

Chapter 1

**“Whether or not a viable regional transmission organization
and adequate transmission exist in Nebraska or in a
region that includes Nebraska.”**

1.0 Purpose

Technical Group #1 dealt with the question “whether or not a viable regional transmission organization and adequate transmission exist in Nebraska or in a region that includes Nebraska”.

2.0 Team Members

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3.0 Summary

At this juncture, the development of Regional Transmission Organizations (RTOs) remains unsettled. While approximately ½ of the original Mid-Continent Area Power Pool (MAPP) members have joined the Midwest ISO, the remaining MAPP members, who include the Nebraska utilities, most of North and South Dakota, and parts of Iowa and Minnesota, have chosen to remain as members of MAPP, and keep their transmission facilities under the MAPP regional transmission tariff. MAPP members are now focusing their efforts on developing a seams operating agreement with the Midwest ISO, and investments to upgrade the MAPP software and hardware infrastructure to make the MAPP regional transmission tariff processes more compatible with other regional transmission tariffs, so that MAPP transmission customers will not be at a disadvantage when conducting interregional energy transactions. A seams agreement is needed to coordinate transmission service between the MAPP and Midwest ISO transmission tariffs to ensure that both parties respect the transmission capacity limits on the other’s system. This becomes particularly important as the Midwest ISO prepares to implement energy markets, which will use an entirely new method of operating the electric system in the Midwest, known as least cost security constrained economic dispatch. Unless proper procedures can be agreed upon through the seams agreement, MAPP members may find their ability to conduct regional wholesale energy transactions adversely affected by this new method employed by the Midwest ISO.

On August 6, 2004 the Federal Energy Regulatory Commission (FERC) issued an Order conditionally approving the Midwest ISO’s Transmission and Energy Market Tariff (TEMT). Among other things, the FERC Order requires the Midwest ISO to execute seams agreements with the regional transmission entities that surround the Midwest ISO. Although there are still many contentious issues to resolve, along with additional FERC filings and approvals required on various aspects of the markets, the Midwest ISO received FERC approval to start its Day-Ahead and Real-Time Energy Markets on March 1, 2005.

MAPP will also need to develop a seams agreement with the Southwest Power Pool (SPP), which is in the process of establishing an initial phase of an energy market that they plan to implement in the spring of 2005. SPP received conditional approval from the FERC in February 2004, to become a Regional Transmission Organization (RTO).

As a result of the investigation of the August 14, 2003 blackout, there has been a renewed focus on reliability and many changes have been, or will be, implemented in the reliability requirements that must be met by the entities involved in the operation of the electric system. The North American Electric Reliability Council (NERC) is leading the effort to convert its operating policies into standards by January 2005. The new standards will be monitored under compliance programs adopted by the Regional Reliability Councils.

The Midwest Reliability Organization (MRO) will replace MAPP as the NERC Regional Reliability Council (RRC) effective January 2005. The MRO was formed and a Board of Directors was seated early in 2004. The NERC Board approved the MRO in June. A transition process is underway to establish MRO committees and move the MAPP standards to the MRO. This will require further revisions to the MAPP Restated Agreement, which is the primary governing MAPP agreement, to remove all of the NERC Regional Reliability Council functions. When approved by the MAPP Members later this year, the MAPP agreement will then govern only the Regional Transmission Committee (RTC) functions and the Generation Reserve Sharing Pool (GRSP).

As concluded in previous years' reports, the development of a RTO that is both economically and operationally viable for Nebraska remains very much a work in progress. Tremendous uncertainty remains as to whether the energy markets being developed by the Midwest ISO or SPP would provide economic benefits, or result in increased costs to customers in Nebraska. Due to the major changes in the way regional wholesale energy business will be conducted in the new markets, compared to the present business procedures, and the incredible complexity of the new energy market processes, an answer to this question will not likely be determined with any degree of certainty until after the markets start and actual market experience is obtained. Thus, the Nebraska utilities, and the other remaining MAPP members have concluded the most prudent course of action is to maintain the MAPP regional transmission tariff and work diligently to develop seams agreements with neighboring RTOs.

Nebraska utilities continue to plan and upgrade their transmission systems so that there is adequate transmission in Nebraska to meet customers energy needs. However, there is not adequate regional transmission capacity to support all of the desired regional wholesale energy transactions.

4.0 MAPP

The MAPP organization continues to undergo change to adapt to the member needs, industry changes, and the need to coordinate operations and business procedures with neighboring RTOs. The organization's governing document, the MAPP Restated Agreement, provides for a NERC RRC, RTC, and a GRSP. The Restated Agreement is again in the process of being revised to adapt to changes taking place.

4.1 MAPP RTC

Based on a recommendation from the Midwest Energy Marketing Association, which is comprised of utilities and marketers conducting wholesale energy transactions in the MAPP region, the MAPP RTC voted affirmatively in June 2004 to extend the length of transmission service that a customer can request under the MAPP transmission tariff, known as Schedule F, from six months to one year. This will allow entities conducting wholesale energy transactions to better serve their customers by enabling them to arrange service on a yearly basis, rather than just a seasonal basis. In addition, the RTC approved the recommendations of a study group to invest up to \$4.5 million in improvements and upgrades to the software and hardware infrastructure to make the MAPP processes more compatible with the Midwest ISO and SPP processes. These changes will enable MAPP transmission customers to more easily conduct interregional energy transactions. A FERC filing has been submitted for approval and arrangements are being made for vendor modifications. It is expected these improvements should be completed by the spring of 2005. Funding for the investments will come through the Administrative Fee that is part of Schedule F service.

These changes are a distinct change in direction for the RTC. In October 2001 the RTC voted to reduce the duration for Schedule F service to six months and set a membership threshold for the termination of Schedule F. At that time it appeared that the preponderance of MAPP members would either join the Midwest ISO or TRANSLink, thus ending the viability of Schedule F as a regional transmission tariff. Since that time no enhancements have been made to the software and hardware infrastructure to keep it up to date. With the demise of TRANSLink and no further members joining the Midwest ISO, it is now clear that the Schedule F membership threshold will not be crossed anytime in the near future.

Although MAPP can remain a viable organization for some period of time, it is important to understand that MAPP is in some respects a shell organization because it owns almost no assets and has only a handful of employees. Under the 2001 merger agreement between MAPP and the Midwest ISO, the Midwest ISO acquired essentially all of the MAPP assets, and the MAPP staff was reduced to less than 20. The merger agreement obligated the Midwest ISO to maintain and staff the MAPP Center in St. Paul, Minnesota and provide transmission related services for six years to the MAPP members that do not join the Midwest ISO. That agreement will terminate in February 2008. Until then, the remaining MAPP members will be able to continue providing Schedule F transmission service, and have some additional time to evaluate the effectiveness and benefits of the Midwest ISO energy markets after the markets have been in operation, and explore other alternatives for participation in a RTO, such as SPP.

It is also important to note that MAPP is not a FERC approved RTO. It is a FERC approved Regional Transmission Group (RTG). The distinction between a RTO and a RTG involves the geographic scope and operational functions performed. A RTO has authority over short-term reliability functions, whereas a RTG does not. Basically, a RTG was a predecessor organization that FERC proposed when it issued Order 888 in 1996. Since that time the concept has evolved to the now current RTO. Thus, the options for the remaining MAPP members to participate in a RTO appear to be limited to joining the Midwest ISO or SPP. However, participation in a RTO is not mandatory. FERC never issued a final rulemaking on its proposed Standard Market Design, which would have mandated participation in a RTO for FERC jurisdictional utilities. However, FERC has no authority under the Federal Power Act to order public power utilities to join a RTO. New federal legislation would be required to give FERC that authority. If the remaining MAPP members determine that joining the Midwest ISO or SPP are not in the customers' best interest, they can maintain the RTG and Schedule F transmission service, and seek to continue a contract with the Midwest ISO, develop a contract with SPP, or some other organization, to provide transmission services.

A further complexity to the relationship between MAPP and the Midwest ISO is that the transmission services provided by the Midwest ISO consist of three basic parts: administration of Schedule F tariff service, administration of the MAPP GRSP, and NERC Reliability Coordinator services. The Midwest ISO must administer the Schedule F transmission service and GRSP functions in accordance with MAPP established procedures. However, the duties and functions performed by the Midwest ISO as the NERC Reliability Coordinator are established by NERC, not MAPP members.

The MAPP members that joined the Midwest ISO no longer have their transmission facilities under the MAPP Schedule F tariff, but they are still part of the GRSP. The MAPP members that did not join the Midwest ISO continue to have their transmission facilities under Schedule F and remain a part of the GRSP. However, all former and remaining MAPP members are under the authority of the Midwest ISO with respect to the reliability functions the Midwest ISO performs as the NERC Reliability Coordinator. There is only one NERC approved Reliability Plan, and all MAPP members are required to follow the directives of the Midwest ISO in responding to emergency conditions. In addition, the Midwest ISO is in the process of developing requirements for its members for generation supply adequacy, which will in all likelihood be different than the MAPP GRSP requirements.

Other MAPP RTC Subcommittees, including the transmission planning, transmission operations, schedules and compensation, and design review will continue to carry out their functions on behalf of the Members. In particular, regional planning and the evaluation of transmission adequacy to support new generation resources and long term transmission service requests continue to provide a valuable service to the members. MAPP will continue to develop a regional transmission plan that is updated every two years.

4.2 MAPP/Midwest ISO Seams Agreement

Currently, there are procedures in place to coordinate transmission service between the Midwest ISO and MAPP Schedule F tariffs. However, when the Midwest ISO starts its energy markets in March 2005 they

will adopt totally new practices for approving wholesale energy transactions in the Midwest region. Managing this complex relationship between MAPP and the Midwest ISO requires an additional agreement to address seams issues between the MAPP Schedule F tariff and the Midwest ISO tariff, as well as distinguish between reliability issues, and tariff or market issues.

The core principle of the seams agreement between MAPP and the Midwest ISO is the Congestion Management Process (CMP). Basically, the CMP is a method to address the parallel flows that exist on the interconnected electric network. When either MAPP or the Midwest ISO approves transmission service under its respective transmission tariff, parallel flows are created on the other entity's system. The CMP is a method to account for the parallel flows and limit the approval of transmission service so that it does not cause transmission facilities on the other entity's system to exceed the transmission capacity limits. The CMP proposes to allocate, or divide up, the transmission capacity between MAPP and the Midwest ISO on facilities that have been established as constraints, otherwise referred to as flowgates.

It is not the intention in this report to go into all of the complexities of the CMP, or all of the other issues in the seams agreement. Suffice to say that there are contentious issues that need to be resolved so that when the Midwest ISO starts its energy markets, the MAPP Schedule F transmission customers are not adversely affected and at a disadvantage to Midwest ISO customers when conducting wholesale energy transactions. A seams committee comprised of MAPP members and Midwest ISO staff has been meeting over the last six months to try and resolve the issues. To date, agreement has not been reached, but progress is being made. The Midwest ISO is required to submit a FERC filing by October 6, 2004 reporting on the status of the seams efforts with MAPP. It is doubtful a full agreement will be reached by then, but both sides are committed to continuing to work on the issues. The "do nothing" option will result in negative impacts to MAPP members.

4.3 MAPP RRC

In 2003 it was decided by the MAPP membership that the RRC should be an organization separate from MAPP, so as to provide independence and avoid potential conflicts of interest between reliability standards and wholesale market functions. Thus, the Midwest Reliability Organization (MRO) was formed to replace the MAPP RRC. In early 2004, a Board of Directors was elected, and in June, the NERC Board officially approved the MRO to replace the RRC. All previous members of the RRC have joined the MRO, as well as other utilities, and the Midwest ISO. The MRO will adopt NERC reliability standards that address both operating and planning issues, taking into account any needed regional variances, monitor compliance of members to the standards, assess penalties for non-compliance, and perform reliability assessments. The MRO Board and Committee seats and voting will be done by sector. There are seven sectors: IOUs, Municipalities, Cooperatives, Federal, Canadian, Transmission System Operator, and Generators and Marketers.

Currently, the MRO is in a transition process to establish committees, select committee members, and transfer MAPP reliability standards to the MRO. The plan is for the MRO to be fully functional in January 2005. Another step that needs to be completed is to revise the MAPP Restated Agreement to remove all items related to the RRC.

5.0 Midwest ISO

On August 6, 2004 FERC issued an Order conditionally approving the Midwest ISO Transmission and Energy Markets Tariff (TEMT). This Order provides the Midwest ISO the necessary approval, subject to further FERC proceedings to revise certain provisions of the TEMT, to start its energy markets on March 1, 2005. Affected utilities, customers, state regulators, industry associations, and other market participants have submitted numerous protests and requests for rehearing. It is doubtful that FERC will alter its overall approval of the MISO TEMT.

The TEMT will employ security-constrained economic dispatch of generation to establish wholesale energy prices using a locational marginal pricing mechanism. The market will include both a Day-Ahead and Real-Time market. Further, the market will offer Financial Transmission Rights (FTRs) as a hedge against congestion costs. This type of market has been established in PJM, the New York ISO, and New England ISO. Of significant difference is that those RTOs have been using a centralized generation dispatch scheme for many years, but the Midwest ISO has not. What kinds of changes this causes in the Midwest is completely unknown. Because of the unknown impacts FERC established various market readiness and startup safeguards. FERC states that the safeguards should provide additional confidence in the reliable operation of the energy markets and provide some additional limits on exposure to market prices and transmission usage charges. Included in the safeguards are achievement of reliability and readiness metrics prior to the start of the market, a cutover plan to revert back to prior tariff service should the market systems fail, a temporary cap on supply bids into the market, and protection against congestion charges for five years for load pockets.

A particularly contentious issue that has not yet been completely resolved is the treatment of transmission rights under Grandfathered Agreements. The Midwest ISO has taken the position that these transmission rights must be converted to service under the TEMT. There were over 400 contracts submitted as meeting the definition of Grandfathered Agreements, i.e. those contracts for transmission service entered into prior to September 1998, the date the Midwest ISO received its initial approval from FERC for tariff service. The parties to the Grandfathered Agreements contend that the Midwest ISO cannot abrogate their contracts and assign them additional costs due to the Midwest ISO markets. There are long-standing legal precedents concerning changing contract rights. Parties are likely to take these issues to court if FERC does not uphold the sanctity of the contract rights.

The Midwest ISO will be allocating FTRs to the market participants in the next few months. There has been a great concern that many of the market participants will not receive sufficient FTRs to protect the deliveries to their native load customers, thereby exposing their customers to congestion charges of unknown magnitude. The Midwest ISO claims that the study they performed projects annual gross savings to consumers of roughly \$713 million. The validity of the study has been challenged by many of the market participants. A study by Wisconsin participants showed that their customers would experience a significant cost increase. Whether there are significant costs savings remains to be proven, but what does seem certain is that the new energy markets will result in cost shifts. Some areas may indeed see some cost savings, but other areas will very likely see significant cost increases. Because the new security constrained economic dispatch has never been performed for this part of the country, there is simply no way to predict the magnitude of any cost change.

6.0 SPP

SPP received a FERC Order in February 2004 conditionally approving SPP as a RTO. SPP submitted a compliance filing on August 2, 2004 in an attempt to satisfy the FERC Order. Of particular note is that SPP does not intend to implement to complete energy markets proposed by the Midwest ISO. Instead, SPP formed a Regional State Committee composed of regulators from each of the States within its footprint to oversee a cost-benefit study. The cost-benefit study will be funded by the SPP at a cost of \$866,000 and performed by an outside consultant to determine if there is sufficient cost savings to customers to proceed with establishing energy markets.

One requirement of the FERC Order was for SPP to develop a seams agreement with the Midwest ISO and other neighboring transmission entities. SPP and the Midwest ISO were unable to reach agreement on the CMP, so SPP filed an unexecuted seams agreement at FERC. The Midwest ISO protested the filing and requested FERC set the issue for hearing. The basic issue of contention is the same difficult issue MAPP and the Midwest ISO are wrestling with, the allocation of flowgate capacity. Asking FERC to decide how to allocate flowgate capacity may be precedent setting, so it behooves MAPP to find a resolution with the Midwest ISO before FERC acts.

MAPP will also need a seams agreement with SPP. To date, there has been no contact between MAPP and SPP to work on a seams agreement. However, it is not as critical as the MAPP/Midwest ISO seams agreement. Initial efforts to work with SPP will probably begin in the next few months.

7.0 TRANSLink

The TRANSLink effort was officially terminated in November 2003. TRANSLink received conditional FERC approval, but after failing to receive state regulatory approval in Minnesota and Iowa, Xcel Energy, which was the largest transmission owning participant, determined that they could no longer support the development effort. Without Xcel participating, the remaining members concluded that TRANSLink lacked sufficient size and therefore agreed to terminate the development.

8.0 Crescent Moon

The Crescent Moon members continue to meet to discuss issues of common interest and develop positions they feel are needed to be put forward, but they are not pursuing the development of a separate transmission organization. The members are actively engaged in the MAPP/Midwest ISO seams agreement effort.

9.0 Conclusions

The options for participation in a RTO have been narrowed down since last year's report. Only the Midwest ISO and SPP have received FERC approval, although still conditional for SPP, to function as a RTO. However, both of these organizations are still in the developmental stage and the economic benefits are dubious. Because of the uncertainty of how the RTO markets will perform from both a reliability and cost standpoint, the conclusion remains unchanged from previous reports. There is no viable regional transmission organization for Nebraska utilities to participate in. Transmission adequacy in Nebraska continues to be studied and built sufficient to deliver generation resources to Nebraska customers, but transmission adequacy to support interregional wholesale energy transactions is limited.

The most prudent course of action for Nebraska utilities is to remain in the MAPP organization and work to address seams issues with the adjoining RTOs. If the Midwest ISO and SPP markets begin operating as planned in 2005, we will be able to observe and evaluate the effects without being impacted directly.