
MISO / SPP Analysis and Participation Recommendation

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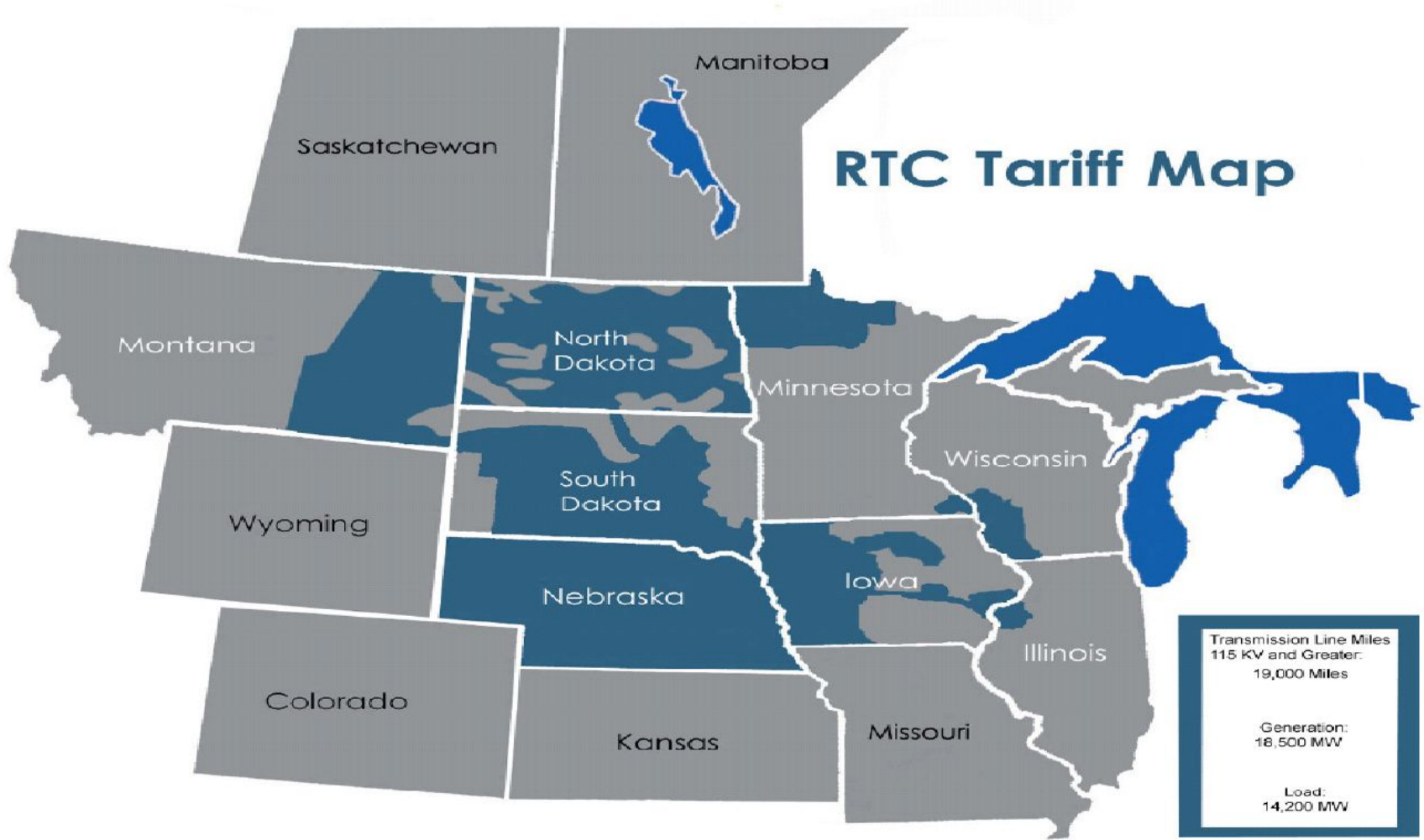
Nebraska Public Power District

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NPPD & MAPP

- **Mid-Continent Area Power Pool (MAPP)**
 - Formally created in 1972 from predecessor organizations
 - NPPD a charter member of MAPP
 - At its peak, MAPP had members over 8 states with 35,000 MW of load
 - In 2002 assets sold to MISO and ½ of members joined MISO
 - Seams Operating Agreement entered into between MISO and remaining MAPP members

Post MISO Sale MAPP Footprint



Background - Timeline

■ July 2007

- MISO gave notice to terminate the existing Seams Operating Agreement with MAPP effective 1/31/08
- MISO offered MAPP Members three options for services and seams management
 - **Part 1** - Reliability Coordination Service
 - **Part 2** - Seams management protocols with generation redispatch
 - **Part 3** - Participation in MISO Markets but NPPD would retain its T-2 Transmission Tariff
- Only about 15,000 MW of load remained in MAPP of the original 35,000 MW

Background – Timeline (Cont'd)

■ September – October 2007

- Enlisted Customized Energy Solutions (CES) to provide Locational Marginal Pricing (LMP) Analysis in MISO (Most MAPP Members)
- Enlisted New Energy Associates (NEA) along with TEA to provide Production Model analysis of 3 MISO options and 2 SPP options
 - Full Membership
 - Contract Services

Background – Timeline (Cont'd)

■ November 2007

- Performed Multiple Scenario Analyses and Quality Assurance processes to ensure data accuracy
- Studied 2008, 2009, 2010 and 2017
- Encouraged OPPD and LES to study SPP options
- Achieved alignment from Nebraska Utilities on the future direction of RTO membership

SPP / MISO Analysis

■ Modeling Results

- All years studied showed SPP to be better economically than MISO or stand alone options
- Transmission expansion to Kansas results in additional economic and reliability benefits
 - Axtell to Spearville 345kV Line

SPP / MISO Analysis (Cont'd)

- **Drivers of Benefits to SPP**
 - Higher off-peak market pricing
 - Lower administrative costs
- **Other Economic Benefits to SPP**
 - SPP transmission revenue sharing
 - Reduced Planning and Operating Reserves
 - Reduction of risk associated with transmission congestion and losses

SPP / MISO Analysis (Cont'd)

■ Qualitative Issues

FERC Jurisdiction Corporate Governance

Board Policy Seams Agreement

Customer Impact Legal Requirements

NPPD Transmission Tariff Generator Dispatch

Participation Options - SPP

- Full Membership Agreement
- Contract Services approach

Recommendation

- **Join SPP under a Full Membership Agreement**

How's It Going?

- Cut-over to SPP went relatively well on April 1st
- Steep learning curve for Nebraska companies as we deal with new people, policies and processes in SPP
- Recent SPP initiatives such as Priority Projects, Highway/byway rate design have created immense debate within SPP and concern by the Nebraska companies

Questions?