

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

**ADD DEFINITION TO OA:**

**“Public Policy Requirements”** shall refer to ~~planning considerations arising from (i) policies pursued by state or federal entities, where such policies are reflected in enacted statutes or regulations, including but not limited to, state renewable portfolio standards and requirements under Environmental Protection Agency regulations, and (ii) public policy initiatives that have not yet been codified into law or regulation, but which nonetheless may have important impacts on long term planning considerations.~~

**“Public Policy Considerations Objectives”** shall refer to Public Policy Requirements, as well as ~~public policy initiatives that have not yet been codified into law or regulation but which nonetheless may have important impacts on long term planning considerations.~~

**SCHEDULE 6 -  
REGIONAL TRANSMISSION EXPANSION PLANNING PROTOCOL**

References to section numbers in this Schedule 6 refer to sections of this Schedule 6, unless otherwise specified.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

**1. REGIONAL TRANSMISSION EXPANSION PLANNING PROTOCOL**

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

**1.1 Purpose and Objectives.**

This Regional Transmission Expansion Planning Protocol shall govern the process by which the Members shall rely upon the Office of the Interconnection to prepare a plan for the enhancement and expansion of the Transmission Facilities in order to meet the demands for firm transmission service, and to support competition, in the PJM Region. The Regional Transmission Expansion Plan (also referred to as “RTEP”) to be developed shall enable the transmission needs in the PJM Region to be met on a reliable, economic and environmentally acceptable basis.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

**1.2 Conformity with NERC Reliability Standards and Other Applicable Reliability Criteria.**

(a) NERC establishes ~~Planning Principles and Guides~~Reliability Standards to promote the reliability ~~and~~, adequacy ~~and security~~ of the North American bulk power supply as related to the operation and planning of electric systems.

(b) ~~Reliability First~~ReliabilityFirst Corporation is responsible for ensuring the ~~adequacy,~~ reliability adequacy, and security of the bulk electric supply systems in the ~~region encompassing the former MAAC, ECAR and MAIN regions,~~geographic region described in the applicable agreement between NERC and ReliabilityFirst Corporation, as approved by FERC, through coordinated operations and planning of generation and transmission facilities. Toward that end, it has adopted the NERC ~~Planning Principles and Guides~~Reliability Standards and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System of the ~~Reliability First~~ReliabilityFirst Corporation.

(c) [Reserved]

(c.01) [Reserved]

(c.02) SERC is responsible for ensuring the ~~adequacy,~~ reliability adequacy, and security of the bulk electric supply systems in the VACAR subregion ~~of SERC through coordinated operations and planning of generation and transmission facilities~~. Toward that end, it has adopted the NERC ~~Planning Principles and Guides~~Reliability Standards and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System for SERC.

(d) The Regional Transmission Expansion Plan shall conform at a minimum to the applicable reliability principles, guidelines and standards of NERC, ~~Reliability First~~ReliabilityFirst Corporation, ~~and SERC, and other Applicable Regional Reliability Councils~~ in accordance with the planning and operating criteria and other procedures detailed in the PJM Manuals.

(e) The Regional Transmission Expansion Plan reliability-planning criteria shall include, Office of the Interconnection planning procedures, NERC ~~planning s~~Reliability Standards, ~~NERC Regional Council Entity planning criteria~~reliability principles and standards, and the individual Transmission Owner FERC filed planning criteria as filed in FERC ~~Form~~Form No. 715, and posted on ~~the~~ PJM website. FERC Form No. 715 material will be posted to the PJM website, subject to applicable Critical Energy Infrastructure Information (CEII) requirements.

(f) The Office of the Interconnection will also provide access through the PJM website, to the planning criteria and assumptions used by the Transmission Owners for the development of the current Local Plan.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

### 1.3 Establishment of Committees.

(a) The Planning Committee shall be open to participation by (i) all Transmission Customers, as that term is defined in the PJM Tariff, and applicants for transmission service; (ii) any other entity proposing to provide Transmission Facilities to be integrated into the PJM Region; (iii) all Members; (iv) the electric utility regulatory agencies within the States in the PJM Region and the State Consumer Advocates; and (v) any other interested entities or persons and shall provide technical advice and assistance to the Office of the Interconnection in all aspects of its regional planning functions. The Transmission Owners shall supply representatives to the Planning Committee, and other Members may provide representatives as they deem appropriate, to provide the data, information, and support necessary for the Office of the Interconnection to perform studies as required and to develop the Regional Transmission Expansion Plan.

(b) The Transmission Expansion Advisory Committee established by the Office of the Interconnection will meet periodically with representatives of the Office of the Interconnection to provide advice and recommendations to the Office of the Interconnection to aid in the development of the Regional Transmission Expansion Plan. ~~The participants in the Transmission Expansion Advisory Committee shall review and provide advice and recommendations on the projects to be included in the Regional Transmission Expansion Plan, including (i) the Regional RTEP Projects and (ii) the Subregional RTEP Projects when in the judgment of the Office of the Interconnection, these projects are determined to substantially impact power flow(s) on the regional transmission facilities.~~ The Transmission Expansion Advisory Committee ~~participants shall incorporate all the Regional~~ participants will ~~shall be given an opportunity to~~ RTEP Projects and Subregional RTEP Projects provide advice for consideration by the Office of the Interconnection regarding sensitivity studies, modeling assumption variations, scenario analyses, and the consideration of Public Policy Requirements Objectives in the studies and analyses to be conducted by the Office of the Interconnection in the final RTEP for approval by the PJM Board. The Transmission Expansion Advisory Committee participants will shall be given the opportunity to review and provide advice and recommendations on the projects to be included in the Regional Transmission Expansion Plan. The Transmission Expansion Advisory Committee meetings shall include discussions addressing interregional planning issues, as required. The Transmission Expansion Advisory Committee shall be open to participation by: (i) all Transmission Customers, as that term is defined in the PJM Tariff, and applicants for transmission service; (ii) any other entity proposing to provide Transmission Facilities to be integrated into the PJM Region; (iii) all Members; (iv) the electric utility regulatory agencies within the States in the PJM Regional and the State Consumer Advocates; and (v) any other interested entities or persons. The Transmission Expansion Advisory Committee shall be governed by the Transmission Expansion Advisory Committee rules and procedures set forth in the PJM Regional Planning Process Manual (PJM Manual M-14 series); and by the rules and procedures applicable to PJM committees.

(c) The Subregional RTEP Committees established by the Office of the Interconnection shall facilitate the development and review of the Subregional RTEP Projects. The Subregional RTEP

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

Committees will be responsible for the initial review of the Subregional RTEP Projects, and to provide recommendations to the Transmission Expansion Advisory Committee concerning the Subregional RTEP Projects. ~~The A~~ Subregional RTEP Committee may of its own accord or at the request of a Subregional RTEP Committee participant, also refer specific Subregional RTEP Projects to the Transmission Expansion Advisory Committee for further review, advice and recommendations.

(d) The Subregional RTEP Committees shall be responsible for the timely review of each Transmission Owner's Local Plan. This review shall include, but is not limited to, the review of the criteria, assumptions and models used by the Transmission Owner to identify criteria violations and proposed solutions prior to finalizing the Local Plan, the coordination and integration of the Local Plans into the RTEP, and addressing any stakeholder issues unresolved in the Local Plan process. The Subregional RTEP Committees will be provided sufficient opportunity to review and provide written comments to the Transmission Owners on the criteria, assumptions, and models used in local planning activities prior to finalizing the Local Plan. The Subregional RTEP Committees meetings shall include discussions addressing interregional planning issues, as required. Once finalized, the Subregional RTEP Committees will be provided sufficient opportunity to review and provide written comments to the Transmission Owners on the Local Plans as integrated into the RTEP, prior to the submittal of the final Regional Transmission Expansion Plan to the PJM Board for approval.

(e) The Subregional RTEP Committees shall be open to participation by: (i) all Transmission Customers, as that term is defined in the PJM Tariff, and applicants for transmission service; (ii) any other entity proposing to provide Transmission Facilities to be integrated into the PJM Region; (iii) all Members; (iv) the electric utility regulatory agencies within the States in the PJM Region and the State Consumer Advocates and (v) any other interested entities or persons.

(f) ~~The Each~~ Subregional RTEP Committee shall schedule and facilitate a minimum of one Subregional RTEP Committee meeting to review the criteria, assumptions and models used by the Transmission Owner to identify criteria violations. ~~The Each~~ Subregional RTEP Committee shall schedule and facilitate an additional Subregional RTEP Committee meeting to review the identified criteria violations and potential solutions for each of the three PJM subregions; ~~the~~ the Mid-Atlantic, West and South; ~~per~~ per Planning Period, and as required. ~~The~~ Subregional RTEP Committees may facilitate additional meetings to incorporate more localized areas within the three subregions into the subregional planning process. At the discretion of the Office of the Interconnection, a designated Transmission Owner may facilitate ~~the~~ Subregional RTEP Committee meeting(s), or the additional meetings incorporating the more localized areas. The Subregional RTEP Committee meetings will incorporate interregional coordination as required.

(g) The Subregional RTEP Committees shall be governed by the Transmission Expansion Advisory Committee rules and procedures set forth in the PJM Regional Planning Process Manual (Manual M-14 series) and by the rules and procedures applicable to PJM committees.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

#### **1.4 Contents of the Regional Transmission Expansion Plan.**

- (a) The Regional Transmission Expansion Plan shall consolidate the transmission needs of the region into a single plan which is assessed on the bases of maintaining the reliability of the PJM Region in an economic and environmentally acceptable ~~and manner, and in a manner that supports supporting~~ competition in the PJM Region, striving to maintain and, when appropriate, enhancing the economic market efficiency and operational efficiency performance of wholesale electric service markets and considering, when appropriate, Public Policy Requirements. In developing a Regional Transmission Expansion Plan to maintain the reliability of the PJM Region, the Office of the Interconnection shall consider Public Policy Requirements.
- (b) The Regional Transmission Expansion Plan shall reflect, consistent with the requirements of this Schedule 6, transmission enhancements and expansions; load forecasts; ~~expected demand response;~~ and capacity forecasts, including expected generation additions and retirements, demand response, and reductions in demand from energy efficiency and price responsive demand, for at least the ensuing ten years.
- (c) The Regional Transmission Expansion Plan shall, as a minimum, include a designation of the Transmission Owner or Owners or other entity that will construct, own and/or finance each transmission enhancement and expansion and how all reasonably incurred costs are to be recovered.
- (d) The Regional Transmission Expansion Plan shall (i) avoid unnecessary duplication of facilities; (ii) avoid the imposition of unreasonable costs on any Transmission Owner or any user of Transmission Facilities; (iii) take into account the legal and contractual rights and obligations of the Transmission Owners; (iv) provide, if appropriate, alternative means for meeting transmission needs in the PJM Region; ~~(v) strive to maintain and, when appropriate, to enhance the economic and operational efficiency of wholesale electric service markets in the PJM Region;~~ (vi) provide for coordination with existing transmission systems and with appropriate interregional and local expansion plans; ~~(vii) take into account, in maintaining reliability, if appropriate, Public Policy Requirements;~~ and (viii) strive for consistency in planning data and assumptions that may relieve transmission congestion across multiple regions.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

## **1.5 Procedure for Development of the Regional Transmission Expansion Plan.**

### **1.5.1 Commencement of the Process.**

(a) The Office of the Interconnection shall initiate the enhancement and expansion study process if (i) required as a result of a need for transfer capability identified by the Office of the Interconnection in its evaluation of requests for interconnection with the transmission system or for firm transmission service with a term of one year or more; (ii) required to address a need identified by the Office of the Interconnection<sup>s</sup> in its on-going evaluation of the transmission system's ~~economic market efficiency~~ and operational ~~adequacy and~~ performance; (iii) required as a result of the Office of the Interconnection's assessment of the transmission system's compliance with ~~Reliability First Corporation's or SERC reliability criteria~~ NERC Reliability Standards, more ~~stringent~~ reliability criteria, if any<sup>s</sup>, or PJM planning and operating criteria; (iv) required to address constraints or available transfer capability shortages, including, but not limited to, available transfer capability shortages that prevent the simultaneous feasibility of stage 1A Auction Revenue Rights allocated pursuant to Section 7.4.2(b) of Schedule 1 of this Agreement, constraints or shortages that are identified by the Office of the Interconnection as a result of expected generation ~~additions or~~ retirements, constraints or shortages based on an evaluation of load forecasts, ~~constraints or shortages arising from congestion events on, or operational performance of, the transmission system,~~ or system reliability needs arising from proposals for the addition of Transmission Facilities in the PJM ~~R~~ region; or (v) expansion of the transmission system is proposed by one or more Transmission Owners, Interconnection Customers, Network Service Users<sup>s</sup> or Transmission Customers<sup>s</sup>, or any party that funds Network Upgrades pursuant to Section 7.8 of Schedule 1 of this Agreement. The Office of the Interconnection may initiate the enhancement and expansion study process if requirements or needs are identified from any of its evaluations and assessments of the foregoing factors (i) through (v), including to address or consider, where appropriate, requirements or needs arising from sensitivity studies, modeling assumption variations, scenario analyses, and consideration of Public Policy Objectives ~~Requirements~~ ~~Considerations~~ ~~employed in its evaluations and assessments.~~

(b) The Office of the Interconnection shall notify the Transmission Expansion Advisory Committee participants of, as well as publicly notice, the commencement of an enhancement and expansion study. The Transmission Expansion Advisory Committee participants shall notify the Office of the Interconnection in writing of any additional transmission considerations they would like to have to be included in the Office of the Interconnection's reliability analyses, including considerations arising from Public Policy Requirements.

### **1.5.2 Development of Scope, Assumptions and Procedures.**

Once the need for an enhancement and expansion study has been established, the Office of the Interconnection shall consult with the Transmission Expansion Advisory Committee and the Subregional RTEP Committees<sup>s</sup>, as appropriate, to prepare the study's scope, assumptions and procedures.



11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

### **1.5.3 Scope of Studies.**

In conducting the enhancement and expansion studies, the Office of the Interconnection shall not limit its analyses to bright line tests to identify and evaluate potential transmission system limitations, violations of planning criteria, or transmission needs. In addition to the bright line tests, the Office of the Interconnection shall employ sensitivity studies, modeling assumption variations, and scenario analyses, and shall also consider, ~~where appropriate,~~ Public Policy Objectives in the studies and analyses, so as to mitigate the possibility that bright line metrics may inappropriately include or exclude transmission projects from the long-term transmission plan. Sensitivity studies, modeling assumption variations, and scenario analyses shall take account of potential changes in expected future system conditions, including but not limited to load levels, transfer levels, generation patterns (including but not limited to the effects of assumptions regarding generation that is at risk for retirement and new generation to satisfy Public Policy Objectives), and uncertainties arising from estimated times to construct transmission upgrades.

Enhancement and expansion studies shall be completed by the Office of the Interconnection in collaboration with the affected Transmission Owners, as required. In general, enhancement and expansion studies shall include:

- (a) An identification of existing and projected limitations on the transmission system's physical, economic and/or operational capability or performance, with accompanying simulations to identify the costs of controlling those limitations. Potential enhancements and expansions will be proposed to mitigate limitations controlled by non-economic means.
- (b) Evaluation and analysis of potential enhancements and expansions, including alternatives thereto, needed to mitigate such limitations.
- (c) Identification, evaluation and analysis of potential transmission expansions and enhancements including, demand response programs, and other alternative technologies as appropriate to maintain system reliability.
- (d) Identification, evaluation and analysis of potential enhancements and expansions for the purposes of supporting competition, economic market efficiency and operational efficiency performance and, ~~when appropriate,~~ Public Policy Requirements in the PJM ~~region~~Region.
- (e) Identification, evaluation and analysis of upgrades to support Incremental Auction Revenue Rights requested pursuant to Section 7.8 of Schedule 1 of this Agreement.
- (f) Identification, evaluation and analysis of upgrades to support all transmission customers, including native load and network service customers.

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

(g) Engineering studies needed to determine the effectiveness and compliance of recommended enhancements and expansions, with the following PJM criteria: system reliability, operational performance, and ~~economic-market~~ efficiency.

(h) Identification, evaluation and analysis of potential enhancements and expansions designed to ensure the Transmission System's capability can support the simultaneous feasibility of all stage 1A Auction Revenue Rights allocated pursuant to Section 7.4.2(b) of Schedule 1 of this Agreement. Enhancements and expansions related to stage 1A Auction Revenue Rights identified pursuant to this section shall be recommended for inclusion in the RTEP together with a recommended in-service date based on the results of the ten (10) year stage 1A simultaneous feasibility analysis. Any such recommended enhancement or expansion under this Section 1.5.3(h) shall include, but shall not be limited to, the reason for the upgrade, the cost of the upgrade, the cost allocation identified pursuant to Section 1.5.6(g) of Schedule 6 of this Agreement and an analysis of the benefits of the enhancement or expansion, provided that any such upgrades will not be subject to a market efficiency cost/benefit analysis.

~~In conducting the enhancement and expansion studies, the Office of the Interconnection shall not limit its analyses to bright line tests to identify and evaluate potential transmission system limitations, violations of reliability criteria, or transmission needs. The Office of the Interconnection shall employ sensitivity studies, modeling assumption variations, and scenario analyses, and shall consider Public Policy Requirements in the studies and analyses, so as to mitigate the possibility that bright line metrics may inappropriately include or exclude transmission projects from long term transmission planning. Sensitivity studies, modeling assumption variations, and scenario analyses shall take account of potential changes in expected future system conditions, including but not limited to load levels, transfer levels, generation patterns (including the effects of assumptions regarding generation that is at risk for retirement), and uncertainties arising from estimated times to construct transmission upgrades.~~

#### **1.5.4 Supply of Data.**

(a) The Transmission Owners shall provide to the Office of the Interconnection on an annual or periodic basis as specified by the Office of the Interconnection, any information and data reasonably required by the Office of the Interconnection to perform the Regional Transmission Expansion Plan, including but not limited to the following: (i) a description of the total load to be served from each substation; (ii) the amount of any interruptible loads included in the total load (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions); (iii) a description of all generation resources to be located in the geographic region encompassed by the Transmission Owner's transmission facilities, including unit sizes, VAR capability, operating restrictions, and any must-run unit designations required for system reliability or contract reasons; the (iv) current Local Plan; and (v) all criteria, assumptions and models used in the current Local Plan. The data required under this Section shall be provided in the form and manner specified by the Office of the Interconnection.

(b) In addition to the foregoing, the Transmission Owners, those entities requesting transmission service and any other entities proposing to provide Transmission Facilities to be

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

integrated into the PJM Region shall supply any other information and data reasonably required by the Office of the Interconnection to perform the enhancement and expansion study.

(c) The Office of the Interconnection also shall solicit from the Members, Transmission Customers and other interested parties, including but not limited to electric utility regulatory agencies within the States in the PJM Region and the State Consumer Advocates, information required by, or anticipated to be useful to, the Office of the Interconnection in its preparation of the enhancement and expansion study, including information regarding potential sensitivity studies, modeling assumption variations, scenario analyses, and Public Policy Requirements Objectives that may be considered.

(d) The Transmission Expansion Advisory Committee and the Subregional RTEP Committees shall each facilitate a minimum of one initial assumptions meeting to be scheduled at the commencement of the RTEP process. The purpose of the assumptions meeting shall be to provide an open forum to discuss with the Office of the Interconnection the following: (i) establish the assumptions to be used in performing the evaluation and analysis of the potential enhancements and expansions to the Transmission Facilities; (ii) incorporate regulatory initiatives Public Policy Objectives, as appropriate, including state regulatory agency initiated programs, and other Public Policy Requirements, to consider including for consideration in the Office of the Interconnection's reliability transmission planning analyses; (iii) provide an open forum to review the impacts of regulatory actions, projected changes in load growth, demand response resources, energy efficiency programs, price responsive demand, generating capacity additions and retirements, market efficiency and other trends in the industry; and (iv) provide an open forum for the review of alternative sensitivity studies, modeling assumptions and scenarios analyses proposed by the Committee participants. Prior to the initial assumptions meeting, the Committee participants will be afforded the opportunity to provide input and submit suggestions regarding the information identified in items (i) through (iv) of this subparagraph subsection. The A range of final assumptions to be used in the studies and scenario analyses shall be determined by the Office of the Interconnection, considering the advice and recommendations of the Transmission Expansion Advisory Committee and Subregional RTEP Committees participants, for both the Regional RTEP Projects and Subregional RTEP Projects and shall be documented and publicly posted for review.

(e) In addition, the Office of the Interconnection shall facilitate periodic meetings with representatives of the electric utility regulatory agencies and other state governmental bodies within the States in the PJM Region the Independent State Agencies Committee (ISAC) to discuss: (i) the assumptions to be used in performing the evaluation and analysis of the potential enhancements and expansions to the Transmission Facilities; (ii) regulatory initiatives, as appropriate, including state regulatory agency initiated programs, and other [Public Policy Considerations Objectives or Public Policy Requirements], to consider including in the Office of the Interconnection's reliability transmission planning analyses; (iii) the impacts of regulatory actions, projected changes in load growth, demand response resources, energy efficiency programs, generating capacity, market efficiency and other trends in the industry; and (iv) alternative sensitivity studies, modeling assumptions and scenario analyses proposed by the electric utility regulatory agencies ISAC. At such meetings, the Office of the Interconnection

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

also shall discuss the current status of the enhancement and expansion study process. ~~Representatives of the electric utility regulatory agencies and other state governmental bodies in the PJM Region~~ The ISAC may request that the Office of Interconnection schedule additional meetings as necessary. The Office of the Interconnection shall inform the Transmission Expansion Advisory Committee and the Subregional RTEP Committees, as appropriate, of the input of the ~~electric utility regulatory agency representatives and other state governmental bodies~~ ISAC and shall consider such input in developing the range of assumptions to be used in the studies and scenario analyses described in subsection (d), above.

(ef) After the assumptions meeting(s), the Transmission Expansion Advisory Committee and the Subregional RTEP Committees shall facilitate additional meetings and shall post all communications required to provide early opportunity for the committee participants; (as defined in Sections 1.3(b) and 1.3(c) of this Schedule 6) to review and evaluate the following **arising from the studies performed by the Office of the Interconnection, including sensitivity studies and scenario analyses:** (i) any identified violations of reliability criteria; ~~(ii)~~ **and** analyses of the ~~economic-market efficiency and operational~~ performance of the transmission system; ~~(iii)~~ potential transmission solutions, **including any acceleration, deceleration or modifications of a potential expansion or enhancement based on the results of sensitivities studies and scenario analyses;** and ~~(iv)~~ the proposed RTEP. These meetings will be scheduled as deemed necessary by the Office of the Interconnection or upon the request of the Transmission Expansion Advisory Committee or the Subregional RTEP Committees. The Office of the Interconnection will provide updates on the status of the development of the RTEP at these meetings or at the regularly scheduled meetings of the PJM Planning Committee.

Formatted: Not Highlight

(fg) The Office of the Interconnection shall supply ~~to Committee participants any reasonably required~~ information and data ~~reasonably required by the Members, Transmission Customers and other impacted interested parties, including but not limited to, electric utility regulatory agencies within the States in the PJM Region, and the State Consumer Advocates,~~ utilized to **perform develop** the Regional Transmission Expansion Plan. Such information and data shall be provided pursuant to the appropriate protection of confidentiality provisions.

(gh) The Office of the Interconnection shall provide access through ~~the~~ PJM website, to the Transmission Owner's Local Plan, including all criteria, assumptions and models used by the Transmission Owners in developing their respective Local Plan ("Local Plan Information"). Local Plan Information shall be provided consistent with: (1) any applicable confidentiality provisions set forth in Section 18.17 of this Operating Agreement; (2) PJM's CEII process; and (3) any applicable copyright limitations. Notwithstanding the foregoing, PJM may share with a third party Local Plan Information that has been designated as confidential, pursuant to the provisions for such designation as set forth in Section 18.17 of this Operating Agreement and subject to: (i) agreement by the disclosing Transmission Owner consistent with the process set forth in this Operating Agreement; and (ii) an appropriate non-disclosure agreement to be executed by PJM, the Transmission Owner and the requesting third party. With the exception of confidential, CEII and copyright protected information, Local Plan Information will be provided for full review by the Planning Committee, the TEAC and the Subregional RTEP Committees.

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

#### **1.5.5 Coordination of the Regional Transmission Expansion Plan.**

- (a) The Regional Transmission Expansion Plan shall be developed in accordance with the principles of interregional coordination with the transmission systems of the surrounding ~~regional reliability councils~~ Regional Entities and with the local transmission providers, through the Transmission Expansion Advisory Committee and the Subregional RTEP Committees.
- (b) The Regional Transmission Expansion Plan shall be developed taking into account the processes for coordinated regional transmission expansion planning established under the following agreements: Joint Operating Agreement Between the Midwest Independent System Operator, Inc. and PJM Interconnection, L.L.C.; Northeastern ISO/RTO Planning Coordination Protocol; Joint Reliability Coordination Agreement Between the Midwest independent System Operator, Inc.; PJM Interconnection, L.L.C. and Progress Energy Carolinas. Coordinated regional transmission expansion planning shall also incorporate input from parties that may be impacted by the coordination efforts, including but not limited to, the Members, Transmission Customers, electric utility regulatory agencies in the PJM Region, and the State Consumer Advocates, in accordance with the terms and conditions of the applicable regional coordination agreements.
- (c) The Regional Transmission Expansion Plan shall be developed by the Office of the Interconnection in consultation with the Transmission Expansion Advisory Committee during the enhancement and expansion study process.
- (d) The Regional Transmission Expansion Plan shall be developed taking into account the processes for coordination of the Regional and subregional systems.

#### **1.5.6 Development of the Recommended Regional Transmission Expansion Plan.**

- (a) The Office of the Interconnection shall be responsible for the development of the Regional Transmission Expansion Plan and for conducting the studies, including sensitivity studies and scenario analyses, on which the plan is based. The Regional Transmission Expansion Plan, including the Regional RTEP Projects, the Subregional RTEP Projects and the Supplemental Projects shall be developed through an open and collaborative process with opportunity for meaningful participation through the Transmission Expansion Advisory Committee and the Subregional RTEP Committees.
- (b) Upon completion of its studies and analysis, including sensitivity studies and scenario analyses, the Office of the Interconnection shall prepare a recommended enhancement and expansion plan, which shall include alternative projects or solutions as applicable, for review by the Transmission Expansion Advisory Committee. The Transmission Expansion Advisory Committee shall facilitate open meetings and communications as necessary to provide opportunity for the Transmission Expansion Advisory Committee participants to collaborate on the preparation of the recommended enhancement and expansion plan. The Office of the

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

Interconnection also shall invite interested parties to submit comments on the plan to the Transmission Expansion Advisory Committee and to the Office of the Interconnection.

(c) The recommended plan shall separately identify enhancements and expansions for the three PJM subregions, the PJM Mid-Atlantic Region, the PJM West Region, and the PJM South Region, and shall incorporate recommendations from the Subregional RTEP Committees.

(c.01) The recommended plan shall separately identify enhancements and expansions that are classified as Supplemental Projects.

(d) The recommended plan shall identify enhancements and expansions that relieve transmission constraints and which, in the judgment of the Office of the Interconnection, are economically justified. Such economic expansions and enhancements shall be developed in accordance with the procedures, criteria and analyses described in Section 1.5.7 below.

(e) The recommended plan shall include proposed Merchant Transmission Facilities within the PJM Region and any other enhancement or expansion of the Transmission System requested by any participant which the Office of the Interconnection finds to be compatible with the Transmission System, though not required pursuant to Section 1.1, provided that (1) the requestor has complied, to the extent applicable, with the procedures and other requirements of Part IV of the PJM Tariff; (2) the proposed enhancement or expansion is consistent with applicable reliability standards, operating criteria and the purposes and objectives of the regional planning protocol; (3) the requestor shall be responsible for all costs of such enhancement or expansion (including, but not necessarily limited to, costs of siting, designing, financing, constructing, operating and maintaining the pertinent facilities), and (4) except as otherwise provided by Part IV of the PJM Tariff with respect to Merchant Network Upgrades, the requestor shall accept responsibility for ownership, construction, operation and maintenance of the enhancement or expansion through an undertaking satisfactory to the Office of the Interconnection.

FOR DISCUSSION: AWC proposes to add: The recommended plan shall also include any project proposed by one or more states to meet its Public Policy Requirements, provided any such state(s) shall be responsible for the costs of that project except to the limited extent that the Office of the Interconnection later determines to recommend inclusion of that project in the recommended plan to address other planning needs provided for this in this Schedule 6. At the request of any such state(s), PJM will include the costs of the project in Rate Schedule 12 for collection from customers in that state(s). To the extent the more than one state requests the inclusion of a project in the plan; those states must provide PJM with the proposed allocation of costs to customers in their state(s) in a form acceptable to PJM. Except to the extent the project is authorized by PJM to proceed to construction. From that point forward that state(s) will have no further cost responsibility for the project.

(f) For each enhancement or expansion that is included in the recommended plan, the plan shall consider, based on the planning analysis: other input from participants, including any indications of a willingness to bear cost responsibility for such enhancement or expansion; and,

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

when applicable, relevant projects being undertaken to ensure the simultaneous feasibility of Stage 1A ARRs, to facilitate Incremental ARRs pursuant to the provisions of Section 7.8 of Schedule 1 of this Agreement or to facilitate upgrades pursuant to Parts II, III or IV of the PJM Tariff, and designate one or more Transmission Owners or other entities to construct, own and, unless otherwise provided, finance the recommended transmission enhancement or expansion. To the extent that one or more Transmission Owners are designated to construct, own and/or finance a recommended transmission enhancement or expansion, the recommended plan shall designate the Transmission Owner that owns transmission facilities located in the Zone where the particular enhancement or expansion is to be located. Otherwise, any designation under this paragraph of more than one entity to construct, own and/or finance a recommended transmission enhancement or expansion shall also include a designation of proportional responsibility among them. Nothing herein shall prevent any Transmission Owner or other entity designated to construct, own and/or finance a recommended transmission enhancement or expansion from agreeing to undertake its responsibilities under such designation jointly with other Transmission Owners or other entities.

(g) Based on the planning analysis and other input from participants, including any indications of a willingness to bear cost responsibility for an enhancement or expansion, the recommended plan shall, for any enhancement or expansion that is included in the plan, designate (1) the Market Participant(s) in one or more Zones, or any other party that has agreed to fully fund upgrades pursuant to this Agreement or the PJM Tariff, that will bear cost responsibility for such enhancement or expansion, as and to the extent provided by any provision of the PJM Tariff or this Agreement, (2) in the event and to the extent that no provision of the PJM Tariff or this Agreement assigns cost responsibility, the Market Participant(s) in one or more Zones from which the cost of such enhancement or expansion shall be recovered through charges established pursuant to Schedule 12 of the Tariff, and (3) in the event and to the extent that the Coordinated System Plan developed under the Joint Operating Agreement Between the Midwest Independent System Operator, Inc. and PJM Interconnection, L.L.C. assigns cost responsibility, the Market Participant(s) in one or more Zones from which the cost of such enhancement or expansion shall be recovered. Any designation under clause (2) of the preceding sentence (A) shall further be based on the Office of the Interconnection's assessment of the contributions to the need for, and benefits expected to be derived from, the pertinent enhancement or expansion by affected Market Participants and, (B), subject to FERC review and approval, shall be incorporated in any amendment to Schedule 12 of the PJM Tariff that establishes a Transmission Enhancement Charge Rate in connection with an economic expansion or enhancement developed under Sections 1.5.6(d) and 1.5.7 of this Schedule 6 and (C), the costs associated with expansions and enhancements required to ensure the simultaneous feasibility of stage 1A Auction Revenue Rights allocated pursuant to Section 7 of Schedule 1 of this Agreement shall (1) be allocated across transmission zones based on each zone's stage 1A eligible Auction Revenue Rights flow contribution to the total stage 1A eligible Auction Revenue Rights flow on the facility that limits stage 1A ARR feasibility and (2) within each transmission zone the Network Service Users and Transmission Customers that are eligible to receive stage 1A Auction Revenue Rights shall be the Responsible Customers under Section (b) of Schedule 12 of the PJM Tariff for all expansions and enhancements included in the Regional

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

Transmission Expansion Plan to ensure the simultaneous feasibility of stage 1A Auction Revenue Rights.

Any designation under clause (3), above, (A) shall further be based on the Office of the Interconnection's assessment of the contributions to the need for, and benefits expected to be derived from, the pertinent enhancement or expansion by affected Market Participants, and (B), subject to FERC review and approval, shall be incorporated in an amendment to a Schedule of the PJM Tariff which establishes a charge in connection with the pertinent enhancement or expansion. Before designating fewer than all customers using Point-to-Point Transmission Service or Network Integration Transmission Service within a Zone as customers from which the costs of a particular enhancement or expansion may be recovered, Transmission Provider shall consult, in a manner and to the extent that it reasonably determines to be appropriate in each such instance, with affected state utility regulatory authorities and stakeholders. When the plan designates more than one responsible Market Participant, it shall also designate the proportional responsibility among them. Notwithstanding the foregoing, with respect to any facilities that the Regional Transmission Expansion Plan designates to be owned by an entity other than a Transmission Owner, the plan shall designate that entity as responsible for the costs of such facilities.

(g.01) Certain Regional RTEP Project(s) and Subregional RTEP Project(s) may not be required for compliance with the following PJM criteria: system reliability, market efficiency or operational performance, ~~or economic efficiency~~, pursuant to a determination by the Office of the Interconnection. These Supplemental Projects shall be separately identified in the RTEP and are not subject to approval by the PJM Board.

(h) Any Transmission Owner and other participants on the Transmission Expansion Advisory Committee may offer an alternative.

(h.01) The Office of the Interconnection shall offer an alternative for review by the Transmission Expansion Advisory Committee or the Subregional RTEP Committees when the Office of the Interconnection determines, in its sole discretion that an alternative exists.

(i) If the Office of the Interconnection adopts the alternative, based upon its review of the relative costs and benefits, the ability of the alternative to supply the required level of transmission service, and its impact on the reliability of the Transmission Facilities, the Office of the Interconnection shall make any necessary changes to the recommended plan.

(j) If, based upon its review of the relative costs and benefits, the ability of the alternative to supply the required level of transmission service, and the alternative's impact on the reliability of the Transmission Facilities, the Office of the Interconnection does not adopt an alternative proposed by a Transmission Owner or Owners, the Transmission Owner or Owners whose alternative or alternatives have not been accepted or to whom cost responsibility has been assigned and other participants on the Transmission Expansion Advisory Committee may require that its or their alternative(s) be submitted to the Dispute Resolution Procedures in Schedule 5 of the Operating Agreement.



11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

(k) Schedule 5 of the Operating Agreement, the Dispute Resolution Procedures may be requested by the parties to a dispute arising from the Regional Transmission Expansion Plan or its development.

#### **1.5.7 Development of Economic Transmission Enhancements and Expansions.**

(a) In June of each year, concurrent with the PJM Board's consideration and approval of the reliability-based transmission enhancement and expansions to be included in the Regional Transmission Expansion Plan, the Office of the Interconnection shall obtain PJM Board approval of the assumptions to be used in performing the market efficiency analysis described in this section to identify enhancements or expansions that could relieve transmission constraints that have an economic impact ("economic constraints"). Such assumptions shall include, but not be limited to, the discount rate used to determine the present value of the Total Annual Enhancement Benefit and Total Enhancement Cost, and the annual revenue requirement, including the recovery period, used to determine the Total Enhancement Cost. The discount rate shall be based on the Transmission Owners' most recent after-tax embedded cost of capital weighted by each Transmission Owner's total transmission capitalization. Each Transmission Owner shall provide the Office of the Interconnection with the Transmission Owner's most recent after-tax embedded cost of capital, total transmission capitalization, and levelized carrying charge rate, including the recovery period. The recovery period shall be consistent with recovery periods allowed by the Commission for comparable facilities. Prior to PJM Board consideration of such assumptions, the assumptions shall be presented to the Transmission Expansion Advisory Committee for review and comment.

(b) Following PJM Board approval of the assumptions, the Office of the Interconnection shall perform a market efficiency analysis to compare the costs and benefits of (i) accelerating reliability-based enhancements or expansions already included in the Regional Transmission Plan that if accelerated also could relieve one or more economic constraints; (ii) modifying reliability-based enhancements or expansions already included in the Regional Transmission Plan that as modified would relieve one or more economic constraints; and (iii) new enhancements or expansions that could relieve one or more economic constraints, but for which no reliability-based need has been identified. Economic constraints include, but are not limited to, constraints that cause (1) significant historical gross congestion; (2) significant historical unhedgeable congestion; (3) pro-ration of Stage 1B ARR requests as described in section 7.4.2(c) of Schedule 1 of this Agreement; or (4) significant simulated congestion as forecast in the market efficiency analysis.

(c) The process for conducting the market efficiency analysis described in subsection (b) above shall include the following:

(i) The Office of the Interconnection shall identify and provide to the Transmission Expansion Advisory Committee a list of economic constraints to be evaluated in the market efficiency analysis.

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

(ii) The Office of the Interconnection shall identify any planned reliability-based enhancements or expansions already included in the Regional Transmission Expansion Plan, which if accelerated would relieve such constraints, and present any such proposed reliability-based enhancements and expansions to be accelerated to the Transmission Expansion Advisory Committee for review and comment. The PJM Board, upon consideration of the advice of the Transmission Expansion Advisory Committee, thereafter shall consider and vote to approve any accelerations.

(iii) The Office of the Interconnection shall evaluate whether including any additional economic-based enhancements or expansions in the Regional Transmission Expansion Plan or modifications of existing Regional Transmission Expansion Plan reliability-based enhancements or expansions would relieve an economic constraint. In addition, any market participant at any time may submit to the Office of the Interconnection a proposal to construct an additional economic-based enhancement or expansion to relieve an economic constraint. To be considered in the market efficiency analysis commencing after approval of the Regional Transmission Expansion Plan by the PJM Board in June, market participant proposals to construct an additional economic-based enhancement or expansion must be received by the Office of the Interconnection by December 31 of the same year. Upon completion of its evaluation, including consideration of any eligible market participant proposed economic-based enhancements or expansions, the Office of the Interconnection shall present to the Transmission Expansion Advisory Committee a description of recommended new economic-based enhancements and expansions for review and comment. Upon consideration of the advice of the Transmission Expansion Advisory Committee, the PJM Board shall consider any new economic-based enhancements and expansions for inclusion in the Regional Transmission Plan and for those enhancements and expansions it approves, the PJM Board shall designate (a) the entity or entities that will be responsible for constructing and owning or financing the additional economic-based enhancements and expansions, (b) the estimated costs of such enhancements and expansions, and (c) the market participants that will bear responsibility for the costs of the additional economic-based enhancements and expansions pursuant to section 1.5.6(g) of this Schedule 6. In the event the entity or entities designated as responsible for construction, owning or financing a designated new economic-based enhancement or expansion declines to construct, own or finance the new economic-based enhancement or expansion, the enhancement or expansion will not be included in the Regional Transmission Expansion Plan but will be included in the report filed with the FERC in accordance with sections 1.6 and 1.7 of this Schedule. This report also shall include information regarding PJM Board approved accelerations of reliability-based enhancements or expansions that an entity declines to accelerate.

(d) To determine the economic benefits of accelerating or modifying planned reliability-based enhancements or expansions or of constructing additional economic based enhancements or expansions and whether such economic-based enhancements or expansion are eligible for inclusion in the Regional Transmission Expansion Plan, the Office of the Interconnection shall perform and compare market simulations with and without the proposed accelerated or modified planned reliability-based enhancements or expansions or the additional economic-based enhancements or expansions as applicable, using the Benefit/Cost Ratio calculation set forth below in this section 1.5.7(d). An economic-based enhancement or expansion shall be included

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

in the Regional Transmission Expansion Plan recommended to the PJM Board, if the relative benefits and costs of the economic-based enhancement or expansion meet a Benefit/Cost Ratio Threshold of at least 1.25:1.

The Benefit/Cost Ratio shall be determined as follows:

Benefit/Cost Ratio = [Present value of the Total Annual Enhancement Benefit for each of the first 15 years of the life of the enhancement or expansion] ÷ [Present value of the Total Enhancement Cost for each of the first 15 years of the life of the enhancement or expansion]

Where

Total Annual Enhancement Benefit = Energy Market Benefit + Reliability Pricing Model Benefit

and

Energy Market Benefit = [.70] \* [Change in Total Energy Production Cost] + [.30] \* [Change in Load Energy Payment]

and

Change in Total Energy Production Cost = [the estimated total annual fuel costs, variable O&M costs, and emissions costs of the dispatched resources in the PJM Region without the economic-based enhancement or expansion] – [the estimated total annual fuel costs, variable O&M costs, and emissions costs of the dispatched resources in the PJM Region with the economic-based enhancement or expansion]

and

Change in Load Energy Payment = [the annual sum of (the hourly estimated zonal load megawatts for each Zone) \* (the hourly estimated zonal Locational Marginal Price for each Zone without the economic-based enhancement or expansion)] – [the annual sum of (the hourly estimated zonal load megawatts for each Zone) \* (the hourly estimated zonal Locational Marginal Price for each Zone with the economic-based enhancement or expansion)] – [the change in value of transmission rights for each Zone with the economic-based enhancement or expansion (as measured using currently allocated Auction Revenue Rights plus additional Auction Revenue Rights made available by the proposed acceleration or modification of the planned reliability-based

enhancement or expansion or new economic based enhancement or expansion)]. For economic-based enhancements and expansions for which cost responsibility is assigned pursuant to section (b)(i) of Schedule 12 of the PJM Tariff, the Change in the Load Energy Payment shall be the sum of the Change in Load Energy Payment in all Zones. For economic-based enhancements or expansions for which cost responsibility is assigned pursuant to section (b)(v) of Schedule 12 of the PJM Tariff, 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.

and

Reliability Pricing Benefit = [.70] \* [Change in Total System Capacity Cost] + [.30] \* [Change in Load Capacity Payment]

and

Change in Total System Capacity Cost = [the sum of (the megawatts that are estimated to be cleared in the Base Residual Auction under Attachment DD of the PJM Tariff) \* (the prices that are estimated to be contained in the Sell Offers for each such cleared megawatt without the economic-based enhancement or expansion) \* (the number of days in the study year)] – [the sum of (the megawatts that are estimated to be cleared in the Base Residual Auction under Attachment DD of the PJM Tariff) \* (the prices that are estimated to be contained in the Sell Offers for each such cleared megawatt with the economic-based enhancement or expansion) \* (the number of days in the study year)]

and

Change in Load Capacity Payment = [the sum of (the estimated zonal load megawatts in each Zone) \* (the estimated Final Zonal Capacity Prices under Attachment DD of the PJM Tariff without the economic-based enhancement or expansion) \* (the number of days in the study year)] – [the sum of (the estimated zonal load megawatts in each Zone) \* (the estimated Final Zonal Capacity Prices under Attachment DD of the PJM Tariff with the economic-based enhancement or expansion) \* (the number of days in the study year)]. The Change in Load Capacity Payment shall take account of the change in value of Capacity Transfer Rights in each Zone, including any additional Capacity Transfer Rights made available by the proposed acceleration or modification of the

planned reliability-based enhancement or expansion or new economic based enhancement or expansion. For economic-based enhancements and expansions for which cost responsibility is assigned pursuant to section (b)(i) of Schedule 12 of the PJM Tariff, the Change in the Load Capacity Payment shall be the sum of the change in Load Capacity Payment in all Zones. For economic-based enhancements or expansions for which cost responsibility is assigned pursuant to section (b)(v) of Schedule 12 of the PJM Tariff, the Change in Load Capacity Payment shall be the sum of the change in the Load Capacity Payment only of the Zones that show a decrease in Load Capacity Payment.

and

Total Enhancement Cost (except for accelerations of planned reliability-based enhancements or expansions) = the estimated annual revenue requirement for the economic-based enhancement or expansion.

Total Enhancement Cost (for accelerations of planned reliability-based enhancements or expansions) = the estimated change in annual revenue requirement resulting from the acceleration of the planned reliability-based enhancement or expansion, taking account of all of the costs incurred that would not have been incurred but for the acceleration of the planned reliability-based enhancement or expansion.

(e) For informational purposes only, to assist the Office of the Interconnection and the Transmission Expansion Advisory Committee in evaluating the economic benefits of accelerating planned reliability-based enhancements or expansions or of constructing a new economic-based enhancement or expansion, the Office of the Interconnection shall calculate and post on the PJM internet site the change in the following metrics on a zonal and system-wide basis: (i) total energy production costs (fuel costs, variable O&M costs and emissions costs);(ii) total load energy payments (zonal load MW times zonal load Locational Marginal Price); (iii) total generator revenue from energy production (generator MW times generator Locational Marginal Price); (iv) Financial Transmission Right credits (as measured using currently allocated Auction Revenue Rights plus additional Auction Revenue Rights made available by the proposed acceleration or modification of a planned reliability-based enhancement or expansion or new economic based enhancement or expansion); (v) marginal loss surplus credit; and (vi) total capacity costs and load capacity payments under the Office of the Interconnection's Commission-approved capacity construct.

(f) To assure that new economic-based enhancements and expansions included in the Regional Transmission Expansion Plan continue to be cost beneficial, the Office of the Interconnection annually shall review the costs and benefits of constructing such enhancements and expansions. In the event that there are changes in these costs and benefits, the Office of the Interconnection shall review the changes in costs and benefits with the Transmission Expansion

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

Advisory Committee and recommend to the PJM Board whether the new economic-based enhancements and expansions continue to provide measurable benefits, as determined in accordance with subsection (d), and should remain in the Regional Transmission Expansion Plan. The annual review of the costs and benefits of constructing new economic-based enhancements and expansions included in the Regional Transmission Expansion Plan shall include review of changes in cost estimates of the economic-based enhancement or expansion, and changes in system conditions, including but not limited to, changes in load forecasts, and anticipated Merchant Transmission Facilities, generation, and demand response, consistent with the requirements of subsection (k).

(g) With respect to each new economic-based enhancement or expansion included in the Regional Transmission Expansion Plan, the Office of the Interconnection shall provide to the Transmission Expansion Advisory Committee the level and type of new generation and demand response that could eliminate the need for the enhancement or expansion.

(h) For new economic enhancements or expansions with costs in excess of \$50 million, an independent review of such costs shall be performed to assure both consistency of estimating practices and that the scope of the new economic-based enhancements and expansions is consistent with the new economic-based enhancements and expansions as recommended in the market efficiency analysis.

(i) For informational purposes only, the Office of the Interconnection shall post monthly on the PJM Internet site analyses of gross and unhedgeable congestion associated with transmission constraints in the PJM Region, including the level of available economic generation used to calculate unhedgeable congestion costs.

(j) At any time, market participants may submit to the Office of the Interconnection requests to interconnect Merchant Transmission Facilities or generation facilities pursuant to Part IV of the PJM Tariff that could address an economic constraint. In the event the Office of the Interconnection determines that the interconnection of such facilities would relieve an economic constraint, the Office of the Interconnection may designate the project as a “market solution” and, in the event of such designation, sections 36A or 41A of the PJM Tariff, as applicable, shall apply to the project.

(k) The assumptions used in the market efficiency analysis described in subsection (b) and any review of costs and benefits pursuant to subsection (f) shall include, but not be limited to, the following:

- (i) Timely installation of Qualifying Transmission Upgrades, as defined in section 2.5.7 of Attachment DD of the PJM Tariff, that are committed to the PJM Region as a result of any Reliability Pricing Model Auction pursuant to Attachment DD of the PJM Tariff or any FRR Capacity Plan pursuant to Schedule 8.1 of the Reliability Assurance Agreement Among Load-Serving Entities in

the PJM Region, on file with FERC as PJM Interconnection, L.L.C. Rate Schedule FERC No. 44 (“RAA”).

- (ii) Availability of Generation Capacity Resources, as defined by section 1.33 of the RAA, that are committed to the PJM Region as a result of any Reliability Pricing Model Auction pursuant to Attachment DD of the PJM Tariff or any FRR Capacity Plan pursuant to Schedule 8.1 of the RAA.
- (iii) Availability of Demand Resources as defined in section 1.13 of the RAA that are committed to the PJM Region as a result of any Reliability Pricing Model Auction pursuant to Attachment DD of the PJM Tariff or any FRR Capacity Plan pursuant to Schedule 8.1 of the RAA.
- (iv) Availability of ILR Resources certified pursuant to section 5.13 of Attachment DD of the PJM Tariff.
- (v) Addition of Customer Facilities pursuant to an executed Interconnection Service Agreement or Interim Interconnection Service Agreement.
- (vi) Addition of Customer-Funded Upgrades pursuant to an executed Interconnection Construction Service Agreement or an Upgrade Construction Service Agreement.
- (vii) Expected level of demand response over at least the ensuing fifteen years based on analyses that consider historic levels of demand response, expected demand response growth trends, impact of capacity prices, current and emerging technologies.
- (viii) Expected levels of potential new generation and generation retirements over at least the ensuing fifteen years based on analyses that consider generation trends based on existing generation on the system, generation in the PJM interconnection queues and Capacity Resource Clearing Prices under Attachment DD of the PJM Tariff. If the Office of the Interconnection finds that the PJM reserve requirement is not met in any of its future year market efficiency analyses then it will model adequate future generation based on type and location of generation in existing PJM interconnection queues.
- (ix) Items (i) through (vi) will be included in the market efficiency assumptions if qualified before January 1 of the year that the assumptions are presented to the PJM Board for approval in June.

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

In the event that any of the items listed in (i) through (vi) above qualify for inclusion in the market efficiency analysis assumptions, however, because of the timing of the qualification the item was not included in the assumptions used in developing the most recent Regional Transmission Expansion Plan, the Office of the Interconnection, to the extent necessary, shall notify any entity constructing an economic-based enhancement or expansion that may be affected by inclusion of such item in the assumptions for the next market efficiency analysis described in subsection (b) and any review of costs and benefits pursuant to subsection (f) that the need for the economic-based enhancement or expansion may be diminished or obviated as a result of the inclusion of the qualified item in the assumptions for the next annual market efficiency analysis or review of costs and benefits.

(l) For informational purposes only, with regard to economic-based enhancements or expansions that are included in the Regional Transmission Expansion Plan pursuant to subsection (d) of this section 1.5.7, the Office of the Interconnection shall perform sensitivity analyses around key inputs, such as price forecasts and expected levels of demand response, used in the market simulations to determine the Benefit/Cost Ratio for such enhancements and expansions and shall provide the results of such sensitivity analyses to the Transmission Expansion Advisory Committee.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000



11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

## **1.6 Approval of the Final Regional Transmission Expansion Plan.**

(a) Based on the studies and analyses performed by the Office of the Interconnection under this Schedule 6, ~~The~~ PJM Board shall approve the ~~final~~ Regional Transmission Expansion Plan, ~~including any alternatives therein, and any additions of economic transmission enhancements or expansions pursuant to Sections 1.5.6(d) and 1.5.7 above,~~ in accordance with the requirements of this Section 1.6. The PJM Board shall not approve the Supplemental Projects listed in the Regional Transmission Expansion Plan. PJM Board approval of the Regional Transmission Expansion Plan shall not represent PJM Board review or approval of the Supplemental Projects, and Supplemental Projects are not eligible for cost allocation pursuant to Schedule 12 of the PJM Tariff.

The Office of the Interconnection shall publish the current, approved Regional Transmission Expansion Plan on the PJM Internet site. Within 30 days after each occasion when the PJM Board approves a Regional Transmission Expansion Plan, or an addition to such a plan, ~~that~~ and designates one or more Transmission Owners to construct ~~an economic~~ such expansion or enhancement ~~developed pursuant to Sections 1.5.6(d) and 1.5.7 above,~~ the Office of the Interconnection shall file with FERC a report identifying the ~~economic~~ expansion or enhancement, its estimated cost, the entity or entities that will be responsible for constructing and owning or financing the project, and the market participants designated under Section 1.5.6(g) above to bear responsibility for the costs of the project.

(b) If a Regional Transmission Expansion Plan is not approved, or if the transmission service requested by any entity is not included in an approved Regional Transmission Expansion Plan, nothing herein shall limit in any way the right of any entity to seek relief pursuant to the provisions of Section 211 of the Federal Power Act.

(c) Following PJM Board approval, the final Regional Transmission Expansion Plan shall be ~~submitted~~ documented, posted publicly and -provided to the ~~Applicable Reliability~~ applicable ~~Regional Council for verification that all enhancements or expansions conform with or exceed all reliability principles and standards of the Applicable Regional Reliability Council~~ Entities.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

**1.7 Obligation to Build.**

(a) Subject to the requirements of applicable law, government regulations and approvals, including, without limitation, requirements to obtain any necessary state or local siting, construction and operating permits, to the availability of required financing, to the ability to acquire necessary right-of-way, and to the right to recover, pursuant to appropriate financial arrangements and tariffs or contracts, all reasonably incurred costs, plus a reasonable return on investment, Transmission Owners designated as the appropriate entities to construct, own and/or finance enhancements or expansions specified in the Regional Transmission Expansion Plan shall construct, own and/or finance such facilities or enter into appropriate contracts to fulfill such obligations. However, nothing herein shall require any Transmission Owner to construct, finance or own any enhancements or expansions specified in the Regional Transmission Expansion Plan for which the plan designates an entity other than a Transmission Owner as the appropriate entity to construct, own and/or finance such enhancements or expansions.

(b) Nothing herein shall prohibit any Transmission Owner from seeking to recover the cost of enhancements or expansions on an incremental cost basis or from seeking approval of such rate treatment from any regulatory agency with jurisdiction over such rates.

(c) The Office of the Interconnection shall be obligated to collect on behalf of the Transmission Owner(s) all charges established under Schedule 12 of the PJM Tariff in connection with facilities which the Office of the Interconnection designates one or more Transmission Owners to build pursuant to this Regional Transmission Expansion Planning Protocol. Such charges shall compensate the Transmission Owner(s) for all costs related to such RTEP facilities under a FERC-approved rate and will include any FERC-approved incentives.

(d) In the event that a Transmission Owner declines to construct an economic transmission enhancement or expansion developed under Sections 1.5.6(d) and 1.5.7 of this Schedule 6 that such Transmission Owner is designated by the Regional Transmission Expansion Plan to construct (in whole or in part), the Office of the Interconnection shall promptly file with the FERC a report on the results of the pertinent economic planning process in order to permit the FERC to determine what action, if any, it should take.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

11/08/2011 Draft – For Review at the 11/14/2011 RPPTF and 11/16/2011 MRC (revised 11/15/2011). ITALICIZED LANGUAGE IS PROPOSED CHANGES PRESENTED AS 11/16/2011 MRC AGENDA ITEM 9B.

## **1.8 Interregional Expansions**

(a) PJM shall collect from Midwest Independent System Operator, Inc., for distribution to the applicable Transmission Owners, in accordance with Schedule 12 of the PJM Tariff, revenues collected by the Midwest Independent System Operator, Inc. under the Open Access Transmission Tariff of the Midwest Independent System Owner, Inc. with respect to transmission enhancements or expansions for which the Coordinated System Plan developed under the Joint Operating Agreement Between the Midwest Independent System Operator, Inc. and PJM Interconnection, L.L.C. assigns cost responsibility for transmission enhancements or expansions in the PJM Region to market participants in the region of the Midwest Independent System Operator, Inc.

(b) PJM shall disburse to the Midwest Independent System Operator, Inc., for distribution to applicable transmission owners of the Midwest Independent System Operator, Inc., revenues collected under Schedule 12 of the PJM Tariff which establishes a charge in connection with enhancements or expansions in the region of the Midwest Independent System Operator, Inc. the cost responsibility for which has been assigned to market participants in the PJM Region under the Coordinated System Plan developed under the Joint Operating Agreement Between the Midwest Independent System Operator, Inc. and PJM Interconnection, L.L.C.

(c) Nothing in this Section 1.8 shall affect or limit any Transmission Owners filing rights under Section 205 of the Federal Power Act as set forth in the PJM Tariff and applicable agreements.

Effective Date: 9/17/2010 - Docket #: ER10-2710-000

### **1.9 Relationship to the PJM Open Access Transmission Tariff.**

Nothing herein shall modify the rights and obligations of an Eligible Customer or a Transmission Customer, as those terms are defined in the PJM Tariff, with respect to required studies and completion of necessary enhancements or expansions. An Eligible Customer or Transmission Customer electing to follow the procedures in the PJM Tariff instead of the procedures provided herein, shall also be responsible for the related costs. The enhancement and expansion study process under this Protocol shall be funded as a part of the operating budget of the Office of the Interconnection.

Effective Date: 9/17/2010