

## **Chapter 1**

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

## **1. 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. Team Members**

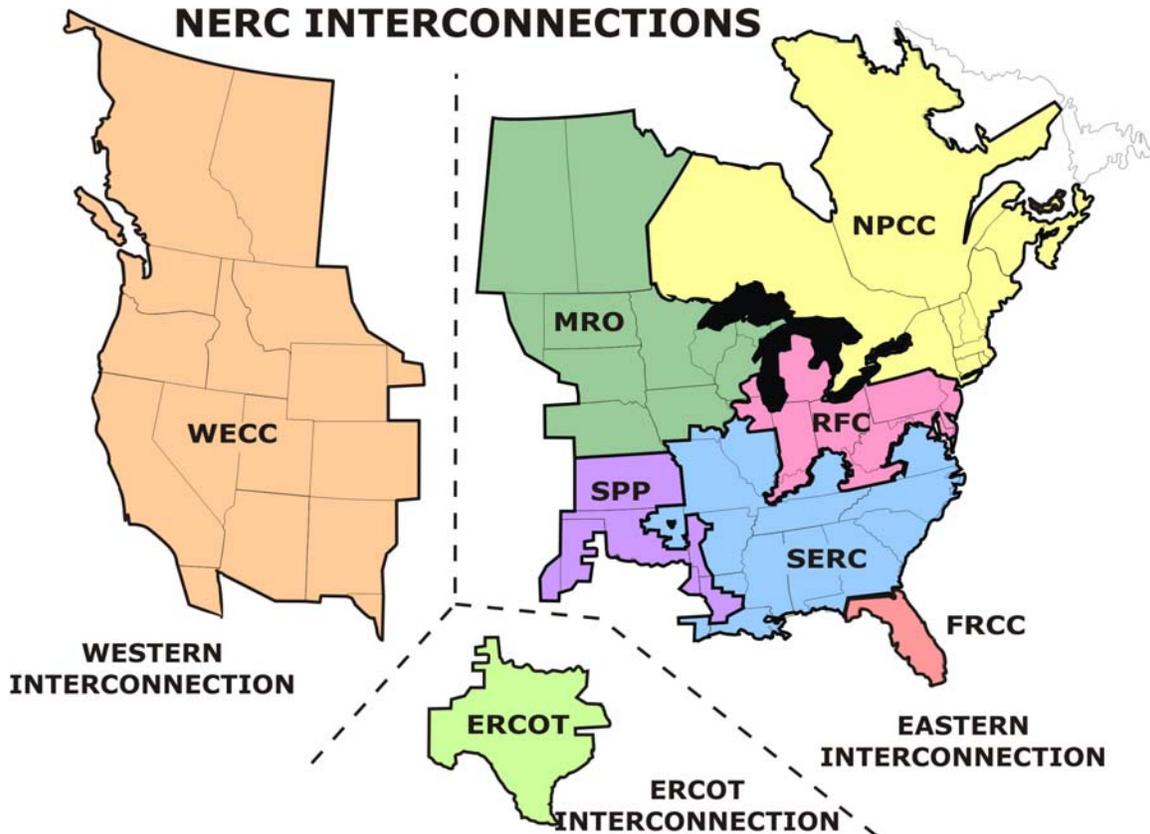
Paul Malone	-	Nebraska Public Power District (NPPD)
Dan Dahlgren	-	Omaha Public Power District (OPPD)
John Krajewski	-	Nebraska Municipal Power Pool Energy (NMPP)
Bruce Merrill	-	Lincoln Electric System (LES)
Lloyd Linke	-	Western Area Power Administration (WAPA)

## **3. Energy Policy Act of 2005**

Since the enactment of the Energy Policy Act of 2005, which reaffirmed a commitment to competition in wholesale power markets as national policy, the Federal Energy Regulatory Commission (FERC) has been extremely busy carrying out the new responsibilities and authorities assigned to the Commission in the Energy Policy Act. In the last year FERC has completed nine final rulemakings, issued three additional notices of proposed rulemakings and submitted seven reports to Congress as required to meet the deadlines specified in the Energy Policy Act. With respect to the issues that effect transmission access, FERC is no longer pursuing any mandatory participation by utilities in a FERC approved Regional Transmission Organization (RTO). Instead, FERC has turned its attention to revising its Open Access Transmission Tariff policies, which were first established in 1996 under FERC Order 888. FERC claims further revisions are needed to prevent remaining discriminatory practices concerning access to the transmission system by customers competing in the wholesale electric markets. In addition, FERC intends to require jurisdictional utilities to participate in an open transmission planning process so that all interested parties can participate.

The other major rulemaking that FERC has undertaken that relates directly to the transmission system is to approve the North American Electric Reliability Council (NERC) as the nation’s Electric Reliability Organization. In the coming months FERC will issue a rulemaking to approve over 120 reliability standards that NERC has proposed. When approved by FERC, these reliability standards will become mandatory for all owners, operators and users of the bulk electric power system. This effort as required by the Energy Policy Act is a response to the blackout of 2003 that affected millions of customers in the Northeast and Midwest. Reliance on compliance to voluntary standards was determined to be one of the causes of the blackout. Thus, FERC will now have the authority to mandate compliance and issue significant financial penalties to entities that are found non-compliant with the reliability standards. This rulemaking will be just the start of an on-going process to establish additional reliability standards and periodically review existing standards to ensure the standards represent the best practices to maintain the reliability of the nation’s bulk power system. Compliance with the reliability standards will be monitored by Regional Entities (REs), a defined term in the Energy Policy Act, who must have a delegation agreement with NERC and must be certified by FERC to carryout those functions for a specific region. It is expected that the existing NERC Regional Reliability Councils will all be certified by FERC

as REs. The Midwest Reliability Organization (MRO) is one of the eight Regional Reliability Councils in North America. NPPD, OPPD, LES, MEAN, and Hastings are members of the MRO. Pictured below is a map showing the three Electric Interconnections in North American and NERC Regional Reliability Councils.

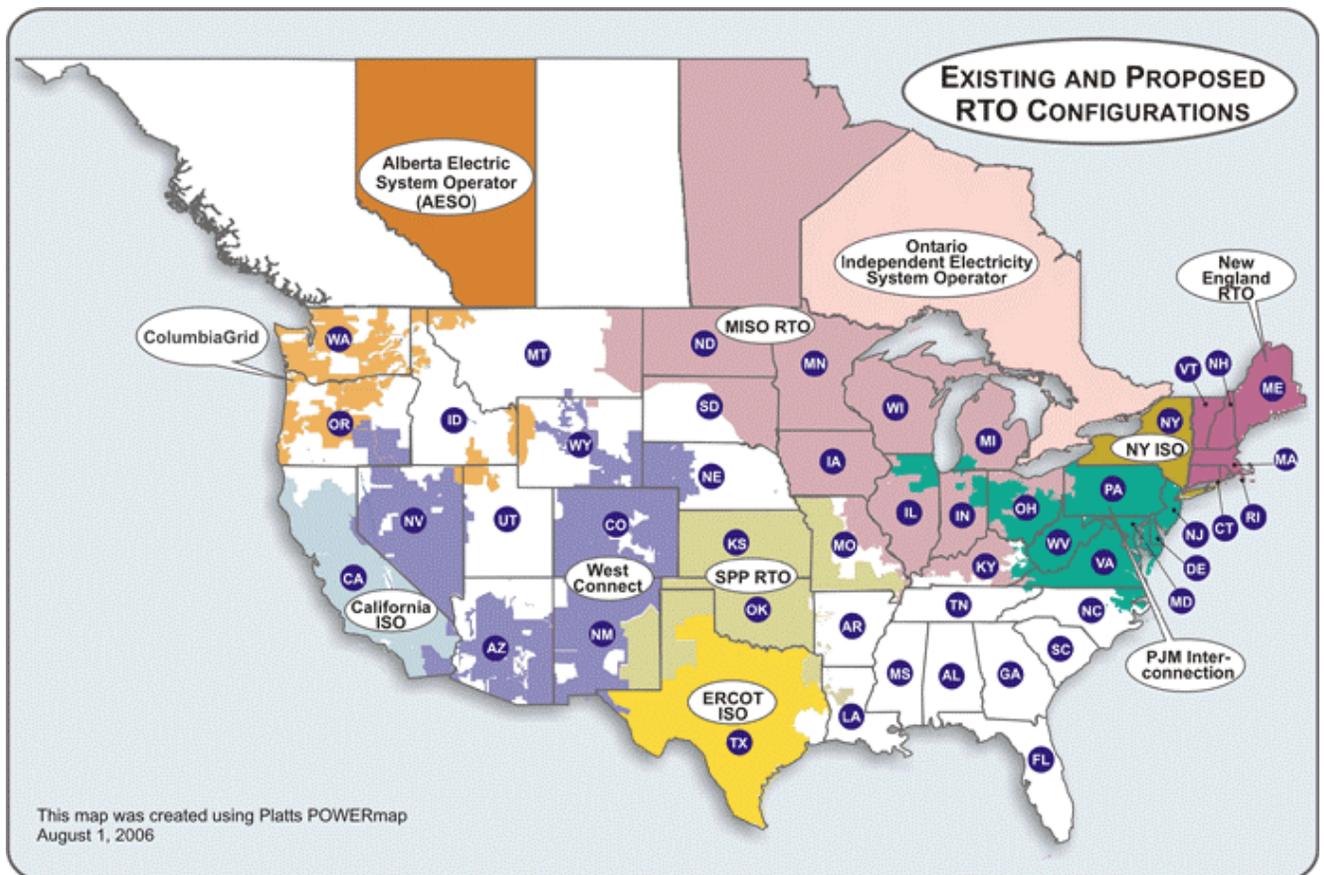


#### 4. Roles and Responsibilities of Regional Transmission Entities

To avoid confusion about what is meant by the term “regional transmission organization” it is important to spend some time discussing the functions performed so as to distinguish between the roles and responsibilities of the various organizations. There are three basic types of regional organizations, those that provide transmission service, those that monitor compliance with reliability standards (as described in Section 2 above), and those that provide marketing functions. For purposes of this report the generic term “regional transmission organization” will be used to refer to any organization that provides regional transmission service. FERC has created many defined terms over the years concerning regional transmission organizations, starting with Regional Transmission Groups (RTGs), Independent System Operators (ISOs), and Regional Transmission Organizations (RTOs). Generally, there has been a progression from RTGs first defined after the Energy Policy Act of 1992, then the term ISO in FERC Order 888 in 1996, and finally the term RTO in FERC Order 2000, issued in 1999. With each new defined term, FERC has given more authority to the regional transmission organization and required the utilities that join to relinquish decision making authority concerning transmission service and planning activities. Utilities

that join a RTO must turn over operational control of their transmission system to the RTO and must take service for all of their native load under the RTO tariff, basically eliminating their own transmission tariff. The picture below (which is posted on the FERC website-[www.ferc.gov](http://www.ferc.gov)) shows the geographic footprint of the entities that FERC has approved as RTOs or are proposed RTOs. To date, FERC has approved New England, New York, PJM, the Midwest ISO (MISO), SPP and the California ISO as RTOs. ERCOT is not subject to FERC jurisdiction, and obviously neither are the Canadian entities. West Connect and Grid West are still in the formation stage. On the map, West Connect is shown as including portions of western Nebraska. The area represented is partially served by Tri-State G&T Cooperative, headquartered in Colorado. Only those facilities and customers located in Nebraska that are served by facilities that are electrically part of the Western Interconnection could become part of the proposed West Connect.

One other point to note is that the geographic boundaries of the RTOs and the Regional Reliability Councils shown in the picture above are not the same, which can give rise to complications in operating the transmission system. In any case, both RTOs and Regional Reliability Councils are under the jurisdiction of FERC.

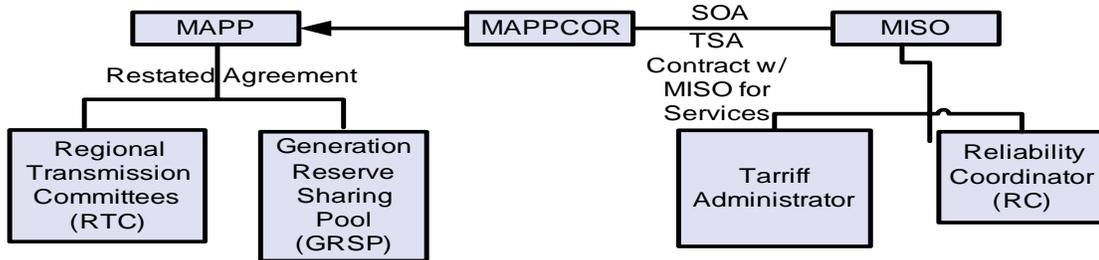


### 5. Status of the Mid-Continent Area Power Pool (MAPP)

As described in more detail in the previous year's report, the MAPP organization has undergone a number of changes in recent years by removing both the energy marketing and Regional Reliability Council functions from its governing document, the MAPP Restated

Agreement, into new stand-alone organizations independent from MAPP with their own governing agreements. The new independent organizations are the Mid-Continent Area Marketers Association (MEMA) and the MRO. The remaining functions governed by the MAPP Restated Agreement are the Regional Transmission Committee (RTC) and the Generation Reserve Sharing Pool (GRSP). MAPP is a FERC approved RTG that provides regional transmission service under its tariff known as Schedule F for up to one year of service, and has a regional transmission planning process open to all interested parties. NPPD, OPPD, LES, MEAN and Hastings are MAPP members. Shown below is a depiction of the MAPP organizational structure.

### Current MAPP Organization



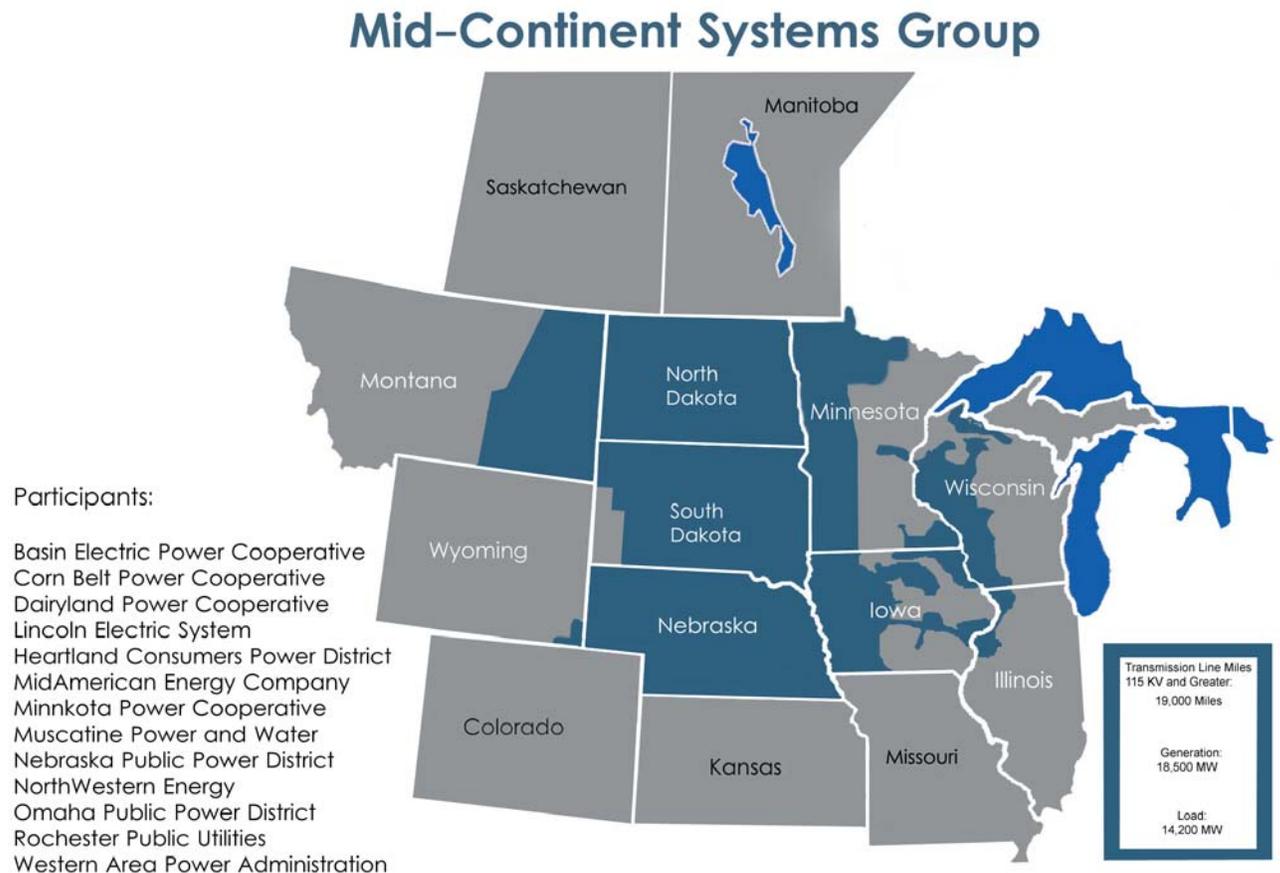
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MAPP is an association of members, whereas MAPPCOR is the legal entity organized as a non-profit corporation. In 2002, MAPP sold off its assets to the Midwest ISO, and most of the staff left or became employees of the Midwest ISO, concurrently when approximately one-half of the members left to join the Midwest ISO. A Transmission Services Agreement (TSA) was executed to provide tariff administration services and reliability coordination services to the remaining MAPP members. The issue facing the MAPP members is that the TSA terminates in February 2008, and the members must find an alternative arrangement for those services.

To that end the transmission owning members of the MAPP executed a Memorandum of Understanding in January 2006 to develop a Transmission Service Coordinator (TSC) to provide transmission tariff administration services, and is exploring the feasibility of a new regional transmission tariff. A TSC is a new type of transmission entity that has been accepted by FERC to provide tariff administration services for a single utility. Most recently, MidAmerican Energy, an Iowa based utility that is a MAPP member, turned over administration of its transmission tariff to TranServ, a new corporation created for that purpose that is independent of MidAmerican and any other market interest. The significant difference between a TSC and a RTO is that participation in a RTO requires utilities to turn over operational control of their transmission system to the RTO and to take tariff service for all of its native load customers under the RTO tariff, whereas participation in a TSC does not.

The TSC Participants believe the TSC concept for a regional transmission organization is much more suitable for the primarily public power utilities in the MAPP region. NPPD, OPPD and LES are participating in the effort to determine if a TSC can provide tariff administration service for the 13 remaining transmission-owning members of MAPP. This effort will require a vote by the MAPP members to approve necessary changes to the MAPP Restated Agreement and approval by FERC, but it is believed the TSC will result in a viable and strong regional transmission organization with adequate dedicated staff to represent the interests of the TSC Participants. The TSC will need to be operational by February 2008.

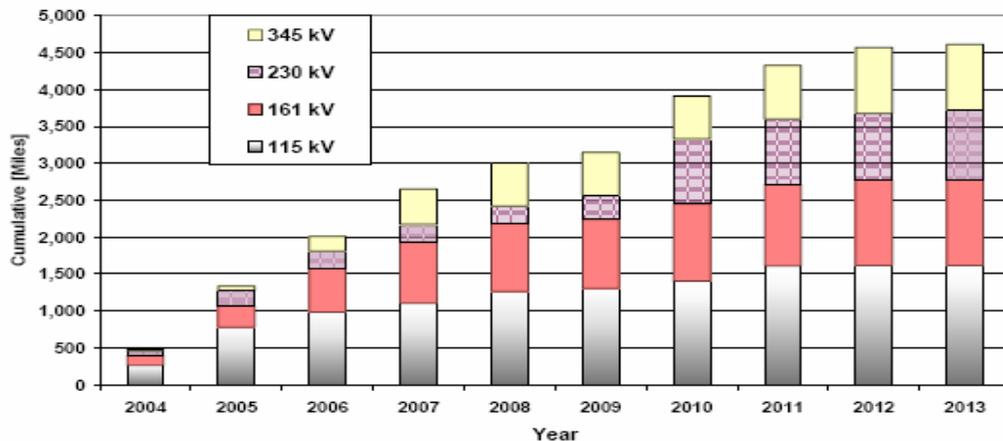
While it is much smaller geographically than it was four years ago when a number of utility members left to join the Midwest ISO, the remaining utilities and the geographic footprint they serve still constitute a viable region with over 19,000 miles of transmission lines and 18,500 MW of generation serving 14,200 MW of load. The TSC Participants have chosen the name of Mid-Continent Systems Group (MCSG) to distinguish it from MAPP. Shown below is the geographic footprint of the MCSG.



## 6. Transmission System Adequacy

Concerning the question of adequate transmission in Nebraska or in the region, the utilities in Nebraska are in the process of significantly expanding the transmission system in Nebraska due to load growth and the addition of large new generation facilities. A Nebraska Sub regional Transmission Plan was published in August 2006 identifying all of the specific transmission additions that are planned for the 2006 – 2015 time period. The Nebraska Sub

regional Plan, along with other Sub regional Plans for the MAPP region will be rolled up into a comprehensive 10 year Transmission Plan for the MAPP region, which will be published by the end of 2006. Elsewhere in the MAPP region, plans have been announced for significant additional transmission facilities. Shown below is a chart from the 2004 MAPP Regional Transmission Plan which depicts the incremental additions (over and above the existing transmission lines) that are planned for the MAPP region in the coming years.



**Figure 2.1-1 Cumulative New and Upgraded Transmission Lines [Miles]**

It has been well documented that investment and expansion of the nation’s transmission system has languished for the last decade and has not kept pace with increased load growth and generation additions. That trend appears to be changing as transmission expansion plans are being announced across the region and the country on a regular basis. While this is a positive sign, it will take a number of years before transmission expansion will catch up. In the meantime, transmission congestion will continue to be problematic when trying to make wholesale market transactions that cross regions. To manage transmission congestion and better coordinate transmission service approvals MAPP and the Midwest ISO implemented a Seams Operating Agreement (SOA) that includes a technically complex congestion management process. This same process is being used by other regions, including the PJM, TVA, and SPP regions. All five regions have established this reciprocal congestion management process to coordinate the seams issues between the regions.

## 7. Conclusions

In summary, MAPP does currently serve Nebraska utilities as a viable regional transmission organization. Its continued viability beyond 2008 is uncertain, but a new organization, MCSG, is under development to replace MAPP as the regional transmission organization.

Adequate transmission exists in Nebraska to deliver the output of Nebraska generation resources to the customers in Nebraska, and while the prospect for regional transmission expansion is improving, there is not adequate transmission in the region at this time to make all of the wholesale market transactions that are sought by utilities and marketers.