

8.1.7.2 Joint Voltage Stability Operating Protocol. Voltage stability or collapse problems have the potential to cause cascading outages and therefore must be closely coordinated to maintain reliable operations. The Parties will coordinate their operations in accordance with good utility practice in order to maintain stable voltage profiles throughout their respective Regions. The Parties will coordinate their established daily voltage/reactive management plans. This coordination will serve to assure an adequate static and dynamic reactive supply under a credible range of system dispatch patterns across both Parties' systems and will assure the plans are complementary.

8.1.7.3 Operating the Most Conservative Result. When any one Party identifies an overload/emergency situation that may impact the other Party's system and the other Party's results/systems do not observe a similar situation, both Parties will operate to the most conservative result until the Parties can identify the reasons for these differences(s).

8.2 Compensation for Market to Non-Market Emergency Principles/Procedures. Each Party is to bear its own costs of compliance with emergency energy principles and procedures, in accordance with any applicable tariff. If a Party is required to purchase emergency energy in order to address the flow of the other Party, then the other Party shall be required to provide compensation.

ARTICLE IX

COORDINATED REGIONAL TRANSMISSION EXPANSION PLANNING

9.1 Administration; Committees.

9.1.1 Joint RTO Planning Committee. The ISC shall form, as a subcommittee, a Joint RTO Planning Committee, comprised of representatives of the Parties' respective staffs in numbers and functions to be identified from time to time. Each Party shall have the right, every other year, to designate a Chairman of the JRPC to serve a one-year calendar term, except that the term of the first Chairman shall commence on the Effective Date and end December 31, 2004. The ISC shall designate the first Chairman. The Chairman shall be responsible for the scheduling of meetings, the preparation of agendas for meetings, and the production of minutes of meetings. The JRPC shall coordinate the coordinated system planning under this Agreement, including the following:

- (a) Prepare and document detailed procedures for the development of power system analysis models. At a minimum, and unless otherwise agreed, the JRPC shall develop common power system analysis models to perform coordinated system planning, as well as models for power flow analyses, short circuit analyses, and stability analyses. For studies of interconnections in close electrical proximity at the boundaries between the systems of the parties, the JRPC will direct the performance of a detailed review of the appropriateness of applicable power system models.
- (b) Prepare, on a regular basis, a Coordinated System Plan as required under Section 9.3.5.
- (c) Coordinate all planning activities under this Article IX, including the exchange of data under this Article.
- (d) Maintain an Internet site and e-mail or other electronic lists for the communication of information related to the coordinated planning process.
- (e) Meet at least a semi-annually to review and coordinate transmission planning activities.
- (f) Support the review by any federal or provincial agency of elements of the Coordinated System Plan.
- (g) Support the review by multi-state entities to facilitate the addition of interstate transmission facilities.
- (h) Establish working groups as necessary to provide adequate review and development of the regional plans.

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- (i) Establish a schedule for the rotation of responsibility for data management, coordination of stakeholder meetings, coordination of analysis activities, report preparation, and other activities.
- (j) Oversee an annual meeting of the Parties' system operations, market operations, and system planning personnel (such personnel as the Parties may designate for the meeting), to review the issues impacting the coordination of these functions as they impact long range planning and the coordination of planning between the systems.

9.1.2 Inter-regional Planning Stakeholder Advisory Committee. The Parties shall form an Inter-regional Planning Stakeholder Advisory Committee. The IPSAC shall facilitate stakeholder review and input into coordinated system planning with respect to the development of the Coordinated System Plan. IPSAC members shall be the members of the MIDWEST ISO Planning Advisory Committee and the PJM Transmission Expansion Advisory Committee. Other stakeholders shall be permitted to become members of the IPSAC, including stakeholders created by change of geographic scope of a Party's Region. The IPSAC will meet no less frequently than prior to the start of each cycle of the coordinated planning process, during the development of the Coordinated System Plan, and upon completion of the Plan to review final results.

9.2 Data and Information Exchange. In support of coordinated system planning, each Party shall provide the other with the following data and information. Unless otherwise indicated, such data and information shall be provided annually.

- (a) Data required for the development of load flow cases, short-circuit cases, and stability cases, including ten year load forecasts, including all critical assumptions that are used in the development of these cases.
- (b) Fully detailed planning models (up to the next ten (10) years) on an annual basis and monthly updates that reflect system enhancement changes or other changes, as they occur.

- (c) The regional plan document produced by the Party, any long-term or short-term reliability assessment documents produced by the Party, and any operating assessment reports produced by the Party.
- (d) The status of expansion studies, system impact studies and generation interconnection studies, such that each Party has knowledge that a commitment has been made to a system enhancement as a result of any such studies.
- (e) Transmission system maps for the Party's bulk transmission system and lower voltage transmission system maps that are relevant to the coordination of planning between the two systems.
- (f) Contingency lists for use in load flow and stability analyses, including lists of all single contingency events and multiple facility tower line contingencies, as well as breaker diagrams for the portions of the Party's transmission system that are relevant to the coordination of planning between the two systems.
- (g) The timing of each planned enhancement, including estimated completion dates and project mobilization schedules, and indications of the likelihood a system enhancement will be completed and whether the system enhancement should be included in system expansion studies, system impact studies and generation interconnection studies, and all related applications for regulatory approval and the status thereof. This information shall be provided annually and from time to time upon changes in status.
- (h) Monthly identification of interconnection requests that have been received and any long-term firm transmission services that have been approved that may impact the operation of a Party's system in a manner that affects the other Party's system.
- (i) Quarterly, the status of all interconnection requests that have been identified.

- (j) Information regarding long-term firm transmission services on all interfaces relevant to the coordination of planning between the systems.
- (k) Such other data and information as is needed for each Party to plan its own system accurately and reliably and to assess the impact of conditions existing on the system of the other Party.
- (l) Load flow and short-circuit data initially will be exchanged in PSS/E format. To the extent practical the maintenance and exchange of power system modeling data will be implemented through databases. When feasible, transmission maps and breaker diagrams will be provided in an electronic format agreed upon by the Parties. Formats for the exchange of other data will be agreed upon by the Parties from time to time.

9.3 Coordinated System Planning. The primary purpose of coordinated transmission planning and development of the Coordinated System Plan is to ensure that coordinated analyses are performed to identify expansions or enhancements to transmission system capability needed to maintain reliability, improve operational performance, or enhance the competitiveness of electricity markets. The Parties will conduct such coordinated planning as set forth in this Section 9.3 and subsections thereof.

9.3.1 Single Party Planning. Each Party shall engage in such transmission planning activities, including expansion plans, system impact studies, and generator interconnection studies, as are necessary to fulfill its obligations under its OATT or as it otherwise shall deem appropriate. Such planning shall conform to applicable reliability requirements of NERC, applicable regional reliability councils, or any successor organizations, and any and all applicable requirements of federal, state, or provincial laws or regulatory authorities. Each Party agrees to prepare a regional transmission planning report that documents the procedures, methodologies, and business rules utilized in preparing and completing the report. The Parties further agree to share, on an ongoing basis, information that arises in the performance of such single party planning activities as is necessary or appropriate for effective coordination between the Parties, including, in addition to the information sharing requirements of Sections 9.2 and 9.3, the identification of proposed transmission system enhancements that may affect the Parties' respective systems.

9.3.2 Coordinated System Plan. The Parties will coordinate any studies required to assure the reliable, efficient, and effective operation of the transmission system. Results of such coordinated studies will be included in the Coordinated System Plan as further described in Section 9.3.5. The Coordinated System Plan shall have as input the results of ongoing analyses of requests for interconnection and ongoing analyses of requests for long-term firm transmission service. The Parties shall coordinate in the analyses of these ongoing service requests in accordance with Sections 9.3.3 and 9.3.4. The Coordinated System Plan shall be an integral part of the expansion plans of each Party.

9.3.3 Analysis of Interconnection Requests. In accordance with the procedures under which the Parties provide interconnection service, each Party will coordinate with the other the conduct of any studies required in determining the impact of a request for generator or merchant transmission interconnection. Results of such coordinated studies will be included in the impacts reported to the interconnection customers as appropriate. Coordination of studies and Network Upgrades will include the following:

- (a) Upon the posting to the OASIS of a request for interconnection, the Party receiving the request (“direct connect system”) will determine whether the other Party is potentially impacted. If the other Party is potentially impacted, the direct connect system will notify the other Party and convey the information provided in the posting.
- (b) If the potentially impacted Party determines that its system may be materially impacted by the interconnection, that Party will contact the direct connect system and request participation in the applicable interconnection studies. The Parties will coordinate with respect to the nature of studies to be performed to test the impacts of the interconnection on the potentially impacted Party, who will perform the studies. The Parties will strive to minimize the costs associated with the coordinated study process.

- (c) Any coordinated studies will be performed in accordance with the study timeline requirements of the applicable generation interconnection procedures of the direct connect system. The potentially impacted Party will comply with this schedule.
- (d) The potentially impacted Party may participate in the coordinated study either by taking responsibility for performance of studies of its system, or by providing input to the studies to be performed by the direct connect system. The study cost estimates indicated in the study agreement between the direct connect system and the interconnection customer will reflect the costs and the associated roles of the study participants including the potentially impacted Party. The direct connect system will review the cost estimates submitted by all participants for reasonableness, based on expected level of participation and responsibilities in the study.
- (e) The direct connect system will collect from the interconnection customer the costs incurred by the potentially impacted Party associated with the performance of such studies and forward collected amounts to the potentially impacted Party.
- (f) If the results of the coordinated study indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the potentially impacted system, the direct connect system will identify the need for such Network Upgrades in the system impact study prepared for the interconnection customer.
- (g) Requirements for construction of such Network Upgrades will be under the terms of the applicable OATT, agreement among owners of transmission facilities subject to the control of the potentially impacted Party and consistent with applicable federal, state or provincial regulatory policy.

- (h) In addition, thermal and reactive impacts associated with circulation and other phenomena that result from interconnection and impact the systems of both Parties will be evaluated in the evaluation of specific requests associated with delivery service and in the development of the Coordinated System Plan.
- (i) Each Party will maintain a separate interconnection queue. The JRPC will maintain a composite listing of interconnection requests for all interconnection projects that have been identified as potentially impacting the systems of both Parties. The JRPC will post this listing on the Internet site maintained for the communication of information related to the coordinated system planning process. The Internet site will contain links to the web sites of each Party where individual interconnection study results will be maintained.

9.3.4 Analysis of Long-Term Firm Transmission Service Requests. In accordance with applicable procedures under which the Parties provide long-term firm transmission service, the Parties will coordinate the conduct of any studies required to determine the impact of a request for such service. Results of such coordinated studies will be included in the impacts reported to the transmission service customers as appropriate. Coordination of studies will include the following:

- (a) The Parties will coordinate the calculation of ATC values associated with the service, based on contingencies on the systems of each Party that may be impacted by the granting of the service.
- (b) Upon the posting to the OASIS of a request for service, the Party receiving the request will determine whether the other Party is potentially impacted. If the other Party is potentially impacted, the Party receiving the request will notify the other Party and convey the information provided in the posting.

- (c) If the potentially impacted Party determines that its system may be materially impacted by the service, that Party will contact the Party receiving the request and request participation in the applicable interconnection studies. The Parties will coordinate with respect to the nature of studies to be performed to test the impacts of the requested service on the potentially impacted Party, who will perform the studies. The Parties will strive to minimize the costs associated with the coordinated study process. The JRPC will develop screening procedures to assist in the identification of service requests that may impact systems of parties other than the system receiving the request.
- (d) Any coordinated studies will be performed in accordance with the study timeline requirements of the applicable transmission service procedures of the Party receiving the request. The potentially impacted Party will comply with this schedule.
- (e) The potentially impacted system may participate in the coordinated study either by taking responsibility for performance of studies of their system, or by providing input to the studies to be performed by the Party receiving the request. The study cost estimates indicated in the study agreement between the Party receiving the request and the transmission service customer will reflect the costs and the associated roles of the study participants. The Party receiving the request will review the cost estimates submitted by all participants for reasonableness, based on expected level of participation and responsibilities in the study.
- (f) The Party receiving the request will collect from the transmission service customer and forward to the potentially impacted system the costs incurred by the potentially impacted systems associated with the performance of such studies.

- (g) If the results of a coordinated study indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the potentially impacted system, the Party receiving the request will identify the need for such Network Upgrades in the system impact study prepared for the transmission service customer.
- (h) Requirements for the construction of such Network Upgrades will be under the terms of the OATTs, agreement among owners of transmission facilities subject to the control of the potentially impacted Party and consistent with applicable federal, state, or provincial regulatory policy.

9.3.5 Development of the Coordinated System Plan.

9.3.5.1 Each Party agrees to assist in the preparation of a Coordinated System Plan applicable to the Parties' systems. Each Party's annual transmission planning reports will be incorporated into the Coordinated System Plan, however, neither Party shall have the right to veto any planning of the other Party nor shall either Party have the right, under this Section, to obtain financial compensation due to the impact of another Party's plans or additions. The Coordinated System Plan will be finalized only after the IPSAC has had an opportunity to review it and respond. The Coordinated System Plan shall:

- (a) Integrate the Parties' respective transmission expansion plans, including any market-based additions to system infrastructure (such as generation or merchant transmission projects) and Network Upgrades identified jointly by the Parties, together with alternatives to Network Upgrades that were considered.
- (b) Set forth actions to resolve any impacts that may result across the seams between the Parties' systems due to such system additions or Network Upgrades; and

- (c) Describe results of the joint transmission analysis for the combined transmission systems, as well as the procedures, methodologies, and business rules utilized in preparing and completing the analysis.

9.3.5.2 Coordination of studies required for the development of the Coordinated System Plan will include the following steps:

- (a) Every three years, the Parties shall perform a comprehensive, coordinated regional transmission expansion planning study. Sensitivity analyses will be performed, as required, during the off years based on a review by the JRPC and IPSAC of discrete reliability problems or operability issues that arise due to changing system conditions. Ad hoc study groups may be formed as needed to address localized seams issues and to ensure the coordinated reliability of the systems. Under the direction of the Parties, study groups will formalize how activities will be implemented, (*e.g.*, a set number of meetings per year and/or develop a protocol for the exchange of studies, report queues, and other relevant information).
- (b) Each Party will be responsible for providing the technical support required to complete the analysis for the study. The responsibility for the coordinated study and the compilation of the coordinated study report will alternate between the Parties.

- (c) The JRPC will develop a scope and procedure for the inter-regional planning assessment. The scope of the study will include evaluations of the transmission system against the reliability criteria, operational performance criteria, and economic performance criteria applicable to each Party. Each Party will provide a baseline model that includes all transmission enhancements included in the party's regional transmission expansion plan, and all of the committed interconnection projects and any associated Network Upgrades.
- (d) The Parties will use planning models that are developed in accordance with the procedures to be established by the JRPC. Exchange of power flow models will be in a format that is acceptable to both Parties and will use a consistent bus numbering convention and bus naming convention to minimize work that is needed to merge detailed power flow models.
- (e) The study will initially evaluate the reliability of the combined transmission systems. Any Network Upgrades required to resolve criteria violations will be agreed upon and included in an updated baseline model.
- (f) The performance of the combined transmission systems will be tested against agreed upon operational and economic criteria, where applicable, using the updated baseline model. Network Upgrades required to resolve operational and/or economic performance criteria violations will be included in the Coordinated System Plan.
- (g) Economic criteria applicable to either Party will be developed and filed by that Party with input from its stakeholders.

9.4 Allocation of Costs of Network Upgrades. “Affected System” shall mean the electric system of the Party other than the Party to which a request for interconnection or long-term firm delivery service is made and that may be affected by the proposed service.

9.4.1 Network Upgrades Associated with Interconnections. When under Section 9.3.3 it is determined that a generation or merchant transmission interconnection to a Party’s system will have an impact on the Affected System such that Network Upgrades shall be made, the upgrades on the Affected System shall be paid for in accordance with the terms and conditions of the Parties’ Order 2003 compliance filings as accepted by FERC.

9.4.2 Network Upgrades Associated with Transmission Service Requests. When under Section 9.3.4 it is determined that the granting of a long-term firm delivery service request with respect to a Party’s system will have an impact on the Affected System such that Network Upgrades shall be made, the upgrades on the Affected System shall be paid for in accordance with the terms and conditions of the Parties’ Order 2003 compliance filings as accepted by FERC.

9.4.3 Network Upgrades Under Coordinated System Plan. The Coordinated System Plan will identify as Cross-Border Allocation Projects those projects in one RTO that benefit the other RTO and consistent with the applicable OATT provisions will designate the portion of the Project Cost for each such project that is to be allocated to each RTO on behalf of its Market Participants. Cost responsibility for the Network Upgrades identified in the Coordinated System Plan to resolve thermal, reactive, or stability constraints related to reliability criteria or will be assigned as described herein. The JRPC will determine an allocation of costs to each RTO for such Network Upgrades based on the procedures described below. The proposed allocation of costs will be reviewed with the IPSAC and the appropriate multi-state entities and posted on the internet web site of the two RTOs. Stakeholder input will be solicited and taken into consideration by the JRPC in arriving at a consensus allocation of costs.

9.4.3.1 Criteria for Project Designation as a Cross-Border Allocation Project:

Projects that meet all of the following criteria will be designated as a Cross-Border Allocation Project: (i) by agreement of the JRPC, the project is needed to efficiently meet applicable reliability criteria; (ii) the project must be a baseline reliability project as defined under the Midwest ISO or PJM Tariffs; (iii) the resulting allocation of cost to the RTO in which the project is not constructed must be a minimum of \$10,000,000; (iv) using the Coordinated System Plan power flow model, the contribution of the Cross-Border RTO to loading on the constrained facility giving rise to the Cross-Border Allocation Project must be at least five percent (5%) of the total loading on the constrained facility; and (v) the Cross-Border Allocation Project must have an in-service date after December 31, 2007. Attached as Attachment 4 to this Agreement is a list of projects that will be excluded from designation as a Cross-Border Allocation Project notwithstanding the in-service date.

9.4.3.2 Cross-Border Allocation Share: The Coordinated System Plan shall designate the share of the Project Cost to be allocated to each RTO based on the relative contribution of the Load of each of the combined RTO Zones to loading on the constrained facility giving rise to the Cross-Border Allocation Project. The loading contribution will be determined using a Joint RTO Planning Model agreed to by the staff's of the RTOs. The contribution of each RTO load to the constrained facility will be determined by the Outage Transfer Distribution Factor (OTDF) on the constrained facility, for contingency criteria violations, and by the Distribution Factor (DFAX), for normal flow criteria violations, when dispatching the Network Resources within the RTO to the RTO load, according to the applicable planning procedures of each RTO. The RTO contribution to loading in megawatts will be the appropriate distribution factor multiplied by the RTO Load. The Cross-Border Allocation Share of each RTO will be the contribution of the RTO divided by the sum of contributions from both RTOs.

9.4.3.3 Method for Non-Thermal Constraints: The JRPC will establish an interface, comprised of a number of transmission facilities, to serve as a surrogate for allocation of cost responsibility for non-thermal constraints. The interface will be established such that the aggregate flow on the interface best represents the non-thermal constraint which the Cross-Border Allocation Project is proposed to alleviate. Allocation of cost responsibility for the non-thermal constraint will be determined by applying the procedures described in Section 9.4.3.2 to the interface serving as a surrogate for the constraint.

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9.4.3.4 Determination of Cross-Border Allocation Share Outside of Coordinated System Plan: Either RTO may request that a project be tested against the Cross-Border cost allocation criteria during the interim periods between periodic formal releases of the Coordinated System Plan. Such tests will be performed on the best available Joint Model, as determined by the JRPC.

9.4.3.5 Cost Recovery of Cross-Border Allocation Shares: The cost recovery of any share of cost of a Cross-Border Allocation Project allocated to either RTO shall be recovered by each RTO according to the applicable tariff provisions of the RTO to which such cost recovery is allocated.

9.4.3.6 Transmission Owners Filing Rights: Nothing in this Section 9.4 shall affect or limit any Transmission Owners filing rights under Section 205 of the Federal Power Act as set forth in the applicable Tariffs and applicable agreements.

9.4.3.7 Amendments: The RTOs shall amend Article IX of this Agreement in accordance with the applicable tariffs and/or agreements.

Issued by: James P. Torgerson, President and CEO, Midwest ISO
Craig Glazer, Vice President, Federal Government Policy, PJM Interconnection, L.L.C.

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- 9.5 Agreement to Enforce Duties to Construct and Own.** To obtain Network Upgrades under this Article IX, PJM will enforce obligations to construct and own or finance enhancements or additions to transmission facilities in accordance with the Transmission Owners Agreement, PJM Interconnection, L.L.C. First Revised Rate Schedule FERC No. 29, the West Transmission Owners Agreement, PJM Interconnection, L.L.C. Rate Schedule FERC No. 33, as either may be amended or restated from time to time, and MIDWEST ISO will enforce obligations to construct enhancements or additions to transmission facilities in accordance with the Agreement of Transmission Facilities Owners To Organize The Midwest Independent Transmission System Operator, Inc., A Delaware Non-Stock Corporation, Midwest ISO FERC Electric Tariff, First Revised Rate Schedule No. 1, as it may be amended or restated from time to time.

ARTICLE X JOINT CHECKOUT PROCEDURES

10.1 Scheduling Checkout Protocols.

10.1.1 Scheduling Protocols. Each Party will leverage technology to perform electronic approvals of schedules and to perform electronic checkouts, in lieu of telephone calls. The Parties will follow the following scheduling protocols:

10.1.1.1 Each Party, acting as the scheduling agent for its respective Control Areas, will conduct all checkouts with first tier Control Areas. A first tier Control Area is any Control Area that is directly connected to any Party's members' Control Area or any Control Area operated by an independent transmission company.

10.1.1.2 The Parties will require all schedules, other than reserve sharing or other emergency events, to be tagged in accord with the NERC tagging standard. For reserve sharing and other emergency schedules that are not tagged, the Parties will enter manual schedules after the fact into their respective scheduling systems to facilitate checkout between the Parties.