August 6, 2012

VIA eTariff

Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426-0001

Re:  PJM Transmission Owners
Docket No. ER12-\__-000
Revised Schedule 12 to PJM Tariff

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act (“FPA”)$^1$ and Part 35 of the regulations of the Federal Energy Regulatory Commission (“FERC” or “Commission”),$^2$ the PJM Transmission Owners (“PJM Transmission Owners”), acting pursuant to the PJM Consolidated Transmission Owners Agreement (“CTOA”),$^3$ submit for filing proposed revisions to Schedule 12 of the PJM Open Access Transmission Tariff (“PJM

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$^3$ PJM Interconnection, L.L.C., Consolidated Transmission Owners Agreement, Rate Schedule No. 42 (June 19, 2008). This filing has been authorized pursuant to the individual and weighted voting requirements in Section 8.5 of the CTOA.
Tariff” or “OATT”) (“PJM”). PJM has been authorized by the PJM Transmission Owners to include this filing letter in the e-tariff filing to amend the OATT.\(^5\)

The PJM Transmission Owners request that the Commission accept the revised Schedule 12 without modification, condition or suspension, to become effective as of October 5, 2012, which is sixty days from the date of this submittal.

I. CONTENTS OF FILING

This filing consists of the following materials:

1. This transmittal letter;

2. Appendix A: Revised Sheets to PJM Tariff (Clean version) illustrating the proposed changes to Schedule 12.

3. Appendix B: Revised Sheets to PJM Tariff (Red-lined version) illustrating the proposed changes to Schedule 12.

II. BACKGROUND AND DESCRIPTION OF PROPOSED REVISIONS

Schedule 12 of the PJM Tariff establishes the recovery of the revenue requirement for the transmission enhancement charges that a transmission customer is required to pay if it is designated as a responsible customer. The assignment for cost responsibility for below 500 kV facilities (“Lower Voltage Facilities”) are determined pursuant to the distribution factor analysis (“DFAX”) methodology set forth in Section (b)(iii)(C) of

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\(^4\) Pursuant to Order No. 714, this filing is being submitted by PJM on behalf of the PJM Transmission Owners as part of an XML filing package that conforms with the Commission’s regulations. PJM has agreed to make all filings on behalf of the PJM Transmission Owners in order to retain administrative control over the PJM Tariff. Thus, the PJM Transmission Owners have requested that PJM submit the revised Schedule 12 to the PJM Tariff in the eTariff system as part of PJM’s electronic Intra PJM’s Tariff.

\(^5\) The OATT Schedule 12 Version 4.0.0 being filed in this matter includes language previously filed with the Commission on July 23, 2012 in Docket No. ER12-2288-000, as accepted language (“July 23rd filing”). The July 23rd filing requested an effective date of July 24, 2012 and was submitted to comply with the Commission’s Opinion No. 503 in Docket No. ER06-456, et al., which directed PJM to enter the Commission approved language into the eTariff system because it was initially filed prior to eTariff.
Schedule 12 of the PJM Tariff. To determine cost responsibility under the DFAX methodology, PJM utilizes a computer model of the electric network and power flow modeling software to calculate individual distribution factors for each facility being studied. The distribution factors, represented as decimal values or percentages, express the portions of a transfer of energy from a defined sink that will flow across a particular transmission facility or group of transmission facilities. These distribution factors represent a measure of the effect of the load of each transmission zone (or the load of a merchant transmission facility) on the constraint being analyzed. The distribution factors for a given Lower Voltage Facility identify the relative contribution of each load to the constraint, as determined by the power flow analysis. This distribution factor thus provides a measure of the relative contribution of different loads to the constraint, which can then be used to assign the costs of an upgrade designed to alleviate the constraint.

Section (b)(iii)(C)(5) of Schedule 12 of the PJM Tariff sets the distribution factor threshold at 0.001 (any distribution factor below that threshold is set to zero). This low distribution threshold factor can produce DFAX analysis outcomes that result in nonadjacent transmission zones sharing costs responsibility for distant, seemingly isolated projects. PJM suggested that a slight increase in the distribution factor threshold would eliminate such anomalous results. Therefore, in the instant filing, the PJM Transmission Owners propose to change the distribution factor threshold to 0.01 to

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6 PJM Tariff, Schedule 12 at § (b)(iii)(C).

decrease the number of anomalous results in the allocation of costs responsibility for projects.

In accordance with Section 7.3.2 of the CTOA, the PJM Transmission Owners consulted in advance with PJM and the PJM Members Committee. In addition, we are requesting the addition of PJM’s name to the service list.

III. EFFECTIVE DATE

The PJM Transmission Owners and PJM request that the Commission establish an effective date for the revisions to Schedule 12 of the PJM Tariff of October 5, 2012, which is sixty (60) days from the date of this filing.

IV. REQUEST FOR WAIVERS

The PJM Transmission Owners and PJM request that the Commission grant any waivers of its rules and regulations to accept the PJM Tariff modifications.

V. CORRESPONDENCE AND COMMUNICATIONS

The PJM Transmission Owners request that all communications regarding this filing be directed to the individuals listed below in their capacity as representatives of the PJM Transmission Owners acting at the direction of the CTOA Administrative Committee, and that their names be entered on the official service list maintained by the Secretary for this proceeding.  

8 The PJM Transmission Owners respectfully requests waiver of 18 C.F.R. § 385.203(b)(3) (2008) to allow more than two persons to be added to the service list in this proceeding.
On behalf of the PJM transmission Owners:

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VI. POSTING AND SERVICE

PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission’s regulations,\(^9\) PJM will post a copy of this filing to the FERC filings section of its internet site, located at the following link:  
http://www.pjm.com/documents/ferc-manuals/ferc-filings.aspx with a specific link to the

\(^9\) See 18 C.F.R §§ 35.2(e) and 385.2010(f)(3).
newly-filed document, and will send an e-mail on the same date as this filing to all PJM Members and all state utility regulatory commissions in the PJM Region\(^\text{10}\) alerting them that this filing has been made by PJM and is available by following such link. PJM also serves the parties listed on the Commission’s official service list for this docket. If the document is not immediately available by using the referenced link, the document will be available through the referenced link within 24 hours of the filing. Also, a copy of this filing will be available on the Commission’s eLibrary website located at the following link: http://www.ferc.gov/docs-filing/elibrary.asp in accordance with the Commission’s regulations and Order No. 714. The PJM Transmission Owners and PJM request any waivers of service by paper copy to the extent necessary.

\(^{10}\) PJM already maintains, updates and regularly uses e-mail lists for all PJM members and affected state commissions.
VII. CONCLUSION

For the reasons set forth herein, the PJM Transmission Owners, with PJM’s concurrence and agreement, respectfully request that the Commission accept these modifications to Schedule 12 of the PJM Tariff, and authorize them to take effect without suspension, condition or modification as of October 5, 2012.

Should additional information be required, please contact the undersigned.

Respectfully submitted,

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On behalf of the PJM Transmission Owners
Attachment A

Revisions to Section(s) of the PJM Open Access Transmission Tariff

(Marked / Redline Format)
SCHEDULE 12
Transmission Enhancement Charges

(a) Establishment of Transmission Enhancement Charges. One or more of the Transmission Owners may be designated to construct and own and/or finance Required Transmission Enhancements (as defined in Section 1.38C of the Tariff) by (1) the Regional Transmission Expansion Plan periodically developed pursuant to Schedule 6 of the Operating Agreement or (2) the Coordinated System Plan periodically developed pursuant to the Joint Operating Agreement Between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (“Coordinated System Plan”). Section 1.7 of Schedule 6 of the Operating Agreement recognizes that Transmission Owners, subject to obtaining any necessary regulatory approvals, may seek to recover the costs of Required Transmission Enhancements and obligates PJM Settlement to collect on behalf of Transmission Owner(s) any charges established by Transmission Owners to recover the costs of Required Transmission Enhancements. If a Transmission Owner is designated by the Regional Transmission Expansion Plan or the Coordinated System Plan to construct and own and/or finance a Required Transmission Enhancement, such Transmission Owner may choose any of the following cost recovery mechanisms, subject to the crediting procedures set forth in section (e) below:

(1) Decline to seek to recover the costs of Required Transmission Enhancements from customers until such time as it makes a filing pursuant to Section 205 of the Federal Power Act to revise its Network Integration Transmission Service rates;

(2) Make a filing pursuant Section 205 of the Federal Power Act and the FERC’s rules and regulations to establish the revenue requirement with respect to a Required Transmission Enhancement, without filing to revise its rates for Network Integration Transmission Service generally; or

(3) Establish the revenue requirement with respect to a Required Transmission Enhancement through the operation of a formula rate in effect applicable to its rates for Network Integration Transmission Service.

A charge established to recover the revenue requirement with respect to a Required Transmission Enhancement is hereafter referred to as a “Transmission Enhancement Charge.” Transmission Enhancement Charges of one or more Transmission Owners shall be established in accordance with this Schedule 12. Transmission Enhancement Charges of one or more transmission owners within the Midwest Independent System Operator, Inc. (“MISO”) shall be determined in accordance with to the MISO Tariff.

(b) Designation of Customers Subject to Transmission Enhancement Charges.

(i) Regional Facilities and Necessary Lower Voltage Facilities. Transmission Provider shall assign on a region-wide basis cost responsibility for Required Transmission Enhancements included in the Regional Transmission Expansion Plan that are (1) Transmission Facilities as defined in section 1.27 of the Consolidated Transmission Owners Agreement (Rate Schedule FERC No. 42) that operate at or above 500 kV (“Regional Facilities”), or (2) new
Transmission Facilities or expansions or enhancements to existing Transmission Facilities that operate below 500 kV that must be constructed or strengthened to support new Regional Facilities, based on the planning criteria used by the Transmission Provider in developing the applicable Regional Transmission Expansion Plan (“Necessary Lower Voltage Facilities”) as follows:

(A) Cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities shall be allocated annually among Responsible Customers as defined in this Schedule 12 on an annual load-ratio share basis using, consistent with section 34.1 of the Tariff, the applicable zonal loads at the time of each Zone’s annual peak load from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(B) A Merchant Transmission Facility will be allocated cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities pursuant to subsection (A) above, beginning in the calendar year following the year in which it initiates operation. Cost responsibility allocated to an owner of a Merchant Transmission Facility pursuant to subsection (A) above shall be based on: (1) for the year following the year in which it initiates operation, the actually awarded Firm Transmission Withdrawal Rights associated with its existing Merchant Transmission Facility; and (2) for all subsequent years, the annual peak load of the Merchant Transmission Facility (not to exceed its actual Firm Transmission Withdrawal Rights) from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(C) (1) Except for transformers that are an integral component of a Regional Facility, transformers with low-side voltages below 500 kV shall not be considered Regional Facilities or Necessary Lower Voltage Facilities; and (2) Transmission Facilities that operate below 500 kV and deliver energy from a Regional Facility to load shall not be considered Necessary Lower Voltage Facilities.

(D) Transmission Provider shall designate in the Schedule 12-Appendix the cost responsibility allocations determined pursuant to this subsection (b)(i) of this Schedule 12.

(ii) Docket No. ER06-456 Settlement. In Docket Nos. ER06-456-000, et al., the FERC approved a “Settlement Agreement And Offer Of Partial Settlement” filed on September 14, 2007, (“Docket No. ER06-456 Settlement”), that among other things provides procedures and methodologies for Transmission Provider, on an interim basis, to assign cost responsibility in accordance with Schedule 6 of the Operating Agreement for (1) Lower Voltage Facilities as defined in subsection (b)(iii) of this Schedule 12, (2) below 500 kV spare parts, replacement equipment, and circuit breakers and associated equipment, and (3) economic-based Required Transmission Enhancements that as planned will operate below 500 kV (collectively “Applicable Facilities”) regarding (1) the assignments of cost responsibility for Applicable Facilities filed in Docket Nos. ER06-456-000, -001, and -002, ER06-954-000, ER06-1271-000, and ER07-424-000, and (2) the assignment of cost responsibility for Applicable Facilities included in Regional Transmission Expansion Plans approved by the PJM Board after June 1, 2007.
(iii) **Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility for Required Transmission Enhancements that (a) are included in the Regional Transmission Expansion Plan to address one or more reliability violations or to address operational adequacy and performance issues; (b) as planned will operate below 500 kV; and (c) are not “Necessary Lower Voltage Facilities” as defined in section (b)(i) of this Schedule 12 (collectively “Lower Voltage Facilities”), as follows:

(A) Cost responsibility for a Lower Voltage Facility shall be assigned pursuant to subsection (b)(iii)(C) of this Schedule 12 when the good faith estimate of the cost of the Lower Voltage Facility prepared in connection with the development of the Regional Transmission Expansion Plan and provided to the PJM Board at the time the Lower Voltage Facility is included for the first time in the Regional Transmission Expansion Plan equals or exceeds $5 million. The determination of whether the estimated costs of a Lower Voltage Facility equals or exceeds this threshold shall be based solely on such good faith estimate of the cost of the Lower Voltage Facility, regardless of the actual costs incurred. For the purpose of applying this $5 million threshold, the estimated cost of a Lower Voltage Facility shall include the aggregate estimated costs of all of the transmission elements approved by the PJM Board at the same time for inclusion in the Regional Transmission Expansion Plan that collectively are intended to mitigate a specific reliability criteria violation or set of related violations.

(B) Cost responsibility for a Lower Voltage Facility, the estimated costs of which do not equal or exceed the $5 million threshold described in subsection (b)(iii)(A) of this Schedule 12, shall be assigned to the Zone where the Lower Voltage Facility is to be located. In the event that a Lower Voltage Facility, the estimated costs of which do not equal or exceed the $5 million threshold, consists of a single transmission element or multiple transmission elements to be located in more than one Zone, each Zone shall be assigned cost responsibility for the transmission elements or portions of the transmission elements located in such Zone. Merchant Transmission Facilities shall not be assigned cost responsibility for Lower Voltage Facilities the estimated costs of which do not equal or exceed the $5 million threshold.

(C) To assign cost responsibility for Lower Voltage Facilities, the estimated costs of which equal or exceed the $5 million threshold described in subsection (b)(iii)(A) of this Schedule 12, Transmission Provider shall use the DFAX analysis described in this subsection (b)(iii)(C) of Schedule 12 that takes into account the contributions of loads and Merchant Transmission Facilities to the reliability criteria violations for which Lower Voltage Facilities are identified as solutions.

(1) For purposes of the assignment of cost responsibility under this section (b)(iii)(C) of Schedule 12, the Transmission Provider, based on a computer model of the electric network and using power flow modeling software, shall calculate distribution factors, represented as decimal values or percentages, which express the portions of a transfer of energy from a defined source to a defined sink that will flow across a particular transmission facility or group of transmission facilities. These distribution factors represent a measure of the effect of the load of each Zone or Merchant Transmission Facility on the transmission constraint that requires the Lower Voltage Facility, as determined by a power flow analysis. In general, a distribution factor can be represented as:
Distribution Factor = (After-shift power flow – pre-shift power flow) / Total amount of power shifted

Total amount of power shifted = Modeled incremental megawatt transfer to a given Load Deliverability Area or Merchant Transmission Facility

Pre-shift power flow = Megawatt flow over the constrained transmission element before the incremental megawatt transfer

After-shift power flow = Megawatt flow over the constrained transmission element after the incremental megawatt transfer

When calculating such distribution factors:

(a) All distribution factors are calculated with respect to a constrained transmission facility that has been modeled to exceed its capability in violation of reliability criteria or to address operational adequacy and performance issues, requiring the addition of the Lower Voltage Facility identified in the Regional Transmission Expansion Plan to resolve the identified violation(s). The distribution factor is calculated for the transmission facility prior to the addition of the reinforcements identified to resolve the violation(s).

(b) Contributions to a criteria violation are determined based on distribution factors to the aggregate load within a Zone or, in the case of a Merchant Transmission Facility, distribution factors determined to the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(c) In the event that a violation is modeled to occur with one or more transmission facilities removed from service, the distribution factor will be calculated with these facilities removed from service.

(d) The calculation of distribution factors shall be determined using linear matrix algebra, such that distribution factors represent the ratio of (i) a change in megawatt flow on a constrained transmission facility to (ii) a change in megawatts transferred to aggregate load within a Zone or, in the case of a Merchant Transmission Facility, the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(e) All values and inputs used in the calculation of the distribution factor shall be the same values and inputs as used in the basecase for the Regional Transmission Expansion Plan.

(2) In the DFAX analysis, to determine the impact of zonal loads and Merchant Transmission Facilities on a constrained facility, Transmission Provider shall calculate a distribution factor for each Zone and each Merchant Transmission Facility by modeling a transfer from all generation in the PJM Region (a) individually to the loads in each Zone and (b)
individually to each Merchant Transmission Facility based on its associated existing or planned Firm Transmission Withdrawal Rights, as applicable, identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility. To establish the impact of the zonal load or Merchant Transmission Facility, in megawatts, on a constrained facility, the distribution factor on a constrained facility associated with the resulting transfer modeled by the Transmission Provider to an individual Zone or a Merchant Transmission Facility shall be multiplied, as applicable, by (c) zonal peak load of the Zone being evaluated or (d) (i) the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) the planned Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated as identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility, for a Merchant Transmission Facility that is not yet in service. The products, so determined, for each Zone and each Merchant Transmission Facility, shall determine the relative allocation shares for each Zone and each Merchant Transmission Facility.

(3) In the DFAX analysis, when Transmission Provider models a transfer from generation to all load within an individual Zone, Transmission Provider shall model the transfer to the Zone as a whole (not on a bus-by-bus basis).

(4) In the DFAX analysis, Transmission Provider shall calculate assignments of cost responsibility based on all reliability criteria violations that contribute to the need for a Lower Voltage Facility. If one Lower Voltage Facility or group of Lower Voltage Facilities resolves multiple violations, to determine a Zone or Merchant Transmission Facility’s cost responsibility for such facility, the Zone’s and Merchant Transmission Facility’s individual megawatt contribution to each reliability criteria violation (determined in subsection (b)(iii)(C)(2) of this Schedule 12) shall be proportionally scaled up or down, so that the sum of the adjusted megawatt impacts equals the magnitude of the overload (the “overload” meaning the megawatt flow on the transmission element exceeding the applicable rating therefore violating the reliability criteria, as modeled in the Regional Transmission Expansion Plan). The Zone’s or Merchant Transmission Facility’s cost responsibility assignment shall be calculated as the ratio of (i) the sum of the contributions, in megawatts, of that Zone or Merchant Transmission Facility, to each of the reliability criteria violations, to (ii) the sum of the overloads, in megawatts, on the constrained facilities that are the subject of the reliability criteria violations. The foregoing notwithstanding, for the cost responsibility assignments for Lower Voltage Facilities already filed in Docket Nos. ER06-456-000, -001, and -002, ER06-954-000, ER06-1271-000, and ER07-424-000, Transmission Provider shall consider only the single worst reliability criteria violation associated with each Lower Voltage Facility.

(5) In the DFAX analysis, Transmission Provider shall model generation both external and internal to individual Zones and Merchant Transmission Facilities to reflect (a) the boundaries of Locational Deliverability Areas (“LDAs”), as defined in Attachment DD to the Tariff, and (b) limitations with respect to the reliability objective for moving generation capacity across the transmission system. Transmission Provider shall adopt the Capacity Emergency Transfer Objective (“CETO”), as defined in Attachment DD to the Tariff, associated with that LDA and calculated for the applicable planning year to be the transfer limitation into the LDA. In modeling the system generation and load, Transmission Provider
shall assume that the percentage of the zonal load in the LDA served by external (or internal) generation to the LDA shall equal the ratio of (i) the CETO associated within that LDA (or generation internal with the LDA) to (ii) the sum of (a) the internal generation within the LDA and (b) the CETO associated with that LDA. For the generation dispatch used in calculating the distribution factor, Transmission Provider shall distribute these amounts of external/internal generation among all generation in the PJM Region external to/internal within the LDA, respectively, in proportion to their capacity. The contribution of each zonal load to the constraint shall be determined by multiplying the resulting distribution factor by the peak load of a Zone or the planned or existing Firm Transmission Withdrawal Rights associated with a Merchant Transmission Facility, as applicable. For Zones and Merchant Transmission Facilities that are located within LDAs that are also entirely contained in other larger LDAs, the modeling approach and distribution factor calculations shall be repeated for such Zones or Merchant Transmission Facilities as above for each LDA. The lowest distribution factor derived from these calculations shall be applied to the Zone or Merchant Transmission Facility in the calculation of the contribution to the constrained facility. A distribution factor threshold of 0.01 shall be applied to all cost responsibility assignment calculations such that any distribution factor less than 0.01 shall be set equal to zero.

(6) In the DFAX analysis, the Zones of Public Service Electric and Gas Company and Rockland Electric Company will be treated as one Zone unless and until Rockland Electric Company elects to be treated as a separate Zone in accordance with the terms of the ER06-456 Settlement.

(7) Transmission Provider shall round cost responsibility assignments determined using the DFAX analysis described in subsection (b)(iii)(C) of this Schedule 12 to the nearest one-hundredth of one percent.

(8) Transmission Provider shall not account for the ability to adjust use of phase angle regulators ("PARs") in the DFAX analysis described in subsection (b)(iii)(C) of this Schedule 12. In the DFAX analysis, all PAR angles shall be fixed at their base case settings.

(iv) **Below 500 kV Spare Parts, Replacement Equipment And Circuit Breakers.** Transmission Provider shall assign cost responsibility for below 500 kV spare parts, replacement equipment, and circuit breakers and associated equipment, included in the Regional Transmission Expansion Plan as follows:

(A) Below 500 kV spare parts that are part of the design specifications of a transmission element of a Lower Voltage Facility at the time the Lower Voltage Facility is first included in the Regional Transmission Expansion Plan shall be considered part of the Lower Voltage Facility for the purpose of applying the cost threshold described in subsection (b)(iii)(A) of this Schedule 12 and cost responsibility for such spare parts shall be assigned in the same manner as the Lower Voltage Facility. Cost responsibility for below 500 kV spare parts independently included the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Lower Voltage Facility as described above in this subsection shall be assigned to the Zone of the owner of the spare part.
(B) Below 500 kV replacement equipment that is part of the design specifications of a transmission element of a Lower Voltage Facility at the time the Lower Voltage Facility is first included in the Regional Transmission Expansion Plan shall be considered part of the Lower Voltage Facility for the purpose of applying the cost threshold described in subsection (b)(iii)(A) of this Schedule 12 and cost responsibility for such replacement equipment shall be assigned in the same manner as the Lower Voltage Facility. Cost responsibility for below 500 kV replacement equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Lower Voltage Facility as described above in this subsection, shall be assigned to the same Zones and/or Merchant Transmission Facilities and in the same proportions as the then-existing assignments of cost responsibility for the facilities that the replacement equipment is replacing.

(C) Below 500 kV circuit breakers and associated equipment that are part of the design specifications of a transmission element of a Lower Voltage Facility at the time the Lower Voltage Facility is first included in the Regional Transmission Expansion Plan shall be considered part of the Lower Voltage Facility for the purpose of applying the cost threshold described in subsection (b)(iii)(A) of this Schedule 12 and cost responsibility for such circuit breakers and associated equipment shall be assigned in the same manner as the Lower Voltage Facility. Cost responsibility for below 500 kV circuit breakers and associated equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Lower Voltage Facility as described above in this subsection, shall be assigned to the Zone of the owner of the circuit breaker and associated equipment.

(v) Economic-Based Required Transmission Enhancements That As Planned Will Operate Below 500 kV. Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV as follows:

(A) Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV and are accelerations of reliability-based Required Transmission Enhancements as described in section 1.5.7(b)(i) of Schedule 6 of the Operating Agreement (“Acceleration Projects”) by performing and comparing (1) a DFAX analysis consistent with the methodology described in subsection (b)(iii)(C) of this Schedule 12, and (2) a methodology that is intended to act as a proxy for expected economic benefits from reduced Locational Marginal Prices (“LMP Benefit”) over the period that the reliability-based enhancement or expansion is to be accelerated (“LMP Benefits Methodology”). The LMP Benefits Methodology shall determine cost responsibility assignment percentages to Zones and Merchant Transmission Facilities in the following manner. The LMP Benefit to a Zone shall be deemed to be equal to the reduction in Locational Marginal Price payments made by Load Serving Entities as a result of the Acceleration Project assuming the customers purchase all energy needs from the PJM Interchange Energy Market, and LMP Benefits so calculated shall be converted into percentage cost responsibility assignments for the affected Zones. The LMP Benefits Methodology shall not incorporate the financial effects of
allocations of Auction Revenue Rights or Financial Transmission Rights. The LMP Benefit to a Merchant Transmission Facility shall be deemed to be equal to the proportionate share of assigned cost responsibility using the DFAX analysis and the assignments of cost responsibility to other Zones in the LMP Benefits Methodology shall be proportionately adjusted, as necessary, to reflect this treatment of Merchant Transmission Facilities to ensure that the total allocation for any economic-based Required Transmission Enhancement that as planned will operate below 500 kV equals one hundred percent. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and the LMP Benefits Methodology, the results do not indicate at least a ten percentage point cost responsibility assignment differential between the two methods for any Zone, cost responsibility for the Acceleration Project shall be assigned using the DFAX analysis. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and LMP Benefits Methodology, the results indicate at least a ten percentage point cost responsibility assignment differential between the DFAX analysis and the LMP Benefits Methodology for any Zone, cost responsibility for the Acceleration Project for the period of time the reliability-based Required Transmission Enhancement is accelerated (i.e. the period between the date the Required Transmission Enhancement actually goes into service and the date the Required Transmission Enhancement originally was scheduled to go in service as a Lower Voltage Facility in the PJM Board approved Regional Transmission Expansion Plan) shall be assigned using the LMP Benefits Methodology. For all periods other than the period of time the reliability-based Required Transmission Enhancement is accelerated, cost responsibility for such an Acceleration Project shall be assigned based on a DFAX analysis consistent with the methodology set forth in subsection (b)(iii)(C) of this Schedule 12.

(B) Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV and that are modifications to reliability-based Required Transmission Enhancements as described in section 1.5.7(b)(ii) of Schedule 6 of the Operating Agreement based on a DFAX analysis consistent with the methodology set forth in subsection (b)(iii)(C) of this Schedule 12.

(C) Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV and are new enhancements or expansions that could relieve one or more economic constraints as described in section 1.5.7(b)(iii) of Schedule 6 of the Operating Agreement based on a Change in Load Energy Payment consistent with the methodology set forth in section 1.5.7(d) of Schedule 6 of the Operating Agreement. Cost responsibility shall be allocated based on each Zone’s pro rata share of the Change in Load Energy Payment. The Change in Load Energy Payment shall be the sum of the Change in the Load Energy Payment only of the Zones that show a decrease in Load Energy Payment.

(vi) Finality of Cost Responsibility Assignment. Once a Lower Voltage Facility or an economic-based Required Transmission Enhancement that as planned will operate below 500 kV is included in the Regional Transmission Expansion Plan, any modification to the Lower Voltage Facility or economic-based Required Transmission Enhancement that as planned will operate below 500 kV, respectively, that subsequently is included in the Regional Transmission
Expansion Plan shall be considered a separate additional project subject to its own cost responsibility assignment. Such subsequent modification shall not impact or be impacted by the cost responsibility assignments that already have been made for the previously approved Lower Voltage Facility or economic-based Required Transmission Enhancement, as applicable.

(vii) FERC Filing. Within 30 days of the approval of each Regional Transmission Expansion Plan or an addition to such plan by the PJM Board pursuant to Section 1.6 of Schedule 6 of the PJM Operating Agreement, the Transmission Provider shall designate in the Schedule 12-Appendix and in a report filed with the FERC the customers using Point-to-Point Transmission Service and/or Network Integration Transmission Service and Merchant Transmission Facility owners that will be subject to each such Transmission Enhancement Charge (“Responsible Customers”) based on the cost responsibility assignments determined pursuant to subsections (b)(i) through (v) of this Schedule 12. Those customers designated by the Transmission Provider as Responsible Customers shall have 30 days from the date the filing is made with the FERC to seek review of such designation. Such cost responsibility designations shall be the same as those made for the relevant Regional Facility, Necessary Lower Voltage Facility, Lower Voltage Facility, and economic-based Required Transmission Enhancement that as planned will operate below 500 kV in the Regional Transmission Expansion Plan or in the Coordinated System Plan.

(viii) MISO. For purposes of this Schedule 12, where the Responsible Customers are subject to the Open Access Transmission and Energy Markets Tariff for the Midwest Independent System Operator, Inc. (“MISO Tariff”), MISO shall be the Responsible Customer with respect to all such Required Transmission Enhancements. Cost responsibility with respect to Transmission Enhancement Charges for which MISO has been designated the Responsible Customer shall be allocated within MISO in accordance with the MISO Tariff.

(ix) Merchant Transmission Facilities.

(A) For purposes of this Schedule 12, where the Transmission Provider has allocated all or a portion of a Required Transmission Enhancement to a Merchant Transmission Facility, the owner of the Merchant Transmission Facility shall be the Responsible Customer with respect to such Required Transmission Enhancement, and shall pay the Transmission Enhancement Charges associated with the Required Transmission Enhancement.

(B)(1) Transmission Provider shall defer collection of Transmission Enhancement Charges associated with Lower Voltage Facilities from a Merchant Transmission Facility until the Merchant Transmission Facility goes into commercial operation; provided, however, in the event the commercial operation of a Merchant Transmission Facility is delayed beyond the commercial operation milestone date(s) specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility and the Transmission Provider or Transmission Owner constructing the Lower Voltage Facility demonstrates that the Merchant Transmission Facility is responsible for such delay, Transmission Provider may begin collecting Transmission Enhancement Charges from the Merchant Transmission Facility prior to the Merchant Transmission Facility going into commercial operation. Transmission Enhancement Charges allocated to a Merchant Transmission Facility for which collection is deferred in
accordance with this section (ix)(B)(1) shall be recorded in appropriate Transmission Provider accounts for deferred charges and collected in accordance with section (ix)(B)(3), below.

(2) Transmission Provider shall base the collection of Transmission Enhancement Charges associated with Lower Voltage Facilities from a Merchant Transmission Facility on the actual Firm Transmission Withdrawal Rights that have been awarded to the Merchant Transmission Facility; provided, however, to the extent that a Merchant Transmission Facility has been awarded less than the amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility, then Transmission Provider shall record the difference between the amount of Transmission Enhancement Charges collected based on the lesser amount of Firm Transmission Withdrawal Rights and the amount of Transmission Enhancement Charges based on the full amount of Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement in appropriate accounts for deferred charges and, after the Merchant Transmission Facility has been awarded the full amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement, collect such deferred amounts in accordance with section (b)(ix)(B)(3), below. Notwithstanding the foregoing, Transmission Provider may collect Transmission Enhancement Charges based on more than a Merchant Transmission Facility’s actually awarded Firm Transmission Withdrawal Rights (not to exceed the Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement) if the Transmission Provider or Transmission Owner demonstrates that the Merchant Transmission Facility is responsible for receiving fewer Firm Transmission Withdrawal Rights than are specified in the applicable Interconnection Service Agreement.

(3) Transmission Provider shall record: (i) in an appropriate deferred asset account, the Transmission Enhancement Charges associated with Lower Voltage Facilities for which collection is deferred in accordance with sections (b)(ix)(B)(1) and (b)(ix)(B)(2); and (ii) in an appropriate deferred liability account, the revenues associated with the Transmission Enhancement Charges that, absent the deferred charges, would have been due to Transmission Owners or to Transmission Owners’ customers as directed by the applicable Transmission Owner. At such time as collection of such deferred Transmission Enhancement Charges are permitted in accordance with sections (b)(ix)(B)(1) and (b)(ix)(B)(2), the deferred charges (along with appropriate interest) shall be collected from the Merchant Transmission Facility in equal installments over the twelve months following the commencement of the collection of the deferred charges. Such amounts shall be distributed to Transmission Owners or to Transmission Owners’ customers as directed by the applicable Transmission Owner, and the Transmission Provider shall make appropriate adjustments to the deferred asset and liability accounts. Transmission Provider shall not be responsible for distributing revenues associated with deferred Transmission Enhancement Charges unless and until such charges are collected in accordance with this section (b)(ix)(B), and uncollected deferred Transmission Enhancement Charges shall not be subject to Default Allocation Assessments to the Members pursuant to section 15.2 of the Operating Agreement.

(x) **Consolidated Edison Company of New York.** (A) Cost responsibility assignments to Consolidated Edison Company of New York for Required Transmission Enhancements pursuant to this Schedule 12 with respect to the Firm Point-To-Point Service
Agreements designated as Original Service Agreement No. 1873 and Original Service Agreement No. 1874 accepted by the Commission in Docket No. ER08-858 (“ConEd Service Agreements”) shall be in accordance with the terms and conditions of the settlement approved by the FERC in Docket No. ER08-858-000. (B) All cost responsibility assignments for Required Transmission Enhancements pursuant to this Schedule 12 shall be adjusted at the commencement and termination of service under the ConEd Service Agreements to take account of the assignments under subsection (x)(A).

(c) **Determination of Transmission Enhancement Charges.** In the event that any Transmission Owner recovers the cost of a Required Transmission Enhancement through a Transmission Enhancement Charge, such charge shall be determined as follows:

1. Transmission Provider shall identify in writing and post on the PJM Internet site the Required Transmission Enhancement(s) to which each Transmission Enhancement Charge corresponds. The Transmission Enhancement Charge with respect to a Required Transmission Enhancement shall recover the applicable Transmission Owner’s annual transmission revenue requirement associated with the Required Transmission Enhancement;

2. Each Transmission Enhancement Charge shall be a monthly charge based on all costs and applicable incentives associated with a particular Required Transmission Enhancement for which the Transmission Owner is responsible;

3. A Transmission Owner’s annual transmission revenue requirement associated with a Required Transmission Enhancement shall be determined pursuant to either (i) a unilateral filing by the Transmission Owner under Section 205 of the Federal Power Act and the FERC’s rules and regulations thereunder; or (ii) a formula rate in effect applicable to the Transmission Owner’s rates for Network Integration Transmission Service, including the costs associated with Required Transmission Enhancements; and

4. Each Transmission Enhancement Charge assigned by the Transmission Provider to Network Customers and Non-Zone Network Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges to Network Customers for Network Integration Transmission Service under Section 34.1 of the PJM Tariff. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Transmission Enhancement Charge that shall be effective during the subsequent calendar year.

5. Each Transmission Enhancement Charge assigned by the Transmission Provider to customers using Point-To-Point Transmission Service shall be calculated monthly to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Section 25 of the PJM Tariff.
(6) Each Transmission Enhancement Charge payable by an owner of a Merchant Transmission Facility pursuant to Section (b) of this Schedule shall be calculated as a fixed monthly charge.

(7) If a Transmission Owner chooses to recover the cost of Required Transmission Enhancements through the operation of a formula rate as described in Section (a), the Transmission Owner must make an informational filing with the Commission one year from the date the selecting Transmission Owner’s formula rates go into effect, and each year thereafter, providing a detailed list of the costs the Transmission Owner has incurred, and the revenues the Transmission Owner has received to provide service.

(d) Recovery of Transmission Enhancement Charges.

(1) Responsible Customers shall pay Transmission Provider all applicable Transmission Enhancement Charges as required by this Schedule 12 in addition to all other charges for transmission service for which such Responsible Customers are responsible under the Tariff.

(2) Transmission Provider shall collect all applicable Transmission Enhancement Charges from each Responsible Customer on a monthly basis. Transmission Provider shall remit or credit all revenues received from Responsible Customers under this Schedule 12 to the Transmission Owner(s) that established such charge or to MISO in the case of Transmission Enhancement Charges established by one or more transmission owners within MISO to be distributed to said transmission owners in accordance with the MISO Tariff.

(e) Crediting of Revenue from Transmission Enhancement Charges. In recognition that a Transmission Owner’s charges for Network Integration Transmission Service set forth in Attachment H are established based upon the Transmission Owner’s total cost of providing FERC-jurisdictional transmission service, including the costs associated with Required Transmission Enhancements, revenue from a Transmission Owner’s Transmission Enhancement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Network Customers in the Transmission Owner’s Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-to-Point Transmission Service for delivery in the Transmission Owner’s Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Point-to-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Transmission Enhancement Charges.
Attachment B

Revisions to Section(s) of the PJM Open Access Transmission Tariff

(Clean Format)
SCHEDULE 12
Transmission Enhancement Charges

(a) Establishment of Transmission Enhancement Charges. One or more of the Transmission Owners may be designated to construct and own and/or finance Required Transmission Enhancements (as defined in Section 1.38C of the Tariff) by (1) the Regional Transmission Expansion Plan periodically developed pursuant to Schedule 6 of the Operating Agreement or (2) the Coordinated System Plan periodically developed pursuant to the Joint Operating Agreement Between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (“Coordinated System Plan”). Section 1.7 of Schedule 6 of the Operating Agreement recognizes that Transmission Owners, subject to obtaining any necessary regulatory approvals, may seek to recover the costs of Required Transmission Enhancements and obligates PJMSettlement to collect on behalf of Transmission Owner(s) any charges established by Transmission Owners to recover the costs of Required Transmission Enhancements. If a Transmission Owner is designated by the Regional Transmission Expansion Plan or the Coordinated System Plan to construct and own and/or finance a Required Transmission Enhancement, such Transmission Owner may choose any of the following cost recovery mechanisms, subject to the crediting procedures set forth in section (e) below:

(1) Decline to seek to recover the costs of Required Transmission Enhancements from customers until such time as it makes a filing pursuant to Section 205 of the Federal Power Act to revise its Network Integration Transmission Service rates;

(2) Make a filing pursuant Section 205 of the Federal Power Act and the FERC’s rules and regulations to establish the revenue requirement with respect to a Required Transmission Enhancement, without filing to revise its rates for Network Integration Transmission Service generally; or

(3) Establish the revenue requirement with respect to a Required Transmission Enhancement through the operation of a formula rate in effect applicable to its rates for Network Integration Transmission Service.

A charge established to recover the revenue requirement with respect to a Required Transmission Enhancement is hereafter referred to as a “Transmission Enhancement Charge.” Transmission Enhancement Charges of one or more Transmission Owners shall be established in accordance with this Schedule 12. Transmission Enhancement Charges of one or more transmission owners within the Midwest Independent System Operator, Inc. (“MISO”) shall be determined in accordance with to the MISO Tariff.

(b) Designation of Customers Subject to Transmission Enhancement Charges.

(i) Regional Facilities and Necessary Lower Voltage Facilities. Transmission Provider shall assign on a region-wide basis cost responsibility for Required Transmission Enhancements included in the Regional Transmission Expansion Plan that are (1) Transmission Facilities as defined in section 1.27 of the Consolidated Transmission Owners Agreement (Rate Schedule FERC No. 42) that operate at or above 500 kV (“Regional Facilities”), or (2) new
Transmission Facilities or expansions or enhancements to existing Transmission Facilities that operate below 500 kV that must be constructed or strengthened to support new Regional Facilities, based on the planning criteria used by the Transmission Provider in developing the applicable Regional Transmission Expansion Plan (“Necessary Lower Voltage Facilities”) as follows:

(A) Cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities shall be allocated annually among Responsible Customers as defined in this Schedule 12 on an annual load-ratio share basis using, consistent with section 34.1 of the Tariff, the applicable zonal loads at the time of each Zone’s annual peak load from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(B) A Merchant Transmission Facility will be allocated cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities pursuant to subsection (A) above, beginning in the calendar year following the year in which it initiates operation. Cost responsibility allocated to an owner of a Merchant Transmission Facility pursuant to subsection (A) above shall be based on: (1) for the year following the year in which it initiates operation, the actually awarded Firm Transmission Withdrawal Rights associated with its existing Merchant Transmission Facility; and (2) for all subsequent years, the annual peak load of the Merchant Transmission Facility (not to exceed its actual Firm Transmission Withdrawal Rights) from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(C) (1) Except for transformers that are an integral component of a Regional Facility, transformers with low-side voltages below 500 kV shall not be considered Regional Facilities or Necessary Lower Voltage Facilities; and (2) Transmission Facilities that operate below 500 kV and deliver energy from a Regional Facility to load shall not be considered Necessary Lower Voltage Facilities.

(D) Transmission Provider shall designate in the Schedule 12-Appendix the cost responsibility allocations determined pursuant to this subsection (b)(i) of this Schedule 12.

(ii) Docket No. ER06-456 Settlement. In Docket Nos. ER06-456-000, et al., the FERC approved a “Settlement Agreement And Offer Of Partial Settlement” filed on September 14, 2007, (“Docket No. ER06-456 Settlement”), that among other things provides procedures and methodologies for Transmission Provider, on an interim basis, to assign cost responsibility in accordance with Schedule 6 of the Operating Agreement for (1) Lower Voltage Facilities as defined in subsection (b)(iii) of this Schedule 12, (2) below 500 kV spare parts, replacement equipment, and circuit breakers and associated equipment, and (3) economic-based Required Transmission Enhancements that as planned will operate below 500 kV (collectively “Applicable Facilities”) regarding (1) the assignments of cost responsibility for Applicable Facilities filed in Docket Nos. ER06-456-000, -001, and -002, ER06-954-000, ER06-1271-000, and ER07-424-000, and (2) the assignment of cost responsibility for Applicable Facilities included in Regional Transmission Expansion Plans approved by the PJM Board after June 1, 2007.
(iii) **Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility for Required Transmission Enhancements that (a) are included in the Regional Transmission Expansion Plan to address one or more reliability violations or to address operational adequacy and performance issues; (b) as planned will operate below 500 kV; and (c) are not “Necessary Lower Voltage Facilities” as defined in section (b)(i) of this Schedule 12 (collectively “Lower Voltage Facilities”), as follows:

(A) Cost responsibility for a Lower Voltage Facility shall be assigned pursuant to subsection (b)(iii)(C) of this Schedule 12 when the good faith estimate of the cost of the Lower Voltage Facility prepared in connection with the development of the Regional Transmission Expansion Plan and provided to the PJM Board at the time the Lower Voltage Facility is included for the first time in the Regional Transmission Expansion Plan equals or exceeds $5 million. The determination of whether the estimated costs of a Lower Voltage Facility equals or exceeds this threshold shall be based solely on such good faith estimate of the cost of the Lower Voltage Facility, regardless of the actual costs incurred. For the purpose of applying this $5 million threshold, the estimated cost of a Lower Voltage Facility shall include the aggregate estimated costs of all of the transmission elements approved by the PJM Board at the same time for inclusion in the Regional Transmission Expansion Plan that collectively are intended to mitigate a specific reliability criteria violation or set of related violations.

(B) Cost responsibility for a Lower Voltage Facility, the estimated costs of which do not equal or exceed the $5 million threshold described in subsection (b)(iii)(A) of this Schedule 12, shall be assigned to the Zone where the Lower Voltage Facility is to be located. In the event that a Lower Voltage Facility, the estimated costs of which do not equal or exceed the $5 million threshold, consists of a single transmission element or multiple transmission elements to be located in more than one Zone, each Zone shall be assigned cost responsibility for the transmission elements or portions of the transmission elements located in such Zone. Merchant Transmission Facilities shall not be assigned cost responsibility for Lower Voltage Facilities the estimated costs of which do not equal or exceed the $5 million threshold.

(C) To assign cost responsibility for Lower Voltage Facilities, the estimated costs of which equal or exceed the $5 million threshold described in subsection (b)(iii)(A) of this Schedule 12, Transmission Provider shall use the DFAX analysis described in this subsection (b)(iii)(C) of Schedule 12 that takes into account the contributions of loads and Merchant Transmission Facilities to the reliability criteria violations for which Lower Voltage Facilities are identified as solutions.

(1) For purposes of the assignment of cost responsibility under this section (b)(iii)(C) of Schedule 12, the Transmission Provider, based on a computer model of the electric network and using power flow modeling software, shall calculate distribution factors, represented as decimal values or percentages, which express the portions of a transfer of energy from a defined source to a defined sink that will flow across a particular transmission facility or group of transmission facilities. These distribution factors represent a measure of the effect of the load of each Zone or Merchant Transmission Facility on the transmission constraint that requires the Lower Voltage Facility, as determined by a power flow analysis. In general, a distribution factor can be represented as:
Distribution Factor = \( \frac{\text{After-shift power flow} - \text{pre-shift power flow}}{\text{Total amount of power shifted}} \)

Total amount of power shifted = Modeled incremental megawatt transfer to a given Load Deliverability Area or Merchant Transmission Facility

Pre-shift power flow = Megawatt flow over the constrained transmission element before the incremental megawatt transfer

After-shift power flow = Megawatt flow over the constrained transmission element after the incremental megawatt transfer

When calculating such distribution factors:

(a) All distribution factors are calculated with respect to a constrained transmission facility that has been modeled to exceed its capability in violation of reliability criteria or to address operational adequacy and performance issues, requiring the addition of the Lower Voltage Facility identified in the Regional Transmission Expansion Plan to resolve the identified violation(s). The distribution factor is calculated for the transmission facility prior to the addition of the reinforcements identified to resolve the violation(s).

(b) Contributions to a criteria violation are determined based on distribution factors to the aggregate load within a Zone or, in the case of a Merchant Transmission Facility, distribution factors determined to the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(c) In the event that a violation is modeled to occur with one or more transmission facilities removed from service, the distribution factor will be calculated with these facilities removed from service.

(d) The calculation of distribution factors shall be determined using linear matrix algebra, such that distribution factors represent the ratio of (i) a change in megawatt flow on a constrained transmission facility to (ii) a change in megawatts transferred to aggregate load within a Zone or, in the case of a Merchant Transmission Facility, the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(e) All values and inputs used in the calculation of the distribution factor shall be the same values and inputs as used in the basecase for the Regional Transmission Expansion Plan.

(2) In the DFAX analysis, to determine the impact of zonal loads and Merchant Transmission Facilities on a constrained facility, Transmission Provider shall calculate a distribution factor for each Zone and each Merchant Transmission Facility by modeling a transfer from all generation in the PJM Region (a) individually to the loads in each Zone and (b)
individually to each Merchant Transmission Facility based on its associated existing or planned Firm Transmission Withdrawal Rights, as applicable, identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility. To establish the impact of the zonal load or Merchant Transmission Facility, in megawatts, on a constrained facility, the distribution factor on a constrained facility associated with the resulting transfer modeled by the Transmission Provider to an individual Zone or a Merchant Transmission Facility shall be multiplied, as applicable, by (c) zonal peak load of the Zone being evaluated or (d) (i) the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) the planned Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated as identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility, for a Merchant Transmission Facility that is not yet in service. The products, so determined, for each Zone and each Merchant Transmission Facility, shall determine the relative allocation shares for each Zone and each Merchant Transmission Facility.

(3) In the DFAX analysis, when Transmission Provider models a transfer from generation to all load within an individual Zone, Transmission Provider shall model the transfer to the Zone as a whole (not on a bus-by-bus basis).

(4) In the DFAX analysis, Transmission Provider shall calculate assignments of cost responsibility based on all reliability criteria violations that contribute to the need for a Lower Voltage Facility. If one Lower Voltage Facility or group of Lower Voltage Facilities resolves multiple violations, to determine a Zone or Merchant Transmission Facility’s cost responsibility for such facility, the Zone’s and Merchant Transmission Facility’s individual megawatt contribution to each reliability criteria violation (determined in subsection (b)(iii)(C)(2) of this Schedule 12) shall be proportionally scaled up or down, so that the sum of the adjusted megawatt impacts equals the magnitude of the overload (the “overload” meaning the megawatt flow on the transmission element exceeding the applicable rating therefore violating the reliability criteria, as modeled in the Regional Transmission Expansion Plan). The Zone’s or Merchant Transmission Facility’s cost responsibility assignment shall be calculated as the ratio of (i) the sum of the contributions, in megawatts, of that Zone or Merchant Transmission Facility, to each of the reliability criteria violations, to (ii) the sum of the overloads, in megawatts, on the constrained facilities that are the subject of the reliability criteria violations. The foregoing notwithstanding, for the cost responsibility assignments for Lower Voltage Facilities already filed in Docket Nos. ER06-456-000, -001, and -002, ER06-954-000, ER06-1271-000, and ER07-424-000, Transmission Provider shall consider only the single worst reliability criteria violation associated with each Lower Voltage Facility.

(5) In the DFAX analysis, Transmission Provider shall model generation both external and internal to individual Zones and Merchant Transmission Facilities to reflect (a) the boundaries of Locational Deliverability Areas (“LDAs”), as defined in Attachment DD to the Tariff, and (b) limitations with respect to the reliability objective for moving generation capacity across the transmission system. Transmission Provider shall adopt the Capacity Emergency Transfer Objective (“CETO”), as defined in Attachment DD to the Tariff, associated with that LDA and calculated for the applicable planning year to be the transfer limitation into the LDA. In modeling the system generation and load, Transmission Provider
shall assume that the percentage of the zonal load in the LDA served by external (or internal) generation to the LDA shall equal the ratio of (i) the CETO associated within that LDA (or generation internal with the LDA) to (ii) the sum of (a) the internal generation within the LDA and (b) the CETO associated with that LDA. For the generation dispatch used in calculating the distribution factor, Transmission Provider shall distribute these amounts of external/internal generation among all generation in the PJM Region external to/internal within the LDA, respectively, in proportion to their capacity. The contribution of each zonal load to the constraint shall be determined by multiplying the resulting distribution factor by the peak load of a Zone or the planned or existing Firm Transmission Withdrawal Rights associated with a Merchant Transmission Facility, as applicable. For Zones and Merchant Transmission Facilities that are located within LDAs that are also entirely contained in other larger LDAs, the modeling approach and distribution factor calculations shall be repeated for such Zones or Merchant Transmission Facilities as above for each LDA. The lowest distribution factor derived from these calculations shall be applied to the Zone or Merchant Transmission Facility in the calculation of the contribution to the constrained facility. A distribution factor threshold of 0.01 shall be applied to all cost responsibility assignment calculations such that any distribution factor less than 0.01 shall be set equal to zero.

(6) In the DFAX analysis, the Zones of Public Service Electric and Gas Company and Rockland Electric Company will be treated as one Zone unless and until Rockland Electric Company elects to be treated as a separate Zone in accordance with the terms of the ER06-456 Settlement.

(7) Transmission Provider shall round cost responsibility assignments determined using the DFAX analysis described in subsection (b)(iii)(C) of this Schedule 12 to the nearest one-hundredth of one percent.

(8) Transmission Provider shall not account for the ability to adjust use of phase angle regulators (“PARs”) in the DFAX analysis described in subsection (b)(iii)(C) of this Schedule 12. In the DFAX analysis, all PAR angles shall be fixed at their base case settings.

(iv) Below 500 kV Spare Parts, Replacement Equipment And Circuit Breakers. Transmission Provider shall assign cost responsibility for below 500 kV spare parts, replacement equipment, and circuit breakers and associated equipment, included in the Regional Transmission Expansion Plan as follows:

(A) Below 500 kV spare parts that are part of the design specifications of a transmission element of a Lower Voltage Facility at the time the Lower Voltage Facility is first included in the Regional Transmission Expansion Plan shall be considered part of the Lower Voltage Facility for the purpose of applying the cost threshold described in subsection (b)(iii)(A) of this Schedule 12 and cost responsibility for such spare parts shall be assigned in the same manner as the Lower Voltage Facility. Cost responsibility for below 500 kV spare parts independently included the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Lower Voltage Facility as described above in this subsection shall be assigned to the Zone of the owner of the spare part.
(B) Below 500 kV replacement equipment that is part of the design specifications of a transmission element of a Lower Voltage Facility at the time the Lower Voltage Facility is first included in the Regional Transmission Expansion Plan shall be considered part of the Lower Voltage Facility for the purpose of applying the cost threshold described in subsection (b)(iii)(A) of this Schedule 12 and cost responsibility for such replacement equipment shall be assigned in the same manner as the Lower Voltage Facility. Cost responsibility for below 500 kV replacement equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Lower Voltage Facility as described above in this subsection, shall be assigned to the same Zones and/or Merchant Transmission Facilities and in the same proportions as the then-existing assignments of cost responsibility for the facilities that the replacement equipment is replacing.

(C) Below 500 kV circuit breakers and associated equipment that are part of the design specifications of a transmission element of a Lower Voltage Facility at the time the Lower Voltage Facility is first included in the Regional Transmission Expansion Plan shall be considered part of the Lower Voltage Facility for the purpose of applying the cost threshold described in subsection (b)(iii)(A) of this Schedule 12 and cost responsibility for such circuit breakers and associated equipment shall be assigned in the same manner as the Lower Voltage Facility. Cost responsibility for below 500 kV circuit breakers and associated equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Lower Voltage Facility as described above in this subsection, shall be assigned to the Zone of the owner of the circuit breaker and associated equipment.

(v) Economic-Based Required Transmission Enhancements That As Planned Will Operate Below 500 kV. Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV as follows:

(A) Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV and are accelerations of reliability-based Required Transmission Enhancements as described in section 1.5.7(b)(i) of Schedule 6 of the Operating Agreement (“Acceleration Projects”) by performing and comparing (1) a DFAX analysis consistent with the methodology described in subsection (b)(iii)(C) of this Schedule 12, and (2) a methodology that is intended to act as a proxy for expected economic benefits from reduced Locational Marginal Prices (“LMP Benefit”) over the period that the reliability-based enhancement or expansion is to be accelerated (“LMP Benefits Methodology”). The LMP Benefits Methodology shall determine cost responsibility assignment percentages to Zones and Merchant Transmission Facilities in the following manner. The LMP Benefit to a Zone shall be deemed to be equal to the reduction in Locational Marginal Price payments made by Load Serving Entities as a result of the Acceleration Project assuming the customers purchase all energy needs from the PJM Interchange Energy Market, and LMP Benefits so calculated shall be converted into percentage cost responsibility assignments for the affected Zones. The LMP Benefits Methodology shall not incorporate the financial effects of
allocations of Auction Revenue Rights or Financial Transmission Rights. The LMP Benefit to a Merchant Transmission Facility shall be deemed to be equal to the proportionate share of assigned cost responsibility using the DFAX analysis and the assignments of cost responsibility to other Zones in the LMP Benefits Methodology shall be proportionately adjusted, as necessary, to reflect this treatment of Merchant Transmission Facilities to ensure that the total allocation for any economic-based Required Transmission Enhancement that as planned will operate below 500 kV equals one hundred percent. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and the LMP Benefits Methodology, the results do not indicate at least a ten percentage point cost responsibility assignment differential between the two methods for any Zone, cost responsibility for the Acceleration Project shall be assigned using the DFAX analysis. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and LMP Benefits Methodology, the results indicate at least a ten percentage point cost responsibility assignment differential between the DFAX analysis and the LMP Benefits Methodology for any Zone, cost responsibility for the Acceleration Project for the period of time the reliability-based Required Transmission Enhancement is accelerated (i.e. the period between the date the Required Transmission Enhancement actually goes into service and the date the Required Transmission Enhancement originally was scheduled to go in service as a Lower Voltage Facility in the PJM Board approved Regional Transmission Expansion Plan) shall be assigned using the LMP Benefits Methodology. For all periods other than the period of time the reliability-based Required Transmission Enhancement is accelerated, cost responsibility for such an Acceleration Project shall be assigned based on a DFAX analysis consistent with the methodology set forth in subsection (b)(iii)(C) of this Schedule 12.

(B) Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV and that are modifications to reliability-based Required Transmission Enhancements as described in section 1.5.7(b)(ii) of Schedule 6 of the Operating Agreement based on a DFAX analysis consistent with the methodology set forth in subsection (b)(iii)(C) of this Schedule 12.

(C) Transmission Provider shall assign cost responsibility for economic-based Required Transmission Enhancements that as planned will operate below 500 kV and are new enhancements or expansions that could relieve one or more economic constraints as described in section 1.5.7(b)(iii) of Schedule 6 of the Operating Agreement based on a Change in Load Energy Payment consistent with the methodology set forth in section 1.5.7(d) of Schedule 6 of the Operating Agreement. Cost responsibility shall be allocated based on each Zone’s pro rata share of the Change in Load Energy Payment. The Change in Load Energy Payment shall be the sum of the Change in the Load Energy Payment only of the Zones that show a decrease in Load Energy Payment.

(vi) **Finality of Cost Responsibility Assignment.** Once a Lower Voltage Facility or an economic-based Required Transmission Enhancement that as planned will operate below 500 kV is included in the Regional Transmission Expansion Plan, any modification to the Lower Voltage Facility or economic-based Required Transmission Enhancement that as planned will operate below 500 kV, respectively, that subsequently is included in the Regional Transmission Plan, should they result in increased cost responsibility for the modified facility or enhancement, shall be treated as a new project and assessed based on the methodology outlined in subsection (b)(iii)(C) of this Schedule 12.
Expansion Plan shall be considered a separate additional project subject to its own cost responsibility assignment. Such subsequent modification shall not impact or be impacted by the cost responsibility assignments that already have been made for the previously approved Lower Voltage Facility or economic-based Required Transmission Enhancement, as applicable.

(vii) **FERC Filing.** Within 30 days of the approval of each Regional Transmission Expansion Plan or an addition to such plan by the PJM Board pursuant to Section 1.6 of Schedule 6 of the PJM Operating Agreement, the Transmission Provider shall designate in the Schedule 12-Appendix and in a report filed with the FERC the customers using Point-to-Point Transmission Service and/or Network Integration Transmission Service and Merchant Transmission Facility owners that will be subject to each such Transmission Enhancement Charge (“Responsible Customers”) based on the cost responsibility assignments determined pursuant to subsections (b)(i) through (v) of this Schedule 12. Those customers designated by the Transmission Provider as Responsible Customers shall have 30 days from the date the filing is made with the FERC to seek review of such designation. Such cost responsibility designations shall be the same as those made for the relevant Regional Facility, Necessary Lower Voltage Facility, Lower Voltage Facility, and economic-based Required Transmission Enhancement that as planned will operate below 500 kV in the Regional Transmission Expansion Plan or in the Coordinated System Plan.

(viii) **MISO.** For purposes of this Schedule 12, where the Responsible Customers are subject to the Open Access Transmission and Energy Markets Tariff for the Midwest Independent System Operator, Inc. (“MISO Tariff”), MISO shall be the Responsible Customer with respect to all such Required Transmission Enhancements. Cost responsibility with respect to Transmission Enhancement Charges for which MISO has been designated the Responsible Customer shall be allocated within MISO in accordance with the MISO Tariff.

(ix) **Merchant Transmission Facilities.**

(A) For purposes of this Schedule 12, where the Transmission Provider has allocated all or a portion of a Required Transmission Enhancement to a Merchant Transmission Facility, the owner of the Merchant Transmission Facility shall be the Responsible Customer with respect to such Required Transmission Enhancement, and shall pay the Transmission Enhancement Charges associated with the Required Transmission Enhancement.

(B)(1) Transmission Provider shall defer collection of Transmission Enhancement Charges associated with Lower Voltage Facilities from a Merchant Transmission Facility until the Merchant Transmission Facility goes into commercial operation; provided, however, in the event the commercial operation of a Merchant Transmission Facility is delayed beyond the commercial operation milestone date(s) specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility and the Transmission Provider or Transmission Owner constructing the Lower Voltage Facility demonstrates that the Merchant Transmission Facility is responsible for such delay, Transmission Provider may begin collecting Transmission Enhancement Charges from the Merchant Transmission Facility prior to the Merchant Transmission Facility going into commercial operation. Transmission Enhancement Charges allocated to a Merchant Transmission Facility for which collection is deferred in
accordance with this section (ix)(B)(1) shall be recorded in appropriate Transmission Provider accounts for deferred charges and collected in accordance with section (ix)(B)(3), below.

(2) Transmission Provider shall base the collection of Transmission Enhancement Charges associated with Lower Voltage Facilities from a Merchant Transmission Facility on the actual Firm Transmission Withdrawal Rights that have been awarded to the Merchant Transmission Facility; provided, however, to the extent that a Merchant Transmission Facility has been awarded less than the amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility, then Transmission Provider shall record the difference between the amount of Transmission Enhancement Charges collected based on the lesser amount of Firm Transmission Withdrawal Rights and the amount of Transmission Enhancement Charges based on the full amount of Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement in appropriate accounts for deferred charges and, after the Merchant Transmission Facility has been awarded the full amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement, collect such deferred amounts in accordance with section (b)(ix)(B)(3), below. Notwithstanding the foregoing, Transmission Provider may collect Transmission Enhancement Charges based on more than a Merchant Transmission Facility’s actually awarded Firm Transmission Withdrawal Rights (not to exceed the Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement) if the Transmission Provider or Transmission Owner demonstrates that the Merchant Transmission Facility is responsible for receiving fewer Firm Transmission Withdrawal Rights than are specified in the applicable Interconnection Service Agreement.

(3) Transmission Provider shall record: (i) in an appropriate deferred asset account, the Transmission Enhancement Charges associated with Lower Voltage Facilities for which collection is deferred in accordance with sections (b)(ix)(B)(1) and (b)(ix)(B)(2); and (ii) in an appropriate deferred liability account, the revenues associated with the Transmission Enhancement Charges that, absent the deferred charges, would have been due to Transmission Owners or to Transmission Owners’ customers as directed by the applicable Transmission Owner. At such time as collection of such deferred Transmission Enhancement Charges are permitted in accordance with sections (b)(ix)(B)(1) and (b)(ix)(B)(2), the deferred charges (along with appropriate interest) shall be collected from the Merchant Transmission Facility in equal installments over the twelve months following the commencement of the collection of the deferred charges. Such amounts shall be distributed to Transmission Owners or to Transmission Owners’ customers as directed by the applicable Transmission Owner, and the Transmission Provider shall make appropriate adjustments to the deferred asset and liability accounts. Transmission Provider shall not be responsible for distributing revenues associated with deferred Transmission Enhancement Charges unless and until such charges are collected in accordance with this section (b)(ix)(B), and uncollected deferred Transmission Enhancement Charges shall not be subject to Default Allocation Assessments to the Members pursuant to section 15.2 of the Operating Agreement.

(x) Consolidated Edison Company of New York. (A) Cost responsibility assignments to Consolidated Edison Company of New York for Required Transmission Enhancements pursuant to this Schedule 12 with respect to the Firm Point-To-Point Service
Agreements designated as Original Service Agreement No. 1873 and Original Service Agreement No. 1874 accepted by the Commission in Docket No. ER08-858 (“ConEd Service Agreements”) shall be in accordance with the terms and conditions of the settlement approved by the FERC in Docket No. ER08-858-000. (B) All cost responsibility assignments for Required Transmission Enhancements pursuant to this Schedule 12 shall be adjusted at the commencement and termination of service under the ConEd Service Agreements to take account of the assignments under subsection (x)(A).

(c) **Determination of Transmission Enhancement Charges.** In the event that any Transmission Owner recovers the cost of a Required Transmission Enhancement through a Transmission Enhancement Charge, such charge shall be determined as follows:

(1) Transmission Provider shall identify in writing and post on the PJM Internet site the Required Transmission Enhancement(s) to which each Transmission Enhancement Charge corresponds. The Transmission Enhancement Charge with respect to a Required Transmission Enhancement shall recover the applicable Transmission Owner’s annual transmission revenue requirement associated with the Required Transmission Enhancement;

(2) Each Transmission Enhancement Charge shall be a monthly charge based on all costs and applicable incentives associated with a particular Required Transmission Enhancement for which the Transmission Owner is responsible;

(3) A Transmission Owner’s annual transmission revenue requirement associated with a Required Transmission Enhancement shall be determined pursuant to either (i) a unilateral filing by the Transmission Owner under Section 205 of the Federal Power Act and the FERC’s rules and regulations thereunder; or (ii) a formula rate in effect applicable to the Transmission Owner’s rates for Network Integration Transmission Service, including the costs associated with Required Transmission Enhancements; and

(4) Each Transmission Enhancement Charge assigned by the Transmission Provider to Network Customers and Non-Zone Network Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges to Network Customers for Network Integration Transmission Service under Section 34.1 of the PJM Tariff. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Transmission Enhancement Charge that shall be effective during the subsequent calendar year.

(5) Each Transmission Enhancement Charge assigned by the Transmission Provider to customers using Point-To-Point Transmission Service shall be calculated monthly to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Section 25 of the PJM Tariff.
(6) Each Transmission Enhancement Charge payable by an owner of a Merchant Transmission Facility pursuant to Section (b) of this Schedule shall be calculated as a fixed monthly charge.

(7) If a Transmission Owner chooses to recover the cost of Required Transmission Enhancements through the operation of a formula rate as described in Section (a), the Transmission Owner must make an informational filing with the Commission one year from the date the selecting Transmission Owner’s formula rates go into effect, and each year thereafter, providing a detailed list of the costs the Transmission Owner has incurred, and the revenues the Transmission Owner has received to provide service.

(d) Recovery of Transmission Enhancement Charges.

(1) Responsible Customers shall pay Transmission Provider all applicable Transmission Enhancement Charges as required by this Schedule 12 in addition to all other charges for transmission service for which such Responsible Customers are responsible under the Tariff.

(2) Transmission Provider shall collect all applicable Transmission Enhancement Charges from each Responsible Customer on a monthly basis. Transmission Provider shall remit or credit all revenues received from Responsible Customers under this Schedule 12 to the Transmission Owner(s) that established such charge or to MISO in the case of Transmission Enhancement Charges established by one or more transmission owners within MISO to be distributed to said transmission owners in accordance with the MISO Tariff.

(e) Crediting of Revenue from Transmission Enhancement Charges. In recognition that a Transmission Owner’s charges for Network Integration Transmission Service set forth in Attachment H are established based upon the Transmission Owner’s total cost of providing FERC-jurisdictional transmission service, including the costs associated with Required Transmission Enhancements, revenue from a Transmission Owner’s Transmission Enhancement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Network Customers in the Transmission Owner’s Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-to-Point Transmission Service for delivery in the Transmission Owner’s Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Point-to-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Transmission Enhancement Charges.