DRAFT 12-07-07
THIS DOCUMENT IS SUBJECT TO REVIEW AND APPROVAL BY NPPD MANAGEMENT AND BOARD

ATTACHMENT K

TRANSMISSION PLANNING PROCESS

1.0 Introduction

This Attachment K addresses the rights and obligations of Transmission Customers, Affected Generators, other relevant stakeholders and the Transmission Provider related to Transmission Planning. Specifically, Attachment K addresses: (a) the Mid-Continent Area Power Pool ("MAPP") regional planning process adopted by the Regional Transmission Committee ("RTC") Members of MAPP in the RTC Region, as those terms are defined by the MAPP Restated Agreement; and (b) the Transmission Provider's local planning process for local facilities not covered by the MAPP regional planning process. Attachment K discusses both planning processes.

The MAPP Regional Plan integrates the transmission plans developed by individual MAPP Members through the RTC's Transmission Planning Subcommittee ("TPSC") and by subregional planning groups ("SPGs"), in order to meet the transmission needs in the MAPP Region of Members and interested parties on a consistent, reliable, environmentally acceptable and economic basis. The MAPP Regional Plan shall be consistent with applicable standards and requirements established by the MAPP Members Reliability Criteria and Study Procedures Manual and by the North American Electric Reliability Council ("NERC") and Midwest Reliability Organization ("MRO") Planning Standards.

2.0 Definitions

2.1 **Host Transmission Owner ("Host TO").** The transmission owner on whose transmission system a proposed Economic Network Upgrade is to be located. The Host TO shall conduct all related project management activities associated with the Economic Network Upgrade. If facility upgrades are required on more than one transmission owner's transmission system for a given set of transmission facilities comprising an Economic Network Upgrade, the affected Host TOs shall provide a single joint Facilities Agreement to the Subscription Rights buyers.

2.2. **Affected Generator.** A generator owner whose existing or proposed generating unit(s) is directly affected by a proposed Economic Network Upgrade as demonstrated in the study analysis performed in conjunction with Section 11, Economic Planning Studies.

2.3 **Affected System.** The transmission owner's system, including the Host TO, that is affected by the allocations in an economic benefits study

performed by the MAPP RTC in accordance with Section 11 of this Attachment K.

2.4 **Affected System Operator.** The transmission owner/operator that operates an Affected System.

2.5 **Economic Network Upgrade.** A project, or set of projects, that is designed to relieve a constrained facility by providing additional transmission capacity, and which has been identified to be: (a) a local economically beneficial project within a single transmission owner's system; or (b) an economically beneficial project classified as a Regionally Beneficial Project in the MAPP Plan, and defined by an Economic Planning Study authorized by the MAPP RTC in Section 11 of this Attachment K as having project benefits exceeding project costs.

2.6 **Physical Transmission Rights.** Rights held by a party to a Facilities Agreement to schedule transmission service across a defined portion of a NERC flowgate or other transmission facility and/or to collect revenue credits, if applicable, against transmission service charges. Physical Transmission Rights will exist for the life of the facility if the holder is an owner, or for the term stated in the Facilities Agreement. The facility's capabilities that are to be allocated as Physical Transmission Rights, shall be consistent with the owner's or joint-owners' methodologies for determining facility ratings, system operating limits and, if applicable, TTC and ATC in accordance with NERC standards.

2.7 **Renewable Energy Zone.** A geographic region recognized by the TPSC that has limited or constrained ability to transport electric energy from generating units that had such units been in production they would have utilized renewable resources for the production of electric energy.

2.8 **Subscription Rights.** Contractual rights to use the transmission capacity associated with an Economic Network Upgrade defined in a Facilities Agreement with the Host TO in exchange for payments to the Host TO for facility charges and continuing operation and maintenance charges.

2.9 **Other Defined Terms**. All other terms will have the meanings set forth in the MAPP Restated Agreement, the TPSC procedures, and the SPG guidelines.

3.0 MAPP Regional Transmission Planning

3.1 **Member Plans**. As part of the MAPP regional transmission planning process, each RTC Member that has transmission facilities under MAPP's Restated Agreement shall prepare and maintain a plan for its transmission facilities ("Member Plan"). Such Member Plans shall conform to applicable reliability standards and requirements, and to applicable methods and assessment practices and other transmission planning standards and requirements established by the RTC. Each Member Plan shall adhere to Local Transmission Planning Standards set forth in Section 13 of this Attachment K. Such plans shall take into account:

(a) the RTC Member's current and anticipated requirements for transmission to provide all-requirements and partial requirements service and service to its end-use loads;

(b) the current and anticipated requirements for transmission to provide network transmission service to those entities for which the RTC Member provides such service;

(c) the RTC Member's other contractual and tariff obligations to provide firm transmission service;

(d) any other contractual obligations of the RTC Member affecting the use of its transmission facilities;

(e) any requirements for future transmission service of a Member or interested party communicated to the RTC Member under procedures, standards and requirements established by the RTC;

(f) the coordination of the RTC Member's transmission plan with the transmission plans of neighboring systems, and in particular any coordination parameters or requirements identified by the relevant subregional working groups used by the RTC; and

(g) the obligation of the RTC Member under FERC requirements, the MAPP Restated Agreement, and applicable standards and requirements established by the RTC to provide transmission service to other entities on a basis comparable to its own use of its transmission facilities.

3.2 Availability of Plans and Information. The RTC Members' transmission plans, along with the information on which the plans are based, shall be made available to the RTC on a regular basis as established by the RTC. Each RTC Member shall make its transmission plan available upon request to any other RTC Member, independent Regional Transmission Organization or relevant non-MAPP neighboring transmission owning utilities. Sufficient additional information should be made available to enable the requesting entity to perform planning analyses on the same basis as the RTC Member providing the information. Such information shall be provided in accordance with the MAPP Critical Energy Infrastructure Information ("CEII") policy and the Commission's Standards of Conduct regulations.

3.3 Planning Procedures and Requirements. The RTC shall establish procedures and requirements for:

(a) The communication to an RTC Member by Members and interested parties of their *bona fide* requirements for transmission service;

(b) The utilization of SPGs for the coordination of RTC Members' transmission plans and the resolution of subregional transmission planning issues on an informal, collaborative basis, which working groups shall be open to any interested RTC Member or other interested party, and shall maintain such records as shall be required by the RTC;

(c) The incorporation of asserted *bona fide* requirements for transmission service into RTC Member, subregional, and regional transmission plans; and

(d) The development of integrated transmission plans by the subregional working groups, and the integration of the subregional plans into a transmission plan for the MAPP RTC Region.

3.4 The MAPP Regional Plan. No less often than biennially, the RTC shall develop and approve a coordinated transmission plan, including alternatives, for the ensuing 10 years, or other planning period specified by NERC, for all transmission facilities in the MAPP RTC Region at a capacity of 115 kV or greater. The MAPP Regional Plan shall integrate the transmission plans developed by individual RTC Members and by subregional working groups, for the purpose of enabling the transmission needs in the MAPP RTC Region of Member and interested parties to be met on a consistent, reliable, environmentally acceptable and economic basis.

The MAPP Regional Plan shall avoid unnecessary duplication of facilities or the imposition of unreasonable costs on any RTC Member, shall take into account the legal and contractual rights and obligations of all Members, may provide alternative means for meeting transmission needs in the MAPP RTC Region, and shall differentiate proposed transmission projects from projects for which a definitive commitment of resources has been made *e.g.*, projects under the Subscription Rights process or under a Facilities Agreement.

The MAPP Regional Plan shall be consistent with standards and requirements established by the applicable reliability entity. The RTC shall develop policies and procedures for updating or modifying the Plan between biennial planning cycles as may be appropriate. Any Member, Regulatory Participant, or interested party may attend any meeting of the RTC or any of its subcommittees dealing with the MAPP Regional Plan.

4.0 <u>MAPP Regional Planning Process</u>

4.1 MAPP Regional Plan Development Process. The TPSC, the RTC Subcommittee responsible for planning in the MAPP region, shall collect the individual Member Plans of the MAPP Members and integrate these Member Plans into four coordinated Subregional Plans. All MAPP Members are obligated to submit their transmission Member Plans to the TPSC under the MAPP Restated Agreement. These Members Plans are to include the needs of all stakeholders in the Member's service area. The Subregional Plans primarily address local load serving needs and subregional issues, but are not precluded from providing for regional transmission needs.

The TPSC collects these Subregional Plans and integrates them into a single coordinated preliminary MAPP Regional Plan. The TPSC, through its working group TRAWG, assesses the adequacy and security of the preliminary MAPP

Regional Plan to meet the local, subregional, regional and inter-regional reliability and market needs, and where required, identifies and evaluates alternatives and recommends preferred plans to address deficiencies. The final MAPP Regional Plan is submitted to the RTC for approval. The appropriate Transmission Owning Members of MAPP, as that term is defined in the MAPP Restated Agreement, are responsible for designing, constructing and placing into service the various transmission projects comprising the MAPP Regional Plan. The MAPP Design Review Subcommittee ("DRS") is responsible for reviewing and approving these individual projects prior to energization and operation.

The TPSC initiates several activities as part of a planning process to produce the MAPP Regional Plan. These activities included collection of planning input data, preparation of study models, the formation of SPGs to collect and coordinate individual Member Plans, collaboration with regulatory agencies, and a procedure to study and evaluate the effectiveness of proposed enhancements in addressing regional and inter-regional problems.

4.2 Process Steps for MAPP Regional Plan Development. The TPSC shall prepare the MAPP Regional Plan as set forth in the MAPP Restated Agreement and this Attachment K and as detailed in the TPSC procedures. The TPSC uses milestone dates as established in the MAPP Regional Transmission Planning Procedures Manual for the following items:

4.2.1 TPSC Data Collection from Members (Annually)

(a) SPG Member and Working Group studies ongoing.

(b) Subregional Plan Addendum report submitted to TPSC.

4.2.2 Data Analysis by TPSC (during the MAPP Regional Plan year):

(a) Analyze history of constrained interface performance.

(b) Analyze history of transmission loading relief requests.

(c) Review of reliability assessment studies and reports.

4.2.3 TPSC Model Preparation:

(a) Select of base case models from appropriate MRO Model Series.

(b) Add Member and SPG plans to models.

(c) Validate firm transactions, major new loads, and new generation.

4.2.4 TPSC Study Procedures:

(a) Evaluate base system with Member/SPG planned additions (local plans).

(b) Identify and evaluate alternative plans to meet regional and inter-regional reliability and market requirements (assess impacts on local plans).

(c) Perform cost analysis.

4.2.5 Regulatory Collaboration

(a) Regulatory participation at SPG and TPSC meetings.

(b) Regulatory input at preliminary planning stages.

(c) Process to address "why project needed" and "why it is better than other alternatives considered" through SPG Meeting process.

4.2.6 MAPP Regional Plan Report and Approval

(a) Submit MAPP Regional Plan Report to the RTC for approval of the MAPP Regional Plan year.

4.3 Updating the MAPP Regional Plan. The TPSC shall update or modify the MAPP Regional Plan between biennial planning cycles in accordance with the procedures below. This update to the MAPP Regional Plan, shall be issued to the RTC for approval. The established SPGs shall remain active in the planning process for their respective subregions. Individual utility Member Plans and detailed documentation should be submitted to the SPGs for their approval.

In order to accomplish this update process, the SPGs shall:

(a) review the individual utility Member Plans;

(b) coordinate the individual utility Member Plans within their subregion;

(c) evaluate the impacts of the individual Member Plans on their subregion and possibly require additional evaluation or study work; and

(d) submit subregional plan modifications to the TPSC each off-year.

The TPSC shall:

(a) evaluate the subregional plan modifications for their impact on the MAPP Regional Plan;

(b) provide feedback to the SPGs regarding the regional impacts; and

(c) approve or deny all final modifications to the MAPP Regional Plan each off-year.

Modifications to the MAPP Regional Plan may include: (a) commitments to new generation; (b) new transmission facilities; (c) changes in construction schedules; or (d) changes in project scope. All approved MAPP Regional Plan modifications must be included in the MRO Model building process and should be submitted to the MRO Model Building Subcommittee by the responsible transmission owning entity.

4.4 Identification of Transmission Requirements. The following process is used to communicate to the TPSC the transmission requirements identified by the Member and interested parties:

(a) Interested parties may contact the Member transmission provider in the area where service is required. If it is unclear as to who is the appropriate transmission provider, the interested parties should contact any member of the TPSC.

(b) The Member is required to take both the Member Plans and interested parties' plans to the appropriate SPGs. The SPG Guidelines indicate the required format Members are to use to submit the data.

(c) The SPGs must prepare coordinated subregional plans incorporating the member and interested parties' needs.

(d) The SPG plans are forwarded to the TPSC.

(e) The TPSC develops a coordinated MAPP Regional Plan addressing SPG, regional and inter-regional needs.

(f) The TPSC forwards the MAPP Regional Plan to the RTC for approval.

The TPSC will establish liaisons with existing neighboring regional planning entities to facilitate addressing inter-regional transmission issues.

5.0 <u>The Transmission Planning Subcommittee</u>

5.1 Procedures for Conduct of TPSC Meetings

5.1.1 TPSC Role. The MAPP TPSC, under the direction of the RTC, shall develop the MAPP Regional Plan and make all related decisions related to regional planning, subject to approval by the RTC. The TPSC shall utilize the following procedures in developing the MAPP Regional Plan and making such related decisions. Costs incurred related to regional planning activities shall be recovered under the provisions of the MAPP Restated Agreement and related RTC policies.

5.1.2 TPSC Representatives. The TPSC shall be constituted as defined by the MAPP Restated Agreement. In accordance with the MAPP Restated Agreement, such Representatives shall be elected by the RTC, and the RTC sets the size, duties and responsibilities of the TPSC. The TPSC Representatives shall elect the TPSC Chair and Vice-Chair.

5.1.3 TPSC Meeting Notification. The notice of a TPSC meeting shall state the time and place of the meeting and shall include an agenda sufficient to notify an interested party of the substance of the matters considered at the meeting. The TPSC meeting notice and agenda shall be sent at least 10 days prior to the meeting. All meeting notices are communicated

electronically through MAPP e-mail distribution lists, and subsequently posted at www.mapp.org. All meeting notices shall be publicly available.

5.1.4 TPSC Meeting Agenda Development. The TPSC agenda shall include the time and place of its meetings. An interested party shall submit a request to the Chair and the Secretary of the TPSC to have an item considered at the next TPSC meeting at least fifteen (15) days in advance, subject to any limitations set forth in the TPSC procedures manual. The Chair of the TPSC has authority to determine action items for the meeting agenda. All action items shall be shown and communicated clearly so that any interested party can determine what is being acted upon.

The TPSC meeting agenda shall be posted at www.mapp.org and sent via the TPSC e-mail distribution list at least ten (10) days prior to the meeting. The TPSC will make the best effort attempt to communicate all supporting information for the meeting agenda at least ten (10) days prior to the meeting. The supporting information shall be posted on the www.mapp.org after communicating it via the e-mail distribution list, unless the information has been deemed CEII.

5.1.5 TPSC Action. The publication of an agenda of actions to be voted upon by the TPSC shall include the wording of any proposed motion, and a brief discussion, as needed, of the reasons for the motion to be offered and voted. The member of the TPSC or other entity sponsoring the motion shall provide the wording of the motion and the discussion points. A best effort attempt shall be made by those sponsoring items on a TPSC meeting agenda to have background material, and the action to be voted, distributed with the meeting agenda in a timely manner. In general, an action may not be brought to a vote of the TPSC unless it is noticed on a published agenda at least ten (10) days prior to the meeting date upon which action is to be voted. This requirement for a 10-day notice may be waived either by the approval of the TPSC Chair or by 90% affirmative vote of the TPSC's voting members present at a TPSC meeting at which a quorum has been established, subject to any limitations set forth in the TPSC procedures.

5.1.6 TPSC Meeting Procedures. The TPSC shall utilize Robert's Rules of Order for guidance regarding conduct of subcommittee meetings. A quorum is necessary to conduct TPSC business. A quorum is established when 50 percent or more of TPSC Representatives are present as currently stated in the MAPP Restated Agreement. A vacant position on the TPSC does not count towards the quorum requirement. All interested parties can attend TPSC and working group meetings.

5.1.7 Affirmative Votes. Actions or decisions by a subcommittee requires an affirmative vote of two-thirds of both the TPSC Transmission Owning

Members and the Transmission Using Members as set forth in the MAPP Restated Agreement.

5.1.8 TPSC Meeting Minutes. All TPSC meetings shall be recorded through accurate and timely meeting minutes. Draft TPSC meeting minutes shall be distributed to TPSC Representatives ten (10) business days following the meeting date for review and comment. The TPSC will attempt to approve their previous meeting's minutes at their next meeting. Once the meeting minutes are approved by the TPSC, the minutes are sent to the TPSC and RTC e-mail distribution lists and posted at www.mapp.org.

5.1.9 Review of TPSC Action. An RTC Member or Regulatory Participant may request a review of TPSC actions, in accordance with the MAPP Restated Agreement.

5.2 TPSC Responsibilities. The TPSC shall:

(a) develop and recommend for approval by the RTC the biennial MAPP Regional Plan required by the MAPP Restated Agreement;

(b) develop procedures and policies for updating and modifying the MAPP Regional Plan between biennial planning cycles, and approve modifications to the MAPP Regional Plan;

(c) develop and approve procedures, standards and requirements for the communication of the future transmission requirements of Members and interested parties to the appropriate Transmission Owning Members, and for the inclusion of *bona fide* requirements in the transmission Member Plans of the Transmission Owning Members, and in the MAPP Regional Plan.

(d) establish procedures, standards and requirements for the coordination of the transmission Member Plans of the Transmission Owning Members with the plans of neighboring transmission systems, including establishing of subregional planning groups for resolution of subregional planning issues on a cooperative basis;

(e) establish procedures, standards, and requirements for making available Member Plans and the information on which the Member Plans are based, as required by the MAPP Restated Agreement;

(f) establish procedures, standards and requirements for public input, including input from Regulatory Participants, in the development of the MAPP Regional Plan;

(g) determine the appropriate Member or Members to construct and own, or to receive Rights Equivalent to Ownership in, transmission facilities;

(h) coordinate with the subcommittees of the RTC, the MRO and Adjacent Systems pertinent to reliability issues, standards, requirements, procedures, models and studies, and conduct or request the MRO to

conduct such studies as appropriate to carry out the responsibilities of the TPSC;

(i) conduct appropriate transmission economic planning studies;

(j) conduct appropriate transmission cost allocation analysis for new projects;

(k) assume responsibility for submission of FERC Form 715 information for MAPP;

(l) conduct transmission adequacy and security assessments as appropriate, including assessments of the intra- and inter-regional transfer capability of the MAPP system; and

(m) oversee the duties and responsibilities of Working Groups.

5.3 Transmission Customer Responsibilities. Transmission Customers in the RTC region shall provide annually to the Transmission Provider the following types of information:

(a) Generators: all planned additions or upgrades (including status and expected in-service date), planned retirements, and environmental restrictions.

(b) Demand Response Resources: existing and planned demand resources and their impacts on demand and peak demand.

(c) Network Customers: forecast information for load and resource requirements over the planning horizon and identification of demand response reductions.

(d) Point-to-Point Transmission Customers: projections of need for service over the planning horizon, including transmission capacity, duration, and receipt and delivery points.

(e) Transmission Customers should provide the Transmission Provider with timely written notice of material changes in any information previously provided relating to its load, its resources, or other aspects of its facilities or operations affecting the transmission provider's ability to provide service.

6.0 Sub-regional Planning Groups

6.1 Current SPGs. The TPSC has established and recognized the following SPGs to carry out the task of coordinating transmission plans among Members:

(a) Northern MAPP

(b) Missouri Basin

(c) Iowa Transmission Working Group

(d) Nebraska

6.2 Establishment of SPGs. The TPSC can establish new or recognize additional SPGs to carry out the task of coordinating transmission plans among Members.

The TPSC may also recognize and coordinate its MAPP Regional Plan with existing or future transmission planning study groups concerned with transmission facilities located outside the MAPP region.

6.3 **SPG Membership**. Membership in a SPG is open to any interested party and any actual or potential user of the relevant transmission facilities. Neighboring transmission owning utilities and regulatory participants are eligible and encouraged to join the SPG to promote joint planning between MAPP and its neighboring regions.

6.4 **SPG Guidelines**. The Subregional Planning Groups, to the extent possible, should:

(a) develop a coordinated Subregional Plan, the SPG Biennial Plan, including alternatives, for the ensuing ten years, for all transmission facilities in the subregion at a voltage of 100 kV or greater;

(b) review and comment on proposed Member Plans for additions and modifications to the subregional transmission system;

(c) provide documentation to the MAPP DRS on the results of the SPG review of Member Plans;

(d) incorporate proposed Member load-serving plans to the subregional transmission system into the SPG Biennial Plan;

(e) incorporate Member Plans for new generator connections into the SPG Biennial Plan, ensuring the outlet transmission is capable of delivering full-accredited output to load over the system load range of 70 percent to 100 percent of peak load;

(f) coordinate the Subregional Plans of the SPG with the Subregional Plans of neighboring SPGs;

(g) update the SPG Biennial Plan as deemed necessary by the SPG or the TPSC;

(h) form technical study task forces as required to carry out the subregional planning responsibilities;

(i) encourage non-MAPP member participation to ensure that the TPSC and the SPGs learn of facility changes outside MAPP's system to ensure the impact of parallel path flows are considered in the planning studies;

(j) ensure SPG studies meet NERC/MRO Planning Standards and requirements; and

(k) promote stakeholder (*i.e.* Regulators, Environmental Agencies, and load and generation developers) involvement in development of the Subregional Plan.

6.5 **Submission of Member Plans to SPG**. Each Transmitting Utility Member, as that term is defined in the MAPP Restated Agreement, shall submit its

transmission plans to the SPG in which its system is geographically located, or SPGs in situations where its system crosses several SPG boundaries. The TPSC requires that all Members submit their individual Member Plans to the appropriate SPG. Each SPG member must be willing to participate in joint SPG studies to assess the adequacy of proposed Member Plans to best meet the needs of the subregion. The TPSC will not be in a position to support the transmission Member Plans of any Member who does not make such Member Plans available to the SPG.

6.6 **Requests for Transmission Service**. In some instances a Member may have to respond to urgent requests for transmission service. The SPG shall make every reasonable effort to review the Member's proposed Member Plans in a timely manner. Upon completion of its review and acceptance of the Member Plans, the SPG shall add these facilities to its Subregional Plan. The TPSC will evaluate these plans for regional impacts.

6.7 **SPG Meetings**. Each SPG should meet at least twice annually to review plans and determine what changes, if any, need to be made to coordinate Member Plans among Members. SPG meetings shall be open to all MAPP Members, interested parties and Regulatory Participants that have an interest in the transmission facilities in the sub-region. Recommendations carried forward to the TPSC by the SPG should reflect a consensus of the SPG members. However, a SPG member also has the right to reflect a minority opinion in any report to the TPSC. The notice of SPG meetings are to be sent out by the SPG/TPSC liaison person or the SPG Chair to the RTC Membership via the RTC exploder email list. The notice shall state the time and place of the meeting, and shall include an agenda sufficient to notify Members of the substance of matters to be considered at the meeting. Additionally, the appropriate subregional regulatory and public participants, who are not RTC Members or may not be subscribed to the RTC exploders list, are to be sent a meeting notice.

6.8 **TPSC/SPG Communication**. Each recognized SPG shall appoint a liaison to the TPSC to facilitate communication of the planning process. The liaison person can be any SPG member including an elected TPSC member. The form of communication the TPSC expects from the SPG includes: (a) SPG Meeting Agendas; (b) SPG final approved Meeting Minutes; and (c) SPG liaison status reports to the TPSC at the scheduled meetings. The SPG meeting agendas and approved minutes should be electronically sent to the TPSC Secretary for posting on the MAPP website in the RTC/TPSC area. The SPG status reports are given by the TPSC liaison at the scheduled TPSC meetings.

6.9 **SPG Planning Responsibilities**. The SPG shall develop a coordinated subregional transmission plan (the SPG Plan), including alternatives, for the ensuing ten years, for all transmission facilities in the subregion at a capacity of 100 kV or greater. This SPG Plan shall be submitted to the TPSC biennially, each even numbered or MAPP Regional Plan year. The SPG shall update and modify

the SPG Plan, as required, between biennial planning year cycles and submit these modifications to the TPSC for approval. The Subregional Plan should: (a) identify load serving problems in the subregion; (b) identify constrained interface problems within the subregion and with neighboring subregions and regions; (c) identify transmission needs for new generation; (d) propose and study transmission expansion alternatives to address these problems and needs; (e) recommend the preferred alternatives which best address the subregional requirements to the TPSC; (f) address subregional deficiencies identified in the MAPP Regional Plan; and (g) provide feedback assessment of impacts of the published MAPP Regional Plan on the subregion.

6.10 **Planning Criteria**. The MAPP Restated Agreement states that each Member's plan shall conform to applicable reliability standards and requirements, and to applicable methods and assessment practices and other transmission planning standards and requirements established by the RTC. In this context, the Subregional Plan shall conform to the requirements of the MAPP Members Reliability Criteria and Study Procedures Manual and the NERC and MRO Planning Standards. In instances where these Standards are different, the more stringent Standard shall be adopted. Such criteria and standards are available at www.mapp.org.

6.11 **SPG Study Models**. Whenever possible, the SPGs shall adopt the most current approved regional model series to develop their base case study models. Each series provides near term, five-year and ten-year models representing summer peak, summer off-peak and winter peak system conditions. The SPG shall determine the appropriate load conditions (summer peak, summer off-peak, winter peak, etc.) and generation schedules for the SPG studies. The SPG shall verify that the load data, new generation data, and all existing firm transactions in the subregion are included and correct. The TPSC will adopt the most current approved regional model series to prepare the MAPP Regional Plan or the update to the MAPP Regional Plan. In developing the base case load flow models to be used for the SPG studies, the SPG shall document all modifications required to load flow cases. The SPGs may add underlying transmission detail to these models as required. The SPG may, if appropriate, adopt other models to conduct its studies. However, the SPG shall develop and provide the TPSC with appropriate files to facilitate incorporation of the Subregional Plan study data into the next regional model series that will be used by the TPSC.

6.12 **SPG Studies and Reports**. A report summarizing the results of the Member and SPG Working Group studies shall be provided for review and consensus approval of the SPG, prior to adopting the plans of Members or the SPG study groups into the Subregional Plan. The SPG shall require its Members or its SPG Study Groups to perform system studies to demonstrate that the performance of the proposed Member and Subregional Plans meets the planning standards defined above. These studies may include, but not necessarily be limited to load flow (steady state, contingency and loss analysis), transient stability, voltage stability,

small signal stability and economic analysis as deemed necessary by the SPG Members.

6.13 Subregional Plan Report to the TPSC. The Subregional Plan, or modifications to the SPG Plan, shall be provided to the TPSC each year. A report shall be provided describing the Subregional Plan. This report shall include the following information: (a) an executive summary (to be incorporated into the MAPP Regional Plan report); (b) a description of needs being addressed; (c) a description of the alternatives considered; (d) recommendations as to which alternatives should be included in the MAPP Regional Plan; (e) a brief description of the SPG studies, including costs, supporting the recommendations, with reference to the detailed SPG study report; (f) a description of the new facilities; and (g) a description of the Public Input/Review Process.

7.0 Public Input Process

7.1 Public Participation. The TPSC shall invite Members, interested parties, any actual or potential users of the relevant transmission facilities, neighboring transmission owning utilities, and Regulatory Participants to be part of the planning process. The SPG shall invite such interested parties to SPG meetings as part of the public input process into the Subregional Plan. The SPG shall:

(a) maintain a list of Public Participants involved in the review and approval of additions to the Transmission System in their subregion;

(b) identify comparable contacts from interconnected NERC regions;

(c) coordinate with the regulatory and environmental participants, and any interested party as to the process required, areas of needs, and possible solutions;

(d) review the solutions with the participants to identify the best options from a transmission and regulatory basis for that subregion to include in the Subregional Plan; and

(e) report to the TPSC the public process completed for the Subregional Plan.

7.2 Regulatory Participation The TPSC shall encourage and facilitate input from Regulatory Participants, in the development of the MAPP Regional Plan. The SPGs, as part of the formal process for regulatory participation, shall:

(a) Maintain a list of public participants involved in the review and approval of additions to the Transmission System in their subregion.

(b) Maintain a list of comparable contacts from interconnected regions.

(c) Coordinate with the regulatory and environmental participants, and any interested party as to the process required, areas of needs, and possible solutions. Review the solutions with the participants to identify the best options from a transmission and regulatory basis for that subregion to include in the MAPP Regional Plan.

(d) Describe in the Subregional Plan how the proposed facilities address the needs, and identify the Regulatory Participants involved in the Subregional Plan development and what future regulatory approvals are required for development of facilities in the Subregional Plan.

The TPSC, as part of the formal process for the regulatory participation, shall:

(a) maintain a list of public participants involved in the review and approval of additions to the Transmission System for each SPG;

(b) report in the MAPP Regional Plan the public input obtained in developing the MAPP Regional Plan;

(c) present the results of the MAPP Regional Plan and the needed facilities to the RTC;

(d) work with the Members and SPGs on final approvals for needed projects as required and coordinate any regional information that needs to be disseminated;

(e) post the MAPP Regional Plan on the MAPP web page, making it available to the public and regulatory community subject to applicable CEII restrictions; and

(f) as required, sponsor information seminars to facilitate regulatory and public acceptance of the MAPP Regional Plan.

8.0 Regional Coordination

The TPSC shall coordinate on planning issues with: (1) the subcommittees of the RTC; (2) the MRO; (3) relevant non-MAPP neighboring transmission owning utilities and Regional Transmission Organizations ("RTOs").

Members of the TPSC who also are members of the MAPP DRS, MRO and neighboring RTOs will be responsible to coordinate the activities of mutual interest. Such a liaison member will report on the relevant activities of these MAPP RTC, MRO and neighboring RTO subcommittees at each TPSC meeting, and will communicate TPSC activities to the MAPP RTC, MRO and neighboring RTO subcommittees. In the event there are no TPSC members on the MAPP RTC, MRO and RTO subcommittees, the TPSC will select a TPSC member who will be responsible for reporting on the relevant activities of these subcommittees at each TPSC meeting. The TPSC correspondent may attend the MAPP RTC, MRO and neighboring RTO subcommittee meetings or employ other effective means to obtain the required information.

9.0 Member Plans

The procedures, standards and requirements for making available Members' transmission plans ("Member Plans") and the information on which the Member Plans are based, as required by the MAPP Restated Agreement. Members may submit information to the TPSC individually, but submittals through the SPGs are preferred. The SPGs provide a forum for members to continue their long-term joint planning relationships with their neighbors, and involve regulatory staff. The Member Plans will be integrated into the SPG Subregional Plan.

The Subregional Plan reports, and subsequent updates, are posted on the MAPP web page at www.mapp.org. Detailed Member planning reports and/or SPG specific project study reports referenced in the Subregional Plan are also posted. Such reports typically provide details of economic evaluations, extensive alternative evaluations and supporting technical studies. Additionally, the TPSC report on the MAPP Regional Plan will provide an executive summary report of the Member and SPG Plans showing the anticipated transmission expansions in the region. This report, also posted on the MAPP web page, will provide insight into Member Plans.

10.0 Dispute Resolution

All substantive and procedural disputes related to the MAPP Regional Planning Process shall be resolved in accordance with the dispute resolution procedures set forth in the MAPP Restated Agreement. Disputes related to local planning issues shall be resolved in accordance with the dispute resolution procedures set forth in this Tariff.

11.0 Economic Planning Studies

The TPSC shall evaluate limitations on MAPP transfer capability through historical Transmission Loading Relief ("TLR") analysis associated with the defined flowgates in the MAPP region. The TPSC shall utilize these comprehensive reviews to determine transmission constraints in the region. The TPSC shall also support economic studies necessary to review the integration of large proposed generation facilities to the regional grid and shall develop concept plans as part of regional study efforts.

The TPSC may also commission SPGs and joint SPGs to address highly constrained regional flowgates and to develop proposed plans for increasing inter-regional transfer capability. SPGs may also perform regional transfer capability analysis and develop exploratory transmission expansion plans to address the most limiting flowgates within their SPG region. The TPSC may also coordinate and support other joint exploratory economic planning efforts within and adjacent to the RTC Region.

In addition to these types of studies, stakeholders, through the TPSC, may request that the TPSC perform economic planning studies to evaluate potential upgrades or other investments that could reduce congestion or integrate new resources and loads on an aggregated or regional basis. The TPSC shall review such proposals and select a certain number for study each year. The TPSC may cluster or batch requests for economic planning studies so the TPSC can perform the studies in the most efficient manner. Requests for studies shall be submitted to the chairman of the TPSC. All such requests will be collected over a 12 month period ending January 1 of each year. The TPSC (with stakeholder input) will commit and engage to address up to five requests per year. The TPSC will attempt to combine the scope of such requests such that the scope of actual study work will adequately address multiple requests, so as not to exceed three studies. Requesting parties would be required to submit essential data for their requested study.

As part of this process, the TPSC may also consider economic studies of upgrades to MAPP flowgates. The flowgates studied will be selected among those determined to have recurring

congestion, as evidenced by a high number of hours per year with no available firm Available Flowgate Capacity ("AFC") or a high number of historical hours per year under Transmission Loading Relief ("TLR"). Along with stakeholder input, the TPSC will use these or similar metrics to determine which MAPP flowgates are most congested and warrant study of the economic benefits of proposed flowgate upgrades. Any economic planning study, which identifies a new MAPP region transmission facility or the upgrade of an existing transmission facility as a proposed Economic Network Upgrade, shall identify the proposed upgrade subject to the cost allocation principles set forth in Section 12 of this Attachment K. Such economic study shall also include a benefit allocation analysis based on one or more of the following principles: (a) reductions in projected congestion costs; (b) reductions in projected energy costs; or (c) reductions in projected transmission losses.

The economic planning studies performed by the TPSC shall include sensitivity analyses representing various generation price scenarios; however, the TPSC shall study the cost of congestion only to the extent it has information to do so. If a stakeholder requests that a particular congested area be studied, it must supply relevant data within its possession to enable the TPSC to calculate the level of congestion costs that is occurring or is likely to occur in the near future.

12.0 Cost Allocation

12.1 Categories of Projects. The TPSC will identify cost responsibility on a regional and subregional basis for Network Upgrades identified in the MAPP Regional Plan for reliability and economic projects subject to any grandfathered project provisions from pre-existing agreements. There will be three categories of projects:

12.1.1 Baseline Reliability Projects (BRP). BRPs are Network Upgrades identified in the base case as required to ensure that the Transmission System is in compliance with applicable NERC and MRO Reliability Standards.

12.1.2 New Transmission Access Projects. New Transmission Access Projects are defined as Network Upgrades identified in Facilities Studies and agreements pursuant to requests for transmission delivery service or transmission interconnection service under a member Transmission Provider's Tariff. New Transmission Access Projects include projects that are needed to accommodate the incremental needs associated with requests for new transmission or interconnection service, as determined in Facilities Studies associated with such requests. New Transmission Access Projects are either Generation Interconnection Projects or Transmission Service Projects.

12.1.2.1 Generation Interconnection Projects. Generation Interconnection Projects are New Transmission Access Projects that are associated with either the interconnection of new generation, or an increase in the generating capacity

of existing generation, under a Transmission Provider's Tariff.

12.1.2.2 **Transmission Service Projects**. Transmission Service Projects are New Transmission Access Projects that are needed to provide for requests for new Point-To-Point Transmission Service, or requests under a member Tariff for Network Service or a new designation of a Network Resource(s).

12.1.3 Regionally Beneficial Projects (RBP). A RBP is a transmission network upgrade that shall be: (a) proposed in accordance with the MAPP Planning Process; (b) found to be eligible for inclusion in the MAPP Regional Plan; (c) determined not to be a New Transmission Access Project; and (d) found to have regional benefits. RBPs may include projects that expand the scope of a project that would otherwise qualify as a Baseline Reliability Project.

12.2 Cost Allocation. The allocation rules for these projects are as follows:

12.2.1 Allocation of Baseline Reliability Project Costs. Each transmission owner is obligated to construct and/or upgrade those BRP facilities required to meet NERC and MRO Reliability Standards associated with serving its native load customers and to meet its firm transmission commitments. Costs associated with a single transmission provider shall be recovered through that transmission provider's rate recovery method. Costs associated with BRP involving multiple transmission owners shall be shared among the affected transmission owners in accordance with this principle, subject to those transmission owners' respective interconnection agreements.

12.2.2 New Transmission Access Projects. New Transmission Access Projects may consist of a number of individual facilities that constitutes a single project for cost allocation purposes. Cost allocation methods applicable to specific requests for interconnection and transmission service under the Tariff shall be used for new Transmission Access Projects.

12.2.3 Allocation Rules for RBPs. The MAPP Regional Plan shall classify transmission projects as described above. Any economic planning study authorized by the MAPP RTC for a RBP and performed in compliance with Section 11 of this Attachment K, which identifies the need for a new MAPP region transmission facility or the upgrade of an existing transmission facility as a proposed Economic Network Upgrade, shall treat such proposed facility upgrade(s) as commercial transmission.

This procedure ("Procedure") describes the process by which the MAPP transmission owner on whose transmission system the Economic Network

Upgrade is located (Host TO) shall solicit participation for the proposed Economic Network Upgrade. The MAPP transmission owner shall have the right to elect to be an Affected System and not serve as the Host TO, provided that the MAPP RTC identifies another qualified transmission owner as the Host TO. A transmission owner that has protested a project as causing undue burden, which has not been satisfactorily resolved, has the option to decline participation.

12.2.3.1 **Applicability.** This Procedure is applicable to MAPP-Region transmission owners, Affected Generators and MAPP-Region Load-Serving Entities ("LSEs").

12.2.3.2 **Host Owner Option.** The Host TO may, of its own accord, elect to perform the defined Economic Network Upgrade, and roll the upgrade costs into the next update of its transmission revenue requirements.

12.2.3.3 **First Call Offer of Subscription Rights.** The Host TO shall submit an offer to participate in the Economic Network Upgrade to LSEs within the Host TO's zone, including its merchant load-serving affiliate, to any Affected Generator, to other MAPP Affected System Operators, and to any Affected System Operators participating on a reciprocal basis in accordance with the benefit allocation defined on a cost causation basis in the economic planning studies performed in compliance with Section 11 of this Attachment K, in exchange for Subscription Rights to the new transmission capacity.

Each Affected System Operator receiving such an offer shall have the right to offer on its OASIS on a non-discriminatory basis to LSEs on its transmission system, including its merchant load-serving affiliate, the opportunity to participate in the Economic Network Upgrade by purchasing a portion of the Subscription Rights made available by such Affected System Operator. If the Affected System Operator's affiliated LSE accepts the subscription offer for participation in the Economic Network Upgrade, the subscription shall be granted to such LSE as a Subscription Rights buyer. The cost of such subscription shall not be included in the transmission revenue requirement of the Affected System Operator, unless the Subscription Rights Buyer requires the upgrade to serve load on the Affected Systems. If demand within the Affected System Operator's zone for the Subscription Rights offered exceeds the number of Subscription Rights available, the Affected System Operator shall offer such Subscription Rights to the interested LSEs within its zone, including its own load, on a pro rata basis, based on coincident peak. Each LSE shall have 60 days to accept such an offer for Subscription Rights.

If the LSE(s) of a Affected System Operator that has received a Subscription Rights solicitation rejects all or part of the solicitation, the Affected System Operator may, at its sole option, seek expedited pre-approval from its end-use rate-making authority to include the cost of such Subscription Rights in its retail rates. The Host TO, MAPP Affected System Operators and any Affected System Operator participating on a reciprocal basis shall be allowed an additional sixty (60) days to seek pre-approvals from their respective rate-approving authorities.

If the Affected System Operator receiving the offer for participation is unable to commit to acquisition of all the subscription rights offered within 120 days, the Affected System Operator shall inform the Host TO of what portion of the subscription offer, if any, will be subscribed to by its LSE(s), including its merchant LSE(s), and what portion, if any, will be subscribed to by its transmission business unit.

Any capacity offered for subscription that remains unsubscribed after 120 days shall be released back to the Host TO.

12.2.3.4 **Second Round Offer of Subscription Rights.** The Host TO shall release any Subscription Rights that remain unsubscribed to the participating Affected System Operators and participating Affected Generators. The Host TO shall allow thirty (30) days for recipients of the second round offer to indicate interest in acquiring the residual Subscription Rights, either for their LSEs, or for their respective transmission business units. If the Subscription Rights offered are acquired by an Affected System Operator's LSE(s), the value of such Subscription Rights will not be included in the Affected System Operator's transmission rates. If the Subscription Rights offered are acquired by an Affected System Operator's transmission business unit, the revenue requirements will be rolled into the Affected System Operator's rate structure and the acquired transmission capacity shall be available under the Affected System Operator's open access transmission tariff ("OATT"). The Affected System Operator, including the Host TO, shall adjust the point-to-point and network service charges to reflect the addition of any revenue requirements to the Affected System Operator's OATT embedded cost rates.

12.2.3.5 **Subscription Rights Auction**. If any Subscription Rights remain available after the Host TO has taken the steps above, all such remaining Subscription Rights shall be auctioned to any eligible transmission customer.

12.2.3.6 **Resale and Reassignment of Subscription Rights.** The Host TO shall provide resale and reassignment provisions for Subscription

Rights on the same basis as provided in the *pro forma* OATT for firm point-to-point transmission service.

12.2.3.7 Failure to Obtain Subscriptions. If all of the efforts described above have been fully exhausted and Subscription Rights sufficient to cover the total cost of the Economic Network Upgrade project have not been successfully subscribed, or if subscribers default as discussed below, the Host TO may cancel the proposed project. If a project is cancelled under such circumstances, the Host TO shall notify all of the subscribers in writing within thirty (30) days of its decision to terminate. If an Economic Network Upgrade is terminated for lack of subscriptions or for defaults on subscriptions, the project shall be deemed to have insufficient economic benefit to market participants, and the project shall not qualify for reconsideration as an Economic Network Upgrade until the latter of a) the next biennial MAPP Regional Plan planning cycle, or b) two years from the date of notice of cancellation.

12.2.3.8 Facilities Agreement. If the Economic Network Upgrade is fully subscribed, the Host TO shall offer the subscribers a Facilities Agreement within sixty (60) days of full subscription. If any of the subscribers fail to execute the Facilities Agreement within thirty (30) days of receipt of such agreement, the Host TO shall use its best efforts to award the non-signing subscriber's Subscription Rights to another qualifying interested party. If the Host TO is unable to secure an alternative subscriber, the Host TO shall pursue resolution with the non-signing/defaulting subscriber(s) pursuant to Article 9, Dispute Resolution, of the MAPP Restated Agreement. Any dispute that has not been resolved through the MAPP Article 9 Dispute Resolution process shall be resolved through the appropriate regulatory or jurisdictional dispute resolution proceedings. A party seeking to invoke FERC jurisdiction over a Dispute shall file with the Commission the Facilities Agreement unexecuted by the non-signing/defaulting subscriber. The Commission shall determine the obligations of the non-signing/defaulting subscriber. If, as a result of the dispute resolution process the non-signing/defaulting subscriber is relieved of its obligations, the Host TO may cancel the project with no further obligations to the remaining subscribers.

12.2.3.9 Conversion of Subscription Rights to Physical Transmission Rights. The Facilities Agreement associated with an Economic Network Upgrade shall convert the Subscription Rights in Sections 12.2.3.3 through 12.2.3.7 above, to Physical Transmission Rights. The additional transmission capability achieved by the project shall be allocated to the Subscription Rights holders as Physical Transmission Rights in proportion to their respective payment for the network upgrade. The Physical Transmission Rights do not in

themselves convey a form of transmission service under Part II or Part III of the Tariff. The holder of the Physical Transmission Rights may use those rights in conjunction with a specific application of transmission service under Part II or Part III of the Tariff of the Host TO, or the holder may sell or assign the Physical Transmission Rights to another party. Physical Transmission Rights may be used by a generator owner to secure firm transmission service and/or provide a hedge against potential congestion charges.

12.2.3.10 Completion of Economic Network Upgrades. Once an Economic Network Upgrade is fully subscribed and Facilities Agreements are in place for all subscribers, the Host TO shall apply good faith efforts to obtain approvals for, design, construct, own, operate and maintain the proposed Economic Network Upgrade facilities under the terms and conditions set forth in the Facilities Agreement(s).

12.2.3.11 Inter-Regional Coordination. This Procedure may be applied for inter-regional Economic Network Upgrades demonstrating inter-regional economic benefits. MAPP Transmission Owners may use this Procedure to fulfill any requirements of reciprocal obligations for inter-regional transmission upgrades identified by the planning processes of adjacent regional entities, including but not limited to the Midwest ISO Transmission Expansion Plan. This Procedure shall also be available to transmission owners in adjacent regions that may be invited to participate in a subscription rights offering from a MAPP Transmission Owner, based on demonstrations of benefits under Section 11 of this Attachment K.

12.2.3.12 Transmission Projects for Renewable Energy Zones. The Subscription Rights procedures of Sections 12.2.3.3 through 12.2.3.7 above may also be applied to a regional transmission project that is designed to develop deliverability from Renewable Energy Zones to a market in the same manner that the Subscription Rights procedures are applied for Economic Network Upgrades. However, this procedure shall not be an alternative for requirements of Transmission Access Projects under Parts II and III of the Tariff, or for the obligations of Attachment I, "Standard Large Generator Interconnection Procedures (LGIP)". The Renewable Energy Zone transmission project must be included in the MAPP Regional Plan or in the transmission plan of an adjacent region that has been coordinated with the MAPP Regional Plan.

12.3 Existing Cost Allocation Methodologies. The cost allocation methodology set forth in this Section 12.0 shall not modify or be inconsistent with (a) existing mechanisms to allocate costs for projects that are constructed by a single transmission owner and billed under existing rate structure, or (b) existing cost allocation methods applicable to specific requests for interconnection or

transmission service under the pro forma OATT. Further, the cost allocation methodology set forth in this Section 12.0 shall not supersede cost-allocation, cost-sharing or joint-investment obligations to which an individual Host TO or Affected System may be subject.

13.0 Nebraska Public Power District Local Planning Process

13.1 Background

Nebraska is a totally public power state meaning that all end use electric customers are served by electric utilities that are governed by elected or appointed Boards or governing bodies. Nebraska Public Power District (NPPD) is a public corporation and political subdivision of the State. By State statute NPPD has an obligation to make its facilities rated 34.5 kV and above available for use by public agencies.

NPPD's transmission system includes nearly 4300 miles of transmission lines in the state of Nebraska. This is comprised of 895 miles of 345 kV, 682 miles of 230 kV and 2717 miles of 115 kV facilities. The NPPD Balancing Authority area encompasses a significant geographic portion of the state of Nebraska and also includes transmission facilities owned by the City of Grand Island, the City of Hastings, Tri-State G&T and WAPA. NPPD has interconnection or joint planning agreements with all load serving entities in its Balancing Authority area. The NPPD system is characterized by summer peak irrigation loads, extreme seasonal load level variations, western Nebraska stability limitations, and four regional constrained transmission interfaces.

The NPPD transmission system provides service to a subtransmission and distribution system that serves the wholesale and retail load serving entities within NPPD's Balancing Authority area. NPPD has long-term wholesale power supply contracts with most of the public power districts, municipalities and cooperatives in its Balancing Authority area, and by contract is obligated to jointly plan the subtransmission system of those customers. NPPD provides retail service by contract to many municipalities and is responsible to plan and operate those distribution systems. Subtransmission facilities are operated as a radial power deliver system defined as those facilities which are designated to operate at nominal voltages of 34.5 kV or 69 kV. Stakeholders in the transmission, subtransmission and distribution planning processes include public power districts, cooperatives, municipalities, and a joint action agency. The distribution facilities are designated as 12.5 kV and below and these facilities provide for a radial low voltage power delivery system for local end use load customers.

NPPD's local planning process involves a continuous coordinated planning effort between the Transmission Planning group and the Subtransmission & Distribution Asset Planning group. The Transmission Planning group is responsible for the high voltage networked transmission system currently comprised of 345 kV, 230 kV and 115 kV facilities, and the Subtransmission and Distribution Asset Planning group is responsible for the planning of the low voltage radial subtransmission and distribution delivery systems.

13.2 Availability of Plans and Information

Entities that require information regarding the status of transmission system planning studies for the NPPD transmission system should make a request for such information to NPPD Transmission Planning. NPPD Transmission Planning can be contacted by sending correspondence to NPPD's corporate headquarters at: Nebraska Public Power District, Att. Transmission Planning; 1414 15th Street, Columbus, Nebraska 68601. Additional contact information is available on the NPPD corporate website.

The Request should identify which entity requires the information, the specific transmission system upgrade for which information is being requested, and specific question to be answered by NPPD. NPPD will review these requests with regard to the NPPD Standards of Conduct which will take precedence over the planning principle of openness with regard to criteria, assumptions, and data. NPPD will not provide information to entities that may act as a conduit of information to energy trading and marketing personnel.

NPPD will only make available completed transmission planning studies and approved plans. NPPD will not provide detailed information directly to entities, but will refer such entities to MAPP as MAPP has established Critical Energy Infrastructure Information, (CEII) policy and non-disclosure polices. This approach is intended to prevent disclosure of CEII to entities that are not legitimate market participants.

13.3 NPPD's Transmission Planning

NPPD's Transmission Planning group is responsible for the future development and optimal operation of NPPD's high voltage transmission system. NPPD's transmission system is a part of the regional interconnected transmission grid and provides for generator interconnections and transmission services under NPPD's T-2 Transmission Service Rate Schedule.

Transmission Planning performs studies to analyze the adequacy, security, and reliability of the system. Transmission Planning is responsible for determining when it is necessary to make additions or modifications to the electrical system in order to provide low cost, reliable electrical service to customers.

Transmission activities including the following items:

- Power Flow and Contingency Analysis
- Transient Stability Analysis
- System Impact Studies
- Facility Interconnection Studies
- NERC Planning Standards Compliance

- Operating Studies and Guides
- Transmission Service Request Analysis
- Future Facility Plans
- Special Protection Systems
- Generator Interconnection Studies

Analysis activities are not limited to NPPD's system only, but also includes neighboring systems. Transmission activities are highly integrated with the Mid-Continent Area Power Pool (MAPP) in exchanging transmission system data, operating information, and insuring the adequacy and reliability of the regional transmission system.

Actual and projected loads on the transmission system are analyzed by Transmission Planning. From this information, transmission plans, facility requirements, and operating guides are developed to provide adequate transmission capacity to reliably serve the load at the lowest cost.

13.4 NPPD Transmission Plan Requirements

The MAPP Restated Agreement requires each Member who is a Transmitting Utility to prepare and maintain a plan for its transmission facilities. These NPPD plans take into account:

- The current and anticipated requirements for transmission to provide service to loads;
- The current and anticipated requirements for transmission to provide network transmission service;
- Other contractual and tariff obligations to provide firm transmission service;
- Any other contractual obligations affecting the use of transmission facilities;
- Any requirements for future transmission service
- The coordination of NPPD's transmission plans with the transmission plans of neighboring Members and systems; and
- The obligation of NPPD under the Restated Agreement, and applicable standards and requirements established by the Regional Transmission Committee to provide transmission service to other entities.

13.5 Stakeholder Coordination and Input to the NPPD Planning Process

NPPD and its wholesale customers established a Power Resource Advisory Board to provide input to NPPD regarding decisions affecting additions to or retirements from the portfolio of power resources and transmission facilities used by NPPD to meet its power supply obligation and to provide a liaison between the wholesale customers and NPPD's Board of Directors.

The Power Resource Advisory Board is comprised of wholesale customer representatives selected by the wholesale customers. NPPD will conduct meetings of the Power Resource Advisory Board at least twice a year and may review the expected seasonal load for the upcoming season and the manner in which NPPD intends to meet such obligations.

NPPD, and other electric utilities in Nebraska, are required to receive approval for construction of generation and transmission from the Nebraska Power Review Board. NPPD communicates about Transmission Planning efforts with neighboring utilities and state authorities in order to give early notification of transmission system expansion option under consideration. All stakeholders including private citizens, in the state of Nebraska have the opportunity to voice concerns to the NPRB,

13.6 Planning Authority

Whiles NPPD recognizes the importance of general consensus among the wholesale customers and NPPD, both agree that NPPD and its Board of Directors has ultimate authority and responsibility for development, approval, and implementing its power resource and transmission plans.

13.7 NPPD Subtransmission And Distribution Asset Planning

Subtransmission and Distribution Asset Planning works jointly with NPPD Wholesale customers and NPPD Retail groups in developing a reliable and economical subtransmission and distribution system to meet the needs of stakeholders. Subtransmission and Distribution Asset Planning activities include:

- Prepare studies, using computer load flow models of the subtransmission and distribution system to determine:
    - When it is necessary to upgrade the system,
    - The most economical switching arrangement for normal operations,
    - How loads can be served during maintenance and emergency outages,
    - Transformer fixed tap settings and the need for load break switches.

- Prepare load projections on Transmission load transformers and review loading to determine when it is necessary to replace the transformers.

- Maintaining switching data, capacitor data, subtransmission and distribution load data and other information necessary to maintain and develop subtransmission and distribution models.
- Maintaining system and facility maps.
- Prepare the yearly load duration report.
- Prepare the yearly substation transformer load report.
- Act as a consultant for the subtransmission planning subcommittee.
- Provide technical data on the transformers and lines for billing.
- Develop joint subtransmission studies for wholesale customers to develop long range plans and to provide service to new customers.
- Subtransmission and Distribution Asset Planning also provides planning criteria, system models, system modeling software support and motor start analysis to the Retail staff.

The Subtransmission / Distribution Plan identifies the ownership, type, timing of installation and approximate location of Subtransmission / Distribution Facilities modifications and/or additions required during the succeeding twenty (20) year period, and sets forth recommendations for modifications and/or additions for the first ten (10) years of the study period.

The Subtransmission / Distribution Plan may be reviewed by each Retail Load Serving Entity and coordinated with the NPPD Transmission Planning group annually or as needed. As-needed reviews may be implemented to study new loads, system problems or any other matter determined to be significant. As part of the annual review, the scheduled additions will be studied to determine when and if they are required. The annual review will also include updates to the joint subtransmission system modeling data. The updated models will then be made available for operational planning analysis and insight. Prior to the expiration date of the Plan, a complete Study will be made and a new Plan developed.