1 The 400 MW transaction. The 400 MW transaction has the same level of firmness as other firm transactions, except as provided in section 1.3 of this Operating Protocol.

1.1.2 The 600 MW transaction. The 600 MW transaction shall have the same level of firmness as other firm transactions.

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 transactions as established by this Operating Protocol.

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 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 transaction reductions when there is an emergency in the PJM Mid-Atlantic Area will be:

- Calling of Emergency Load Response

- Voltage reduction

- Pro-rata load shed and reduction of the 600/400 MW transactions[2]

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

1.4   All aspects of this Operating Protocol are subject to the dispute resolution procedures set forth in the Joint Operating Agreement Among and Between New York Independent System Operator, Inc., and PJM Interconnection, L.L.C.

1.5   The Parties will review all aspects of this Operating Protocol annually.

1.6   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 – Planning Procedures, Appendix 5 – Operation of the PARs, Appendix 6 – Distribution of Flows Associated with Implementation of Day-Ahead and Real Time Market Desired Flows, Appendix 7 – References, and Appendix 8 – Definitions.

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[2]   In a maximum generation emergency in the PJM Mid-Atlantic Area where PSE&G load needs to be curtailed, the PSE&G load would be curtailed pro-rata with curtailment of the ConEd requested service (and other firm service on the system). But, if NYISO is not also in a capacity emergency, the desired flow on ABC will be reduced by up to 400 MW to the extent necessary to avoid a PSEG load curtailment. ConEd may upgrade the transmission service for the 400 MW transaction to eliminate the reduction of the 400 MW transaction prior to load shed as described above by requesting such upgraded service and funding all necessary transmission upgrades as required by Part II and Part VI of the PJM OATT. The 600 MW transaction shall be reduced in the same manner as all other firm transactions in PJM.

**35.21   Schedule C - Operating Protocol for the Implementation Of Con Ed –
            PJM Transmission Service Agreements**

1.1   This "Operating Protocol" establishes procedures for the planning, operation, control, and scheduling of energy between the New York Independent System Operator, Inc. ("NYISO") and PJM Interconnection, L.L.C. ("PJM") (collectively, the "Parties"), associated with two Long-term Firm Point-to-Point Transmission Service Agreements ("TSAs") entered into by Consolidated Edison Company of New York ("ConEd") and PJM, dated April 18, 2008, executed in connection with the rollover of contracts dated May 22, 1975 (as amended May 9, 1978) and May 8, 1978 between ConEd and Public Service Electric & Gas Company ("PSE&G"). The TSA designated Original Service Agreement No. 1874 is referred to herein as the 400 MW transaction and the TSA designated Original Service Agreement No. 1873 is referred to as the 600 MW transaction. The two contracts are referred to collectively as the "600/400 MW transactions."

    1.1.1   The 400 MW transaction. The 400 MW transaction has the same level of firmness as other firm transactions, except as provided in section 1.3 of this Operating Protocol.

    1.1.2   The 600 MW transaction. The 600 MW transaction shall have the same level of firmness as other firm transactions.

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 transactions as established by this Operating Protocol.

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 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 transaction reductions when there is an emergency in the PJM Mid-Atlantic Area will be:

    •   Calling of Emergency Load Response
    •   Voltage reduction
    •   Pro-rata load shed and reduction of the 600/400 MW transactions[1]

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[1]   In a maximum generation emergency in the PJM Mid-Atlantic Area where PSE&G load needs to be curtailed, the PSE&G load would be curtailed pro-rata with curtailment of the ConEd requested service (and other firm service on the system). But, if NYISO is not also in a capacity emergency, the desired flow on ABC will be reduced by up to 400 MW to the extent necessary to avoid a PSEG load curtailment. ConEd may upgrade the transmission service for the 400 MW transaction to eliminate the reduction of the 400 MW transaction prior to load shed as described above by requesting such upgraded service and funding all necessary transmission upgrades as required by Part II and Part VI of the PJM OATT. The 600 MW transaction shall be reduced in the same manner as all other firm transactions in PJM.

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

1.4   All aspects of this Operating Protocol are subject to the dispute resolution procedures set forth in the Joint Operating Agreement Among and Between New York Independent System Operator, Inc., and PJM Interconnection, L.L.C.

1.5   The Parties will review all aspects of this Operating Protocol annually.

1.6   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 – Planning Procedures, Appendix 5 – Operation of the PARs, Appendix 6 – Distribution of Flows Associated with Implementation of Day-Ahead and Real Time Market Desired Flows, Appendix 7 – References, and Appendix 8 – Definitions.

35.21   Schedule C Appendices

Appendix 1- Process Flow

Two Day-ahead Actions:

1.   PJM shall post constraint forecast information on its OASIS, or a comparable website, indicating if there is the potential for off-cost operations, two days prior to the operating day by 9 pm (sample at Figure 1 in Appendix 7).

2.   PJM shall analyze transmission and generation outages in accordance with Appendix 2B to determine if the 600/400 MW transaction 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.2

Day Ahead Scheduling:

4.   ConEd shall submit a contract election (NY-DAE) in the NYISO's Day-Ahead Market for the 600/400 MW transactions prior to the NYISO Day Ahead Market (DAM) deadline (currently 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

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2   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>.

nodal prices for the JK (Ramapo), BC (Farragut) and A (Goethals) pricing points on the NYISO OASIS, or a comparable website (sample at Figure 2 in Appendix 7).

9. ConEd shall submit a transaction election (PJM-DAE) in the PJM Day Ahead Market prior to the PJM Day Ahead Market deadline (currently 12 noon):
   a) ConEd shall submit a transaction election for the 600 MW transaction.
   b) ConEd shall submit a transaction election for the 400 MW transaction.

10. PJM shall establish the PJM (aggregate ABC interface and aggregate JK interface) Desired Flow (PJMDF) 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 PJMDF schedules determined in (11). The amount of the PJM-DAE which clears will become the PJM Day Ahead Schedule amount (PJM-DAS).

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 on https://esuite.pjm.com/mui/index.htm or a comparable website (sample at Figure 3 in Appendix 7).

If there is congestion in the PJM Day Ahead Market:

14. If there is congestion in PJM that affects the 600/400 MW transaction, PJM shall re-dispatch.

In Day Operations:

15. 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.

16. 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 6.

17. 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 interface3.

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3   PJM and NYISO will operate in accordance with the bandwidth requirements of Step 17 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

18.   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.[4]
        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 the balancing market costs for deviations
                between PJM-DAS and RTE pursuant to the TSAs described in Section 35.1 of
                this Operating Protocol. ConEd shall settle with the NYISO for balancing market
                costs for deviations between NY-DAE and RTE. ConEd shall not be responsible
                for NYISO balancing market costs resulting from NYISO-directed deviations
                between NY DAE and RTE.

        Note - Actions identified in steps 17 and 18 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:

19.   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 use reasonable efforts to 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. PJM and the NYISO shall
        continue to use reasonable efforts to modify actual interface flows in incremental
        adjustments 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.

20.   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 use reasonable efforts to redirect up to 300 MW (in a mutually
        agreed upon amount and in mutually agreed upon increments) from the NYISO system

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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.

[4]   At all times, however, the ConEd election under the 600/400 MW transactions 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.

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. PJM and the NYISO shall continue to use reasonable efforts to modify actual interface flows in incremental adjustments 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

A list of constraints identified as potential constraints that may result in off-cost operation due to transfers associated with the 600/400 MW transactions will be posted on the PJM and NYISO OASIS or web page. The constraints included in the 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 transactions. Other constraints, not listed on the web site, may arise that could cause either ISO/RTO to operate off-cost. The list may be revised by NYISO/PJM to reflect system changes or security monitoring technique changes in their respective Control Areas.

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 transactions. 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.   It is not anticipated that one primary facility outage will preclude PJM from providing redispatch for the 600 MW or 400 MW transaction. However, combinations of two or more outages of the facilities, listed on the PJM OASIS or web page, could preclude PJM from accommodating all or part of the delivery, even with redispatch. In this case, PJM will provide notification to NYISO.

PJM will provide notification5 of all outages by posting these outages (transmission only) on the PJM OASIS or web site.

NYISO will provide notification of all outages by posting these outages (transmission only) on the NYISO OASIS or web site.

PJM and the NYISO will review and revise, as necessary, the list of primary and secondary facilities on an annual basis.

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

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:

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

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

$PJMDF_{ABC} = $ [PJM-DAE] + [A]*[PJM-NYISO DAM Schedule] + [B] *[OH-NYISO DAM Schedule] + [C] *[West-PJM DAM Schedule] + [D]*[DAM Lake Erie Circulation]

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

RTMDFABC = [RTE] + [A]*[PJM-NYISO RTM Schedule] + [B] *[OH-NYISO RTM Schedule] + [C] *[West-PJM RTM Schedule] + [D]*[RTM Lake Erie Circulation] + Auto Correction Factor

RTMDFJK = [RTE] - [A]*[PJM-NYISO RTM Schedule] - [B] *[OH-NYISO RTM Schedule] - [C] *[West-PJM RTM Schedule] - [D]*[RTM Lake Erie Circulation] + 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.

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 on the PJM and NY OASIS sites or web sites.

Appendix 4 - Planning Procedures

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 transactions.

EXISTING IMPAIRMENTS

- PJM and the NYISO are not aware of any existing impairments that would preclude provision of transmission service under the 600 MW / 400 MW transaction.

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 MW[6] of firm delivery from the NYISO at Waldwick and 1,000 MW of re-delivery from PJM at

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6   1,000 MW will also be included in the FTR simultaneous feasibility analysis.

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.

Appendix 5 – 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 transactions, 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 transactions .

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 1/3 of the ABC Interface), and for the J and K lines (initial assumption is balanced each ½ 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 600/400 MW transactions. 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. PJM and the NYISO shall continue to use reasonable efforts to modify actual interface flows in incremental adjustments 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. PJM and the NYISO shall continue to use reasonable efforts to modify actual interface flows in incremental adjustments 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 6 – 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 MW-100 MW = 200 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.
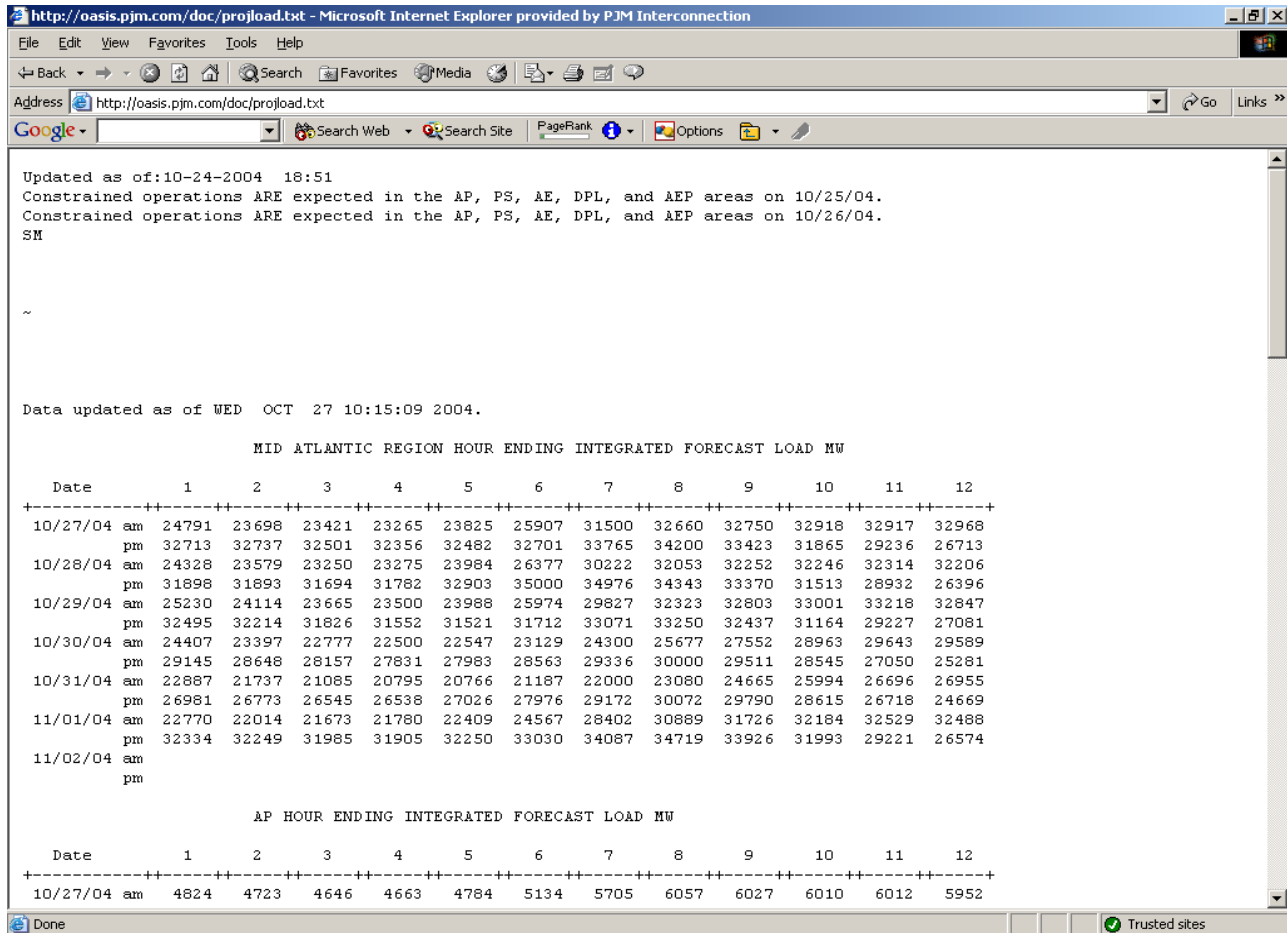
Appendix 7 – References

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Address   http://oasis.pjm.com/doc/projload.txt

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Updated as of:10-24-2004  18:51
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.
SM


~



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 23825 25907 31500 32660 32750 32918 32917 32968
         pm 32713 32737 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 27081
 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 21737 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
```

Done   Trusted sites

Figure 1 - PJM Constraints

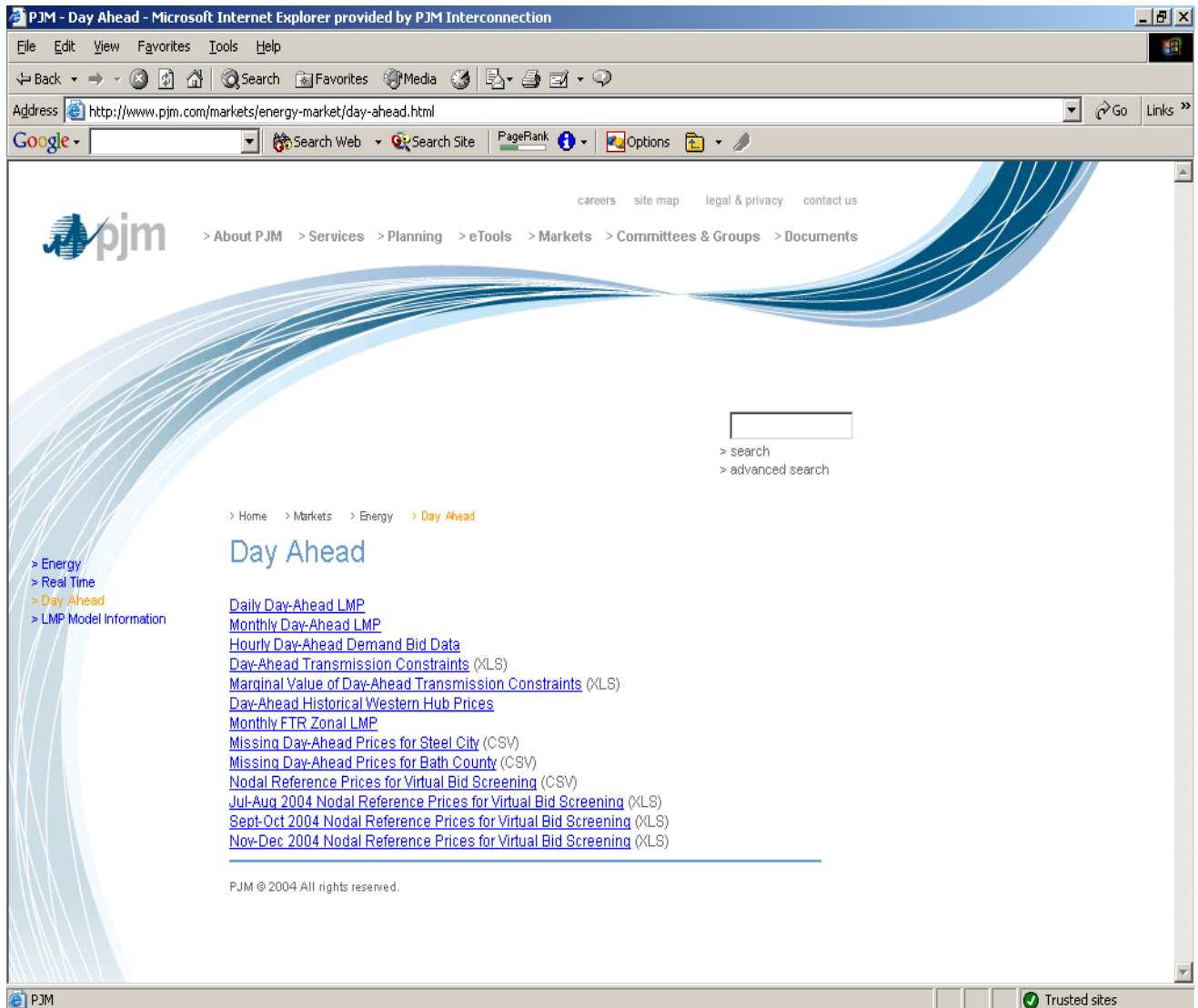**Figure 2 - NYISO Day Ahead Results**

Figure 3 - PJM Day Ahead Market Results

Appendix 8 – Definitions

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). However, for the evaluation of a PJM request for a redirect, the Off-cost value for PJM shall be more than $5 (with a reasonable expectation of the appropriate PJM cost differential continuing for at least two consecutive hours) and the Off-cost value for the NYISO shall be $0. For the evaluation of a NYISO request for a redirect, the Off-cost value for NYISO shall be more than $5 (with a reasonable expectation of the appropriate NYISO cost differential continuing for at least two consecutive hours) and then Off-cost value for the PJM shall be $0.

Mid-Atlantic Area: Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, PPL Electric Utilities Corporation, Pennsylvania Electric Company, Potomac Electric Power Company, Public Service Electric and Gas Company, and Rockland Electric Company.

New York ISO Day Ahead Election (NY-DAE): election by ConEd – submitted in the NYISO Day-Ahead Market prior to 5 a.m..

NY Desired Flow (NYDF): desired flow calculation by NYISO based on NY-DAE for input to NYISO Day Ahead Market.

PJM Day Ahead Market Election (PJM-DAE): election by the ConEd – submitted in the PJM Day Ahead Market prior to 12 noon.

PJM Desired Flow (PJMDF): desired flow calculation by PJM based on PJM-DAE for input to PJM Day Ahead Market.

ConEd Real-Time election (RTE): option by ConEd to request Real-Time Market modification from its Day Ahead Market election.

Real Time Market Desired Flow (RTMDF): Desired flow for real time operations.

Impairments: Conditions determined during the NYISO's and PJM's respective planning analyses that will cause implementation of the 600/400 MW transactions to result in violations of established reliability criteria.

Active Load Management (ALM): Active Load Management is end-use customer load which can be interrupted at the request of PJM. Such PJM request is considered an Emergency action and is implemented prior to a voltage reduction.

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.