

**June 21, 2013**

**Notice of  
Attachment H Transmission Owners Stakeholder Process for  
Compliance with Requirements of FERC's March 22, 2013 Order  
Relating to Regional Cost Allocation**

The Attachment H Transmission Owners<sup>1</sup> have developed the draft tariff revisions included with the attached explanatory document as the basis for compliance with certain requirements of the March 22, 2013 Order issued by the Federal Energy Regulatory Commission ("FERC") in Docket Nos. ER13-198-000, *et al.*<sup>2</sup> The Attachment H Transmission Owners intend to use these tariff revisions as the basis for the compliance filing to be submitted to the FERC on or before July 22, 2013.

Written comments on the draft tariff revisions may be submitted for consideration by the Attachment H Transmission Owners by email to [TO\\_Cost\\_Allocation@pjm.com](mailto:TO_Cost_Allocation@pjm.com). Written comments should be submitted on or before July 3, 2013.

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<sup>1</sup> PJM Transmission Owners with revenue requirements provided in Attachment H of the PJM Open Access Transmission Tariff.

<sup>2</sup> *PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,214 (2013).

June 21, 2013

**PLAN FOR COMPLIANCE WITH  
REQUIREMENTS OF FERC'S MARCH 22, 2013 ORDER  
RELATING TO REGIONAL COST ALLOCATION**

In the order issued by the Federal Energy Regulatory Commission ("FERC") on March 22, 2013 in Docket Nos. ER13-198-000, *et al.*,<sup>3</sup> FERC imposed four requirements relating to the filing submitted by the PJM Attachment H Transmission Owners<sup>4</sup> on October 11, 2012 concerning regional cost allocation (the "October 11 Filing"). This document describes the approach the PJM Transmission Owners plan to take to comply with these requirements in the filing they submit to the FERC on or before July 22, 2013. The revisions to the PJM tariff that the PJM Transmission Owners plan to propose are marked on Attachment 1 to this document.

**1. Nonincumbent Transmission Developers' Access to Regional Cost Allocation Mechanisms.**

In the October 11 Filing, the PJM Transmission Owners proposed to revise Schedule 12 of the PJM tariff, which provides the mechanism for allocating the costs of Required Transmission Enhancements included in the Regional Transmission Expansion Plan, to provide that, for purposes of Schedule 12, "the term, 'Transmission Owner,' shall include any entity that undertakes to construct and own and/or finance a Required Transmission Enhancement even if such entity is not yet eligible to become a party to the Consolidated Transmission Owners Agreement." In the March 22 Order, FERC found this approach, "in concept, [to be a] just and reasonable" approach to addressing the requirement of Order No. 1000 that nonincumbent transmission developers be afforded an opportunity comparable to that of incumbent transmission owners to allocate the costs of a project selected in a regional plan for purposes of

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<sup>3</sup> *PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,214 (2013) (the "March 22 Order").

<sup>4</sup> PJM Transmission Owners with revenue requirements provided in Attachment H of the PJM Open Access Transmission Tariff ("PJM Transmission Owners").

cost allocation using regional cost allocation methods, but expressed concern that certain other provisions of the PJM tariff and the Consolidated Transmission Owners Agreement (“CTOA”), which it identified in the March 22 Order, might be read to conflict with Schedule 12, as revised.<sup>5</sup> FERC accordingly required either an explanation why the provisions identified in the March 22 Order do not prevent a nonincumbent transmission owner from submitting filings under section 205 of the Federal Power Act to allocate the costs of an RTEP project it is designated to build under Schedule 12, or revision of those provisions.<sup>6</sup>

To comply with this requirement, the PJM Transmission Owners plan (a) to provide the explanation requested to show that the provisions cited in the March 22 Order do not deny nonincumbent transmission owners access to the cost allocation mechanisms of Schedule 12; and (b) to modify further the language they added to Schedule 12 to remove any doubt that any provision of the PJM tariff or the CTOA could have that effect. The modified language is shown in revised section (a)(iv) of Schedule 12 on Attachment 1.

The PJM Transmission Owners plan to explain generally that none of the provisions of the PJM tariff and the CTOA identified in the March 22 Order restricts the ability of an entity designated to construct an RTEP project from submitting filings under section 205 to recover the costs of the project under the regional cost allocation methodology applicable under Schedule 12. These provisions appropriately recognize the rights and obligations of the owners of the transmission facilities over which PJM provides transmission service, including, in particular, the rights each PJM Transmission Owner has retained to make filings under section 205 with respect to the rates charged for services provided over the facilities that the Transmission Owner has made available to PJM. Provisions that acknowledge these rights, and which in some cases

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<sup>5</sup> March 22 Order at P 319.

<sup>6</sup> *Id.* at P 333.

implement a 2003 settlement agreement the Commission accepted to resolve a dispute over them,<sup>7</sup> do not preclude the assignment of cost responsibility under Schedule 12 for an RTEP project that a nonincumbent may be assigned to construct and the recovery of those costs by that nonincumbent under section 205.

**a. Definition of Transmission Owner**

The PJM Transmission Owners plan to explain that the fact that the definition of “Transmission Owner” in the PJM tariff is framed in the present tense, as the March 22 Order notes,<sup>8</sup> does not bar a nonincumbent developer from recovering the cost of a project it is selected in RTEP to build under Schedule 12, as revised in the October 11 Filing. As revised, Schedule 12 specifies that references to such entities are encompassed within the term “Transmission Owner,” when used in that schedule. That such entities are not Transmission Owners for other purposes under the tariff does not deny them access to Schedule 12’s cost recovery and cost allocation mechanisms.

**b. PJM Tariff Section 9.1**

Section 9.1 of the PJM tariff describes the “exclusive and unilateral rights” of Transmission Owners to file pursuant to section 205 for changes relating to “the establishment and recovery of the Transmission Owners’ revenue requirements or the transmission rate design under the PJM Tariff, and . . . any provisions of the PJM Tariff governing the recovery of transmission-related costs incurred by the Transmission Owners.” The PJM Transmission Owners plan to explain that a nonincumbent developer’s section 205 filing to recover its costs of constructing an RTEP project and PJM’s assignment of cost responsibility for that project under the applicable cost allocation mechanism in Schedule 12 would not fall within those categories

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<sup>7</sup> *Pennsylvania-New Jersey-Maryland Interconnection*, 105 FERC ¶ 61,294 (2003).

<sup>8</sup> March 22 Order at P 328.

of filings reserved to existing Transmission Owners and there is accordingly no conflict with the provision that the PJM Transmission Owners added to Schedule 12.<sup>9</sup> The developer's filing to recover its own costs does not involve (a) the "establishment and recovery of a Transmission Owner's transmission revenue requirements"; (b) "transmission rate design"; or (c) a change to any other PJM OATT provisions governing "the recovery of transmission-related costs incurred by the Transmission Owners."

**c. CTOA Section 4.10 and PJM Tariff Parts IV and VI**

The PJM Transmission Owners plan to explain that neither section 4.10 of the CTOA, which requires Transmission Owners to enter into a suitable interconnection agreement, containing provisions "for the safe and reliable operation of each interconnection," before connecting their transmission or distribution facilities to those of a non-party nor any provision of Parts IV and VI of the PJM OATT prevents the cost of a nonincumbent's RTEP project from being assigned under Schedule 12, as revised in the October 11 Filing.<sup>10</sup> The requirement for an interconnection agreement under Section 4.10 of the CTOA does not limit any rights of an entity interconnecting to a Transmission Owner's facilities to submit filings to the Commission to recover its costs. Nor does anything in Part IV or Part VI of the PJM OATT, including the specification of a Transmission Owner's right to recover the costs of upgrading its facilities to interconnect a new customer, bar a nonincumbent transmission developer from filing under section 205 to recover its project's costs under amended Schedule 12.

**d. CTOA Sections 7.1.1 and 7.1.3**

Finally, the PJM Transmission Owners plan to explain that sections 7.1.1 and 7.1.3 of the CTOA which, paralleling section 9.1 of the PJM tariff (discussed above), state the exclusive

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<sup>9</sup> Of course, once the nonincumbent's project goes into service, the nonincumbent becomes a Transmission Owner under the CTOA.

<sup>10</sup> *Id.* at P 331.

rights of each Transmission Owner “to file unilaterally at any time pursuant to Section 205 of the Federal Power Act to establish or change the transmission revenue requirement for services provided under the PJM Tariff with respect to its Transmission Facilities” and “rates and charges for transmission and ancillary services . . . for delivery within its Zone, which rates and charges are based solely on the costs of the Transmission Facilities of such Party,” do not prohibit a nonincumbent developer from submitting a filing to recover its costs and having the costs of its RTEP project assigned under Schedule 12.<sup>11</sup> These provisions appropriately reflect the reserved rights of each Transmission Owner to make section 205 filings to establish the rates for transmission services provided under the PJM tariff using its own transmission facilities. A nonincumbent developer’s filing to recover its own project’s costs does not establish or change the revenue requirements of a current Transmission Owner or modify zonal rates that are based solely on the costs of a Transmission Owner’s facilities. It thus would not conflict with the rights reserved to individual Transmission Owners under Section 7.1.1 and 7.1.3 of the PJM tariff.

**2. Allocation Within PJM of Costs Allocated to PJM of Transmission Projects Located in Other Regions and Allocation to Other Regions of PJM Transmission Projects.**

In paragraph 422 of the March 22 Order, the Commission found that PJM and the PJM Transmission Owners had failed to address adequately consequences for other transmission planning regions of a transmission facility selected in the RTEP for purposes of cost allocation. In addition, the Commission determined that the PJM Transmission Owners did not address whether the PJM Region has agreed to bear the costs associated with any required upgrades in another transmission planning region and, if so, how those costs were to be allocated within

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<sup>11</sup> March 22 Order at P332, quoting CTOA, §§ 7.1.1, 7.1.3.

PJM.<sup>12</sup> PJM and the PJM Transmission Owners were directed to address these issues in their compliance filings.<sup>13</sup>

At the time of the October 11 Filing, there was only one agreement in place under which PJM had agreed to share costs of a required upgrade located in another region: the Joint Operating Agreement Between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (“PJM-MISO JOA”). The July 10 compliance filings will add additional agreements under which PJM has agreed to share costs of a required upgrade located in another region. The PJM Transmission Owners plan to build on the Commission-accepted treatment of cost allocation of projects constructed pursuant to the PJM-MISO JOA to comply with the March 22 Order with respect to interregional cost allocation.<sup>14</sup> A new Schedule 12-Appendix B is being created in which each of the agreements between PJM and another region will be listed and future agreements that result in interregional cost allocation will be listed. In accordance with Regional Cost Allocation Principle 4,<sup>15</sup> in the absence of an agreement listed in Schedule 12-Appendix B, PJM will not agree to bear costs for transmission projects constructed in another region or seek to impose costs on other regions for transmission projects constructed in PJM.

Projects developed pursuant to an agreement listed in Schedule 12-Appendix B (an “Appendix B Agreement”) will be considered Required Transmission Enhancements under the RTEP for purposes of Schedule 12 and costs of those projects assigned to Responsible

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<sup>12</sup> See March 22 Order, P 422.

<sup>13</sup> *Id.*, at P 426.

<sup>14</sup> See, e.g., *Midwest Indep. Transmission Sys. Operator, Inc.*, 113 FERC ¶ 61,194 (2005) (conditionally accepting the PJM-MISO JOA’s cross-border cost allocation process but requiring further description of the joint RTO planning model); *Midwest Indep. Transmission Sys. Operator, Inc.*, 122 FERC ¶ 61,084 (2008) (approving the PJM-MISO JOA cost allocation provisions for reliability projects); *Midwest Indep. Transmission Sys. Operator, Inc.*, 129 FERC ¶ 61,102 (approving the PJM-MISO JOA cost allocation provisions for market efficiency projects).

<sup>15</sup> Order No. 1000 at P 657.

Customers in PJM in accordance with the principles of Schedule 12.<sup>16</sup> The revenue requirement with respect to Required Transmission Enhancements constructed in other regions pursuant to an Appendix B Agreement will be governed by tariffs or agreements in effect in such region.

Conversely, when a neighboring region accepts costs of a project in PJM constructed pursuant to an Appendix B Agreement, the neighboring region will become a Responsible Customer under Schedule 12.<sup>17</sup>

The modifications to Schedule 12 described above are included in Attachment 1.

### **3. Explanation of Implementation of Solution-Based DFAX**

While approving the use of Solution-based DFAX, the March 22 Order agreed with certain commenters that the October 11 Filing had failed to explain adequately how it would be implemented. The PJM Transmission Owners were directed to revise Schedule 12 to provide a more complete explanation of Solution-based DFAX is used to calculate assignments of cost responsibility.<sup>18</sup>

To provide the explanation required in the March 22 Order, the PJM Transmission Owners plan to revise Schedule 12 to provide additional detail concerning the steps involved in applying Solution-based DFAX that take place during the process described in the current subsection (b)(iii)(B).<sup>19</sup> To provide additional clarification, the PJM Transmission Owners also plan to reorganize Section (b)(iii)(A) through (D) of Schedule 12 into new subsections (A) and (B) plus subparts. The remaining subsections of Section (b)(iii) will be unchanged, although they will be renumbered. Subsection (A) will describe various factors and modeling practices

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<sup>16</sup> See Section (a)(i). The definition of Required Transmission Enhancements found at Section 1.38C of the OATT is also being amended to include projects constructed in other regions pursuant to Appendix B Agreements.

<sup>17</sup> See Section (b)(ix).

<sup>18</sup> March 22 Order at P 428.

<sup>19</sup> These steps were described in the testimony submitted by Steven R. Herling as part of the October 11 Filing. See October 11 Herling Testimony at 11.



that are to be employed in performing the Solution-based DFAX analysis. Subsection (B) will describe the sequential steps of the analysis. The modifications to Schedule 12 described in this section are included in Attachment 1.

The preambular language in subsection (A) will contain a new shorthand phrase for purposes of Section (b)(iii), “Responsible Zone.” This phrase substitutes for the longer phrase, “Zone and[/or] each Merchant Transmission Facility” throughout the section, except in the few instances in which it is important to refer to Zones or Merchant Transmission Facilities separately. Subsection (A)(2) will be deleted since it was duplicated entirely by subsection (A)(3) (which will be renumbered as subsection (A)(2)). Both subsections provided that distribution factors are determined based on the aggregate load within a Zone or the Firm Transmission Withdrawal Rights over a Merchant Transmission Facility. New subsection (A)(3) will incorporate language from former subsection (B), establishing how the term, “zonal peak load,” will be applied with respect to existing Merchant Transmission Facilities or those not yet in service. Subsections (A)(4) and (A)(5), formerly subsections (C) and (D), respectively, set forth criteria and/or factors in performing the Solution-based DFAX analysis. One sentence will be deleted from the former subsection (D), where it duplicated part of the Solution-based DFAX steps in subsection (B). Finally, the last sentence of former subsection (D), establishing the distribution factor threshold of 0.01 for DFAX cost assignment purposes, will be moved to a new subsection (A)(6).

Subsection B will set forth the step-by-step process by which PJM will apply the Solution-based DFAX. Steps 1, 4 and 5 were found in the former subsection B; steps 2 and 3 are new. Under step 1 (subsection (B)(1)), PJM calculates distributions factors in each direction of use of the relevant Required Transmission Enhancement and establishes the use by each

Responsible Zone. Under step 2 (subsection (B)(2)), the relative use by each Responsible Zone for each direction of use is determined. Step 3 (subsection (B)(3)), determines the percentage use of the Required Transmission Enhancement in each direction over the course of the year using a production cost model. Under step 4 (subsection (B)(4)), the relative use in each direction determined in step 2 is multiplied by the percentage use in each direction of the Required Transmission Enhancement determined in step 3. Step 5 (subsection (B)(5)) states that the results of the calculation in step 4 determine the relative cost responsibility of each Responsible Zone.

#### **4. Classification of Direct Current Transmission Facilities for Regional Cost Allocation.**

To comply with the requirement in the March 22 Order for the submission on compliance “of criteria for qualification as a Regional Facility that consider a [direct current or “D.C.”] transmission facility and an [alternating current or “A.C.”] transmission facility in a comparable manner,”<sup>20</sup> the PJM Transmission Owners plan to propose revised criteria for classification of D.C. Required Transmission Enhancements as Regional Facilities.

The revised criteria will classify D.C. facilities, like A.C. facilities, as Regional Facilities based on the voltage of the Required Transmission Enhancement. The PJM Transmission Owners plan to propose minimum voltage thresholds for D.C. Required Transmission Enhancements to qualify as Regional Facilities that (a) like the criteria for A.C. Required Transmission Enhancements, distinguish between projects that comprise a single circuit (defined for D.C. facilities as both conductors of a bipole facility, as well as any A.C./D.C. converter terminal) and those that comprise two circuits; and (b) are equivalent, from the standpoint of power-carrying capability, to the corresponding voltage thresholds for A.C. Required

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<sup>20</sup> March 22 Order at PP 439, 440.

Transmission Enhancements. In identifying the voltage thresholds for D.C. facilities that are equivalent to the accepted thresholds for A.C. facilities, the PJM Transmission Owners plan to take account of the fact that the voltage thresholds for A.C. facilities are stated in terms of the voltage between the three conductors or phases that make up three-phase A.C. facilities, while the voltage of bipole D.C. facilities is stated as the phase-to-neutral voltage of each of the two conductors or poles that make up the D.C. facility.

The criteria that the PJM Transmission Owners plan to propose for classification of a D.C. Regional Enhancement as a Regional Facility, based on these principles, are shown in revised section (b)(1)(D) of Schedule 12 on Attachment 1.

**ATTACHMENT 1**

June 21, 2013

**SCHEDULE 12  
Transmission Enhancement Charges**

**(a) Establishment of Transmission Enhancement Charges.**

**(i) Establishment of Transmission Enhancement Charges by Transmission Owners and Entities That Will Become Transmission Owners.** 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.~~ any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Schedule 12-Appendix B (“Appendix B Agreement”) (collectively, for purposes of this Schedule 12 only, “Regional Transmission Expansion 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 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

***Proposed Amended Schedule 12 (Compliance Filing)***  
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Enhancement Charges of one or more Transmission Owners for Required Transmission Enhancements shall be established in accordance with this Schedule 12.

**(ii) Establishment of Transmission Enhancement Charges With Respect to Required Transmission Enhancements Constructed by Entities in Another Region.** ~~Transmission Enhancement Charges~~ The revenue requirement with respect to a Required Transmission Enhancement constructed pursuant to ~~of one or more transmission owners within the Midwest Independent System Operator, Inc. (“MISO”)~~ shall be determined in accordance with the MISO Tariff a region covered by an Appendix B Agreement ~~agreement listed in Schedule 12 Appendix B~~ in another region by an entity designated by such other region shall be governed by the tariffs or agreements in effect in such region. Transmission Enhancement Charges to recover the costs of such Required Transmission Enhancement for which PJM is responsible shall be determined in accordance with this Schedule 12. Other than with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, no PJM Network or Transmission Customer will bear cost responsibility for any required transmission upgrades in another region as a consequence of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan.

**(iii) Transmission Facilities Not Eligible for Cost Responsibility Assignment.** Any alternating current (“A.C.”) facilities or direct current (“D.C.”) facilities that are Attachment Facilities, Local Upgrades, Merchant Network Upgrades, Merchant Transmission Facilities, Network Upgrades, Supplemental Projects as defined in Section 1.42A.02 of the Operating Agreement, or any other Transmission Facilities that operate or are planned to be operated in a manner that requires customers to subscribe to transmission service over such facilities or to a portion of the electric capability of such facilities shall not be eligible for cost responsibility assignment pursuant to this Schedule 12.

**(iv) Entities Not Yet Eligible to Become Transmission Owners.** For purposes of this Schedule 12 only, the term, “Transmission Owner,” shall include any entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement, even if such entity is not yet eligible to become a party to the Consolidated Transmission Owners Agreement. In compliance with FERC’s Order On Compliance Filing issued in *PJM Interconnection, L.L.C.*, Docket No. ER13-198-000 *et al.* on March 22, 2013, nothing in the PJM Tariff nor the Consolidated Transmission Owners Agreement shall prevent an entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement from recovering the costs of such Required Transmission Enhancement through this Schedule 12.

~~\_\_\_\_\_~~ **(v) Effective Date.** The assignment of cost responsibility or classification of Required Transmission Enhancements either (1) made by the Transmission Provider prior to ~~the effective date of the amendments to this Schedule 12 filed in Docket No. \_\_\_\_\_ on [October [ ], 2012~~ February 1, 2013, or (2) applicable to Required Transmission Enhancements approved by the PJM Board pursuant to Section 1.6 of the PJM Operating Agreement prior to ~~such effective~~

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***Subject to Revision Before Filing***

~~date~~ February 1, 2013 are set forth in Schedule 12-Appendix. Except as specifically set forth herein, nothing in this Schedule 12 shall change the assignment of cost responsibility or classification of Required Transmission Enhancements included in Schedule 12-Appendix. The assignment of cost responsibility or classification of all other Required Transmission Enhancements shall be set forth in Schedule 12-Appendix A.

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

~~(i) Regional Facilities and Necessary Lower Voltage Facilities.~~ Transmission Provider shall assign cost responsibility on a region-wide basis for Required Transmission Enhancements included in the Regional Transmission Expansion Plan that ~~(1) are (1) Transmission Facilities as defined in section 1.27 of the Consolidated Transmission Owners Agreement (Rate Schedule FERC No. 42) that~~ (a) are A.C. facilities that operate at or above 500 kV; (b) constitute a single Required Transmission Enhancement comprising two A.C. circuits operating at or above 345 kV and below 500 kV, where both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end, regardless of whether or not the two circuits are routed in the same right-of-way (“Double-circuit 345 kV Required Transmission Enhancement”); (c) are A.C. or D.C. shunt reactive resources (such as capacitors, static var compensators, static synchronous condenser (STATCON), synchronous condensers, inductors, other shunt devices, or their equivalent) connected to a Transmission Facility described in clause (a) or (b) of this subsection, or (d) are D.C. facilities meeting the criteria set forth in subsection (b)(i)(D) (collectively, “Regional Facilities”), or (2) new A.C. Transmission Facilities or expansions or enhancements to existing Transmission Facilities that operate below 500 kV (or 345 kV in the case of a Regional Facility described in clause (1)(b) of this subsection) 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 among Responsible Customers as defined in this Schedule 12 as follows:

(1) Fifty percent (50%) shall be assigned annually on a load-ratio share basis as follows:

(a) With respect to each Zone, using, consistent with section 34.1 of the Tariff, the applicable zonal loads at the time of such Zone’s annual peak load from the 12-month period ending October 31 preceding the calendar year for which the annual cost responsibility allocation is determined; and

(b) With respect to Merchant Transmission Facilities, (1) for the calendar 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 calendar years, the annual peak load of the Merchant Transmission

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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.

(2) Fifty percent (50%) shall be assigned as follows:

(a) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to address one or more reliability violations or to address operational adequacy and performance issues (collectively, “Reliability Project”), in accordance with the distribution factor (“DFAX”) analysis described in subsection (b)(iii) of this Schedule 12; and

(b) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to relieve one or more economic constraints as described in section 1.5.7(b)(iii) of Schedule 6 of the Operating Agreement (“Economic Project”), in accordance with the methodology described in subsection (b)(v) of this Schedule 12.

(B) (1) Except for transformers that are an integral component of an A.C. Regional Facility and transformers that are an integral component of a D.C. Regional Facility with a low side phase-to-phase voltage rating of not less than 345kV, transformers connected to Lower Voltage Facilities, as defined in section (b)(ii) of this Schedule 12 and transformers connected to D.C. Regional Facilities with a low side phase-to-phase voltage rating of less than 345kV, shall not be considered Regional Facilities or Necessary Lower Voltage Facilities; and (2) Transmission Facilities that are not Regional Facilities and deliver energy from a Regional Facility to load shall not be considered Necessary Lower Voltage Facilities.

(C) With respect Required Transmission Enhancements that qualify as Regional Facilities under subsection (b)(i)(1)(b) or subsection (b)(i)(1)(D)(2) of this Schedule 12,

(1) where the Required Transmission Enhancement includes both new Transmission Facilities and pre-existing Transmission Facilities, cost responsibility under this section (b)(i) shall apply only to the cost of the new Transmission Facilities plus the original cost less accumulated depreciation of pre-existing Transmission Facilities that are included in Schedule 12-Appendix or Schedule 12-Appendix A;

(2) cost responsibility shall be assigned under this section (b)(i) only after the Required Transmission Enhancement goes into service as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement; and

(3) cost responsibility shall be assigned under this section (b)(i) for any CWIP permitted to be recovered before the Required Transmission Enhancement goes into service only after such Transmission Facilities are approved in a Regional Transmission Expansion Plan as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement.



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***Subject to Revision Before Filing***

(D) A Required Transmission Enhancement included in the Regional Transmission Expansion Plan that is a D.C. facility, consisting of D.C. lines (i.e., wires or cables) and A.C./D.C. converters, shall be a Regional Facility only if:

~~\_\_\_\_\_ (1) (a) such D.C. facility is connected to at least one substation or switching station that is also connected to either (i) at least one A.C. transmission line operated at 500 kV or above; or (ii) at least one Double-circuit 345 kV Required Transmission Enhancement comprises two poles and operates at a voltage of  $\pm 433$  kV D.C. or above; and or~~

~~\_\_\_\_\_ (2) (b) any transformer between the substation or switching station described in subsection (b)(i)(D)(1)(a) above and the D.C. converter has a low side phase to phase voltage rating of not less than 345kV, such voltage having been determined by Transmission Provider in the Regional Transmission Expansion Plan to be necessary and appropriate; or such D.C. Facility constitutes a single Required Transmission Enhancement comprising two D.C. circuits where (i) both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end, regardless of whether or not both circuits are routed in the same right-of-way, and (ii) each such circuit consists of two poles and operates at a voltage of  $\pm 298$  kV D.C or above (“Double-circuit D.C. Required Transmission Enhancement”).~~

~~(2) such D.C. facility is connected directly to a D.C. facility that is a Regional Facility.~~

**(ii) Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility for Required Transmission Enhancements that (a) are not Regional Facilities; and (b) are not “Necessary Lower Voltage Facilities” as defined in section (b)(i) of this Schedule 12 (collectively “Lower Voltage Facilities”), as follows:

(A) If the Lower Voltage Facility is a Reliability Project, Transmission Provider shall use the DFAX analysis described in subsection (b)(iii) of this Schedule 12; and

(B) If the Lower Voltage Facility is an Economic Project, Transmission Provider shall use the methodology described in subsection (b)(v) of this Schedule 12.

**(iii) DFAX Analysis for Reliability Projects.**

(A) For purposes of the assignment of cost responsibility for Reliability Projects under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) 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 use by the load of each Zone or Merchant Transmission Facility (collectively, “Responsible Zone”) of the Required Transmission Enhancement, as determined by a power flow analysis. In general, a distribution factor can be represented as:

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*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 Required Transmission Enhancement before the incremental megawatt transfer*

*After-shift power flow = Megawatt flow over the Required Transmission Enhancement after the incremental megawatt transfer*

When calculating such distribution factors:

(1) All distribution factors are calculated with respect to the Required Transmission Enhancement subject to cost allocation under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12.

~~(2) Use of a Required Transmission Enhancement is 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.~~

~~(3) 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 Required Transmission Enhancement 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.~~

~~(4) With respect to a Merchant Transmission Facility, zonal peak load shall mean (i) the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) for a Merchant Transmission Facility that is not yet in service, 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.~~

~~(5) 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).~~

~~(6) In the DFAX analysis, Transmission Provider shall model generation both external and internal to individual Responsible Zones 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~~

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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. For Responsible Zones 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 Responsible Zones for each LDA. The lowest distribution factor derived from these calculations shall be applied to the Responsible Zone in the calculation of the use of the Required Transmission Enhancement.

(6) No cost responsibility shall be assigned to a Responsible Zone unless the magnitude of the distribution factor is greater than or equal to 0.01. Any distribution factor of a smaller magnitude shall be set equal to zero.

(B) The DFAX analysis will be performed in accordance with the following steps:

(1) Transmission Provider shall calculate a distribution factor and a direction of use for each Responsible Zone by modeling a transfer from all generation in the PJM Region to each Responsible Zone. To establish the use by a Responsible Zone, in megawatts, of a Required Transmission Enhancement, the distribution factor of a Required Transmission Enhancement associated with the resulting transfer modeled by the Transmission Provider to each Responsible Zone shall be multiplied by the Responsible Zone’s peak load.

(2) The Transmission Provider shall separately determine the relative use of the Required Transmission Enhancement by each Responsible Zone in each direction by dividing the megawatts of use by each Responsible Zone determined in Section (iii)(B)(1) by the total use of all Responsible Zones using the Required Transmission Enhancement in the same direction of use.

(3) Transmission Provider shall determine the direction of use percentage of the Required Transmission Enhancement in each direction using a production cost analysis to determine the total use, in megawatt hours, of the Required Transmission Enhancement by all Zones and Merchant Transmission Facilities in each direction over the course of a year. The Transmission Provider shall calculate the percentage use in each direction by dividing the megawatt-hours of use in each direction by total use in megawatt-hours in both directions of use.

(4) The Transmission Provider shall multiply the relative use by each Responsible Zone of the Required Transmission Enhancement in each direction of use

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~~determined in Section (iii)(B)(2), above, by the applicable direction of use percentage determined in Section (iii)(B)(3), above.~~

~~\_\_\_\_\_ (5) \_\_\_\_\_ The products of the calculation performed in Section (iii)(B)(4), above, shall determine the relative allocation to each Responsible Zone of cost responsibility for the Required Transmission Enhancement.~~

~~\_\_\_\_\_ (B) \_\_\_\_\_ In the DFAX analysis, to determine the impact of zonal loads and Merchant Transmission Facilities on a Required Transmission Enhancement, 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 use by the zonal load or Merchant Transmission Facility, in megawatts, of a Required Transmission Enhancement, the distribution factor of a Required Transmission Enhancement 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) for a Merchant Transmission Facility, the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) for a Merchant Transmission Facility that is not yet in service, 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. 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. The DFAX analysis will be performed in accordance with the following steps:~~

~~\_\_\_\_\_ (1) \_\_\_\_\_ Transmission Provider shall calculate a distribution factor and a direction of use for each Responsible Zone by modeling a transfer from all generation in the PJM Region to each Responsible Zone. To establish the use by a Responsible Zone, in megawatts, of a Required Transmission Enhancement, the distribution factor of a Required Transmission Enhancement associated with the resulting transfer modeled by the Transmission Provider to each Responsible Zone shall be multiplied by the Responsible Zone's peak load.~~

~~\_\_\_\_\_ (2) \_\_\_\_\_ The Transmission Provider shall separately determine the relative use of the Required Transmission Enhancement by each Responsible Zone in each direction by dividing the megawatts of use by each Responsible Zone determined in Section (iii)(B)(1) by the total use of all Responsible Zones using the Required Transmission Enhancement in the same direction of use.~~

~~\_\_\_\_\_ (3) \_\_\_\_\_ Transmission Provider shall determine the direction of use percentage of the Required Transmission Enhancement in each direction using a production cost analysis to determine the total use, in megawatt-hours, of the Required Transmission Enhancement by all Zones and Merchant Transmission Facilities in each direction over the course of a year. The Transmission Provider shall calculate the percentage use in each direction~~

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by dividing the megawatt-hours of use in each direction by total use in megawatt-hours in both directions of use.

(4) The Transmission Provider shall multiply the relative use by each Responsible Zone of the Required Transmission Enhancement in each direction of use determined in Section (iii)(B)(2), above, by the applicable direction of use percentage determined in Section (iii)(B)(3), above.

(5) The products of the calculation performed in Section (iii)(B)(4), above, shall determine the relative allocation to each Responsible Zone of cost responsibility for the Required Transmission Enhancement.

~~—————(C) 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).~~

~~—————(D) 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 use by each zonal load or Merchant Transmission Facility of the Required Transmission Enhancement 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 use of the Required Transmission Enhancement. 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.~~

~~(EC) 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~~

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Electric Company elects to be treated as a separate Zone in accordance with the terms of the Settlement Agreement And Offer Of Partial Settlement approved by FERC in Docket Nos. ER06-456-000, et al.

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

(GE) 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) of this Schedule 12. In the DFAX analysis, all PAR angles shall be fixed at their base case settings.

(HF) In the DFAX analysis, if the Required Transmission Enhancement is a D.C. facility, the Transmission Provider shall determine cost responsibility assignment as follows:

(1) The Required Transmission Enhancement shall be replaced in the model with a comparable proxy A.C. facility, the impedance of which shall be calculated based on the length of the D.C. facility that was removed from the model multiplied by an approximate per unit/mile impedance value for the proxy A.C. facility.

(2) Where a D.C. facility is an integral part of a Required Transmission Enhancement that also includes A.C. facilities, the methodology described in Subsection (b)(iii)(HF)(1) above shall be used only for the D.C. facility segment of such Required Transmission Enhancement.

(3) A D.C. facility used to control flow over portions of the Transmission System shall be modeled with a zero impedance and no control shall be applied.

(IG) If Transmission Provider determines in its reasonable engineering judgment that, as a result of applying the provisions of this Section (b)(iii), the DFAX analysis cannot be performed or that the results of such DFAX analysis are objectively unreasonable, the Transmission Provider may use an appropriate substitute proxy for the Required Transmission Enhancement in conducting the DFAX analysis. If a proxy is used that is not specified in this Schedule 12, Transmission Provider shall state in a written report (a) the reasons why it determined the DFAX analysis could not be performed or that the results of the DFAX analysis were objectively unreasonable; (b) why the substitute proxy produced objectively reasonable results; and (3) a recommendation as to what changes, if any, should be considered in conducting the DFAX analysis.

(JH) The Transmission Provider shall make a preliminary cost responsibility determination for each Required Transmission Enhancement subject to this section (b)(iii) of Schedule 12 at the time such Required Transmission Enhancement is included in the Regional Transmission Expansion Plan.

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(1) When CWIP in connection with a Required Transmission Enhancement subject to this section (b)(iii) of Schedule 12 is entitled to be recovered, the preliminary determination of cost responsibility made at the time that the Required Transmission Enhancement was included in the Regional Transmission Expansion Plan shall be used to assign cost responsibility for such CWIP and such cost responsibility shall remain unchanged until the date the Required Transmission Enhancement goes into service. Once a Required Transmission Enhancement has gone into service, the updated cost responsibility determination provided for in subsection (b)(iii)(H)(2) shall apply.

(2) Beginning with the calendar year in which a Required Transmission Enhancement is scheduled to enter service, and thereafter annually at the beginning of each calendar year, the Transmission Provider shall update the preliminary cost responsibility determination for each Required Transmission Enhancement using the values and inputs used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the date of the update. All values and inputs used in the calculation of the distribution factor in a determination of cost responsibility shall be the same values and inputs as used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the determination of cost responsibility.

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

(A) Spare parts that are part of the design specifications of a Required Transmission Enhancement at the time such Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such spare parts shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for spare parts independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection shall be assigned to the Zone of the owner of the spare part, if the owner of the spare part is a Transmission Owner listed in Attachment J of the Tariff. If the owner of the spare part is not a Transmission Owner listed in Attachment J of the Tariff, cost responsibility shall be assigned on a *pro rata* basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

(B) Replacement equipment that is part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in section (b)(vi) of this Schedule 12 and cost responsibility for such replacement equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for Required Transmission Enhancement replacement equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a Required

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Transmission Enhancement 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) Circuit breakers and associated equipment that are part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such circuit breakers and associated equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for 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 Required Transmission Enhancement as described above in this subsection, shall be assigned to the Zone of the owner of the circuit breaker and associated equipment if the owner of the circuit breaker is a Transmission Owner listed in Attachment J of the Tariff. If the owner of the circuit breaker is not a Transmission Owner listed in Attachment J of the Tariff, cost responsibility shall be assigned on a *pro rata* basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

(v) **Economic Projects.** Transmission Provider shall assign (i) fifty percent (50%) of cost responsibility for Economic Projects that are Regional Facilities; and (ii) full cost responsibility for Economic Projects that are Lower Voltage Facilities; as follows:

(A) Transmission Provider shall assign cost responsibility for Economic Projects that are accelerations of Reliability Projects 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) 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 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



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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 Project is accelerated (i.e. the period between the date the Reliability Project actually goes into service and the date the Reliability Project originally was scheduled to go in service 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 Project is accelerated, cost responsibility for such an Acceleration Project shall be assigned in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(B) Transmission Provider shall assign cost responsibility for Economic Projects that are modifications to Reliability Projects as described in section 1.5.7(b)(ii) of Schedule 6 of the Operating Agreement in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(C) Transmission Provider shall assign cost responsibility for Economic Projects that 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 to the Zones that show a decrease in the net present value of the Changes in Load Energy Payment determined for the first 15 years of the life of the Economic Project. The Change in Load Energy Payment for each year shall be determined using the methodology set forth in Section 1.5.7(d) of Schedule 6 of the Operating Agreement. Cost responsibility shall be assigned based on each Zone's pro rata share of the sum of the net present values of the Changes in Load Energy Payment only of the Zones in which the net present value of the Changes in Load Energy Payment shows a decrease.

**(vi) Required Transmission Enhancements Costing Less Than \$5 Million.** Notwithstanding Section (b)(i), (b)(ii), (b)(iv) and (b)(v), cost responsibility for a Required Transmission Enhancement for which the good faith estimate of the cost of the Required Transmission Enhancement (a) prepared in connection with the development of the Regional Transmission Expansion Plan and (b) provided to the PJM Board at the time the Required Transmission Enhancement is included for the first time in the Regional Transmission Expansion Plan, does not equal or exceed \$5 million shall be assigned to the Zone where the Required Transmission Enhancement is to be located. The determination of whether the estimated cost of a Required Transmission Enhancement does not equal or exceed \$5 million shall be based solely on such good faith estimate of the cost of the Required Transmission Enhancement regardless of the actual costs incurred. The estimated cost of a Required Transmission Enhancement shall include the aggregate estimated costs of all of the transmission elements approved by the PJM Board at the time such elements are included in the Regional Transmission Expansion Plan that collectively are intended (i) in the case of a Reliability Project, to resolve a specific reliability

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criteria violation, or (ii) in the case of an Economic Project, provide a specific LMP Benefit. Where a Required Transmission Enhancement subject to this section (b)(vi) consists of a single transmission element or multiple transmission elements that will 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 a Required Transmission Enhancement subject to this Section (b)(vi).

**(vii) Modifications of Required Transmission Enhancements.** Once a Required Transmission Enhancement is included in the Regional Transmission Expansion Plan, any modification to such Required Transmission Enhancement that subsequently is included in the Regional Transmission Expansion Plan as a separate Reliability or Economic Project shall be considered a separate and distinct Required Transmission Enhancement for purposes of cost responsibility assignment under this Schedule 12. Except as provided in Section (b)(iv) of this Schedule 12, any cost responsibility assignment that has been made for a previously approved Required Transmission Enhancement shall have no impact on the cost responsibility assignment of such modification.

**(viii) 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 A 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, or Lower Voltage Facility in the Regional Transmission Expansion Plan.

~~————(ix) **MISO Regions With Which PJM Has Entered Into An Agreement Listed in Schedule 12-Appendix B.** 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—costs of a Required Transmission Enhancement are allocated to a region other than PJM pursuant to an agreement set forth in Schedule 12-Appendix B. Responsible Customers for such costs shall be customers in such region.~~ Cost responsibility with respect to the costs of a Required Transmission Enhancement for which MISO has been designated the Responsible Customer shall be allocated within MISO in accordance with the MISO Tariff allocated to a region other than PJM shall be allocated within such region in accordance with the applicable tariff or agreement governing the allocation of such costs in such region.~~

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**(x) 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 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 Required Transmission Enhancement 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 (b)(x)(B)(1) shall be recorded in appropriate Transmission Provider accounts for deferred charges and collected in accordance with section (b)(x)(B)(3), below.

(2) Transmission Provider shall base the collection of Transmission Enhancement Charges associated with Required Transmission Enhancements 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)(x)(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 Required Transmission Enhancements for which collection is deferred in accordance with sections (b)(x)(B)(1) and

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(b)(x)(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)(x)(B)(1) and (b)(x)(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)(x)(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.

**(xi) 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 (xi)(A).

**(xii) Public Policy Projects.**

(A) Transmission Facilities as defined in section 1.27 of the Consolidated Transmission Owners Agreement constructed by a Transmission Owner pursuant to a Public Policy Requirement as defined in Section 1.38B of the Operating Agreement, but not included in a Regional Transmission Expansion Plan as a Required Transmission Enhancement, shall be as considered a Supplemental Project, as defined in Section 1.42A.02 of the Operating Agreement.

(B) If a transmission enhancement or expansion is proposed pursuant to Section 1.5.9(a) of Schedule 6 of the Operating Agreement which is not a Supplemental Project ("State Agreement Public Policy Project"), the Transmission Provider shall submit the assignment of costs to Responsible Customers proposed in connection with such State Agreement Public Policy Project to the Transmission Owners Agreement Administrative Committee for consideration and filing pursuant to Section 7.3 of the Consolidated Transmission Owners Agreement and Section 9.1(a) of the PJM Tariff. Nothing in this Section (b)(xii) shall prevent the Transmission Provider or the state governmental entities proposing such State Agreement Public Policy Project from filing a proposed assignment of costs to Responsible Customers for such project pursuant to Section 206 of the Federal Power Act.

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**(xiii) Replacement of Transmission Facilities.** Unless determined by PJM to be a Required Transmission Enhancement included in a Regional Transmission Expansion Plan, cost responsibility for the replacement of Transmission Facilities, as defined in section 1.27 of the Consolidated Transmission Owners Agreement, shall be assigned to the Zonal loads and Merchant Transmission Facilities responsible for the costs of the Transmission Facilities being replaced.

**(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.
- (4) Each Transmission Enhancement Charge applicable 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 applicable 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.

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(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 the appropriate authority in a region other than PJM](#) in the case of Transmission Enhancement Charges established ~~by one or more transmission owners within MISO in such region in connection with a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement,~~ to be distributed ~~to said transmission owners~~ in accordance with the [MISO Tariff applicable tariff or agreement governing the distribution of such charges in such region.](#)

**(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.

**SCHEDULE 12 – APPENDIX B**

**Joint Planning Or Coordination Agreements Between PJM  
And Other Regions Or Transmission Planning Authorities**

1. 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.
2. Joint Operating Agreement Among and Between New York Independent System Operator Inc. and PJM Interconnection, L.L.C. and The Amended and Restated Northeastern ISO/RTO Planning Coordination Protocol.
3. [SERTP ENTITIES]

*Proposed Amended Section 1.38C (Compliance Filing)  
Subject to Revision Before Filing*

**June 21, 2013**

**1.38C Required Transmission Enhancements:**

Enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan 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.~~ any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Schedule 12-Appendix B (“Appendix B Agreement”) designates one or more of the Transmission Owner(s) ~~or the transmission owners within the Midwest Independent System Operator~~ to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that meet the definition of transmission facilities pursuant to FERC’s Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities constructed pursuant to an Appendix B Agreement, cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.