

U.S. Department of Energy National Electric Transmission Congestion Study Workshop

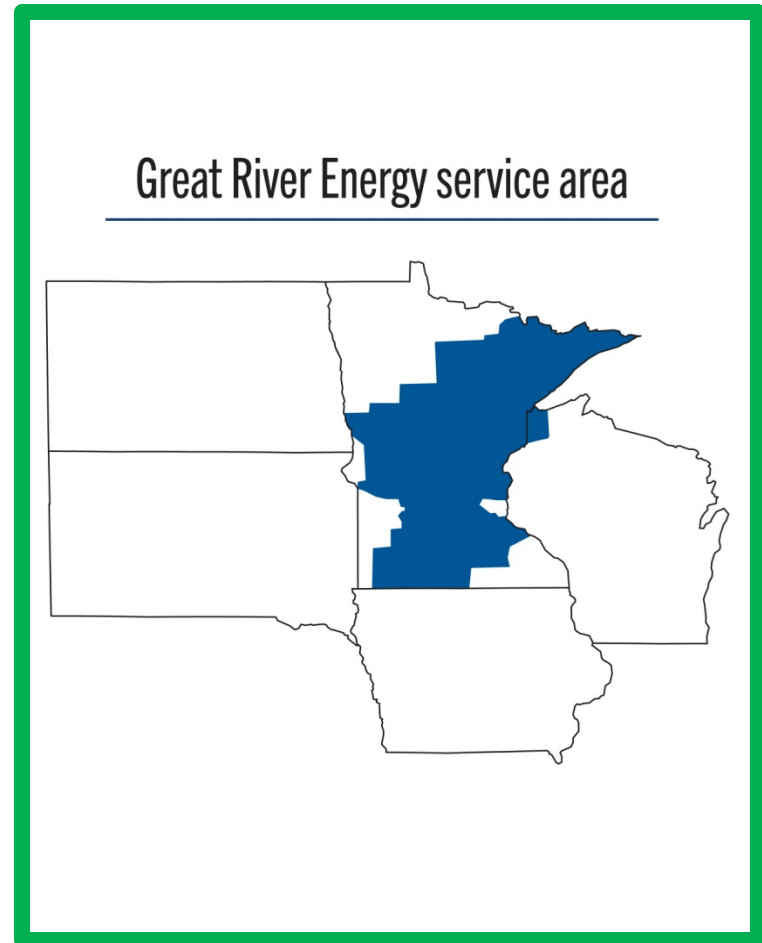
St. Louis, MO
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Panel II – Industry
Laureen L. Ross McCalib
Great River Energy



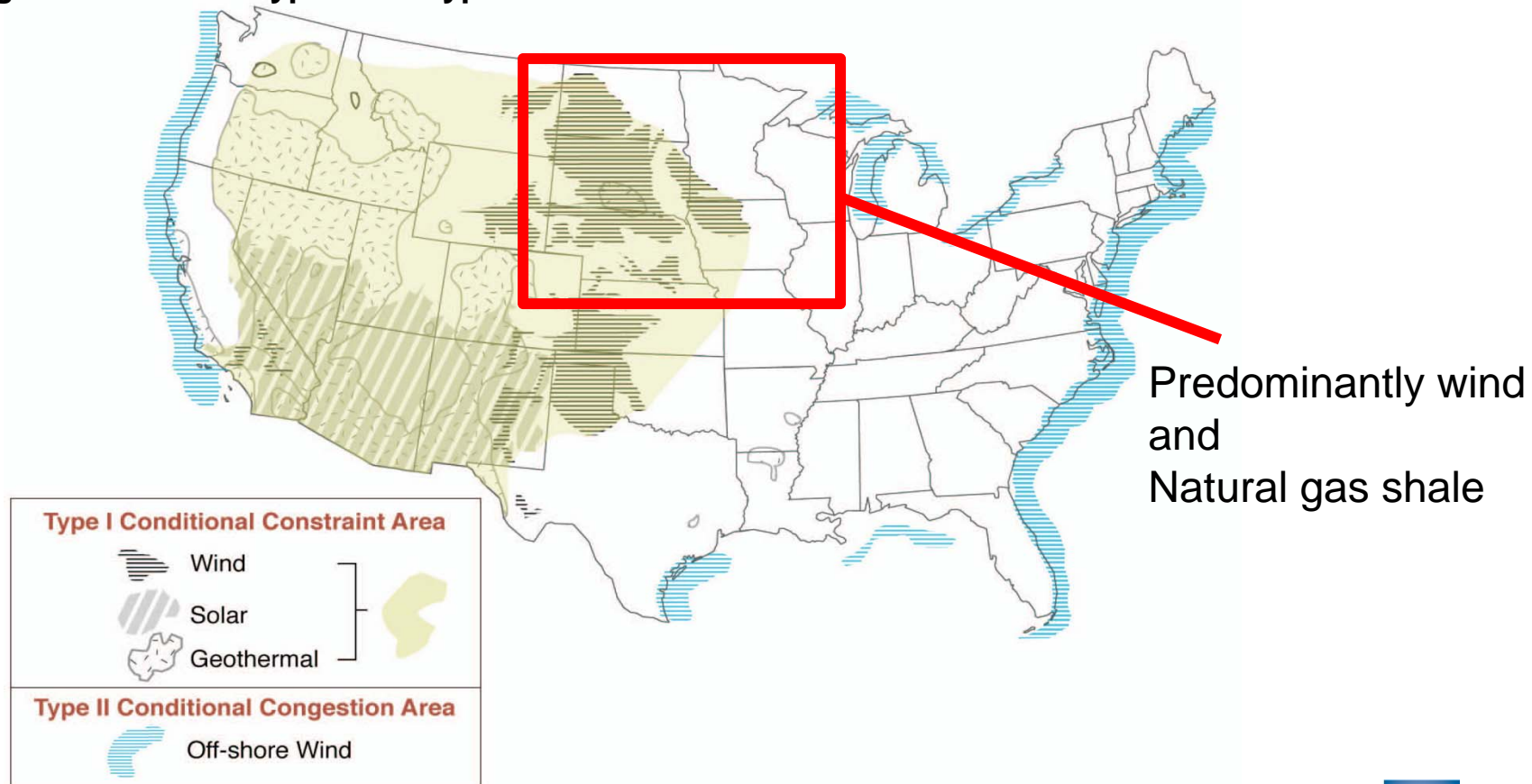
Great River Energy

- Not-for-profit electric cooperative
- 28 members
- 3,400 MW of capacity
- 14,300,000 MWH sales
- 4,500 miles of transmission
- \$3.3 billion in assets
- 850 employees



Conditional Constraint Areas

National Electric Transmission Congestion Study 2009
Figure ES-1. 2009 Type I and Type II Conditional Constraint Areas



CapX2020 Transmission Facilities



Nearly 700 miles and \$1.9 billion of 345 and 230 kV lines

- Alleviates emerging community service reliability around the state
- Critical foundation for future transmission and generation
- Provides needed transmission capacity to support new generation outlet
- In-service dates from 2012 - 2015

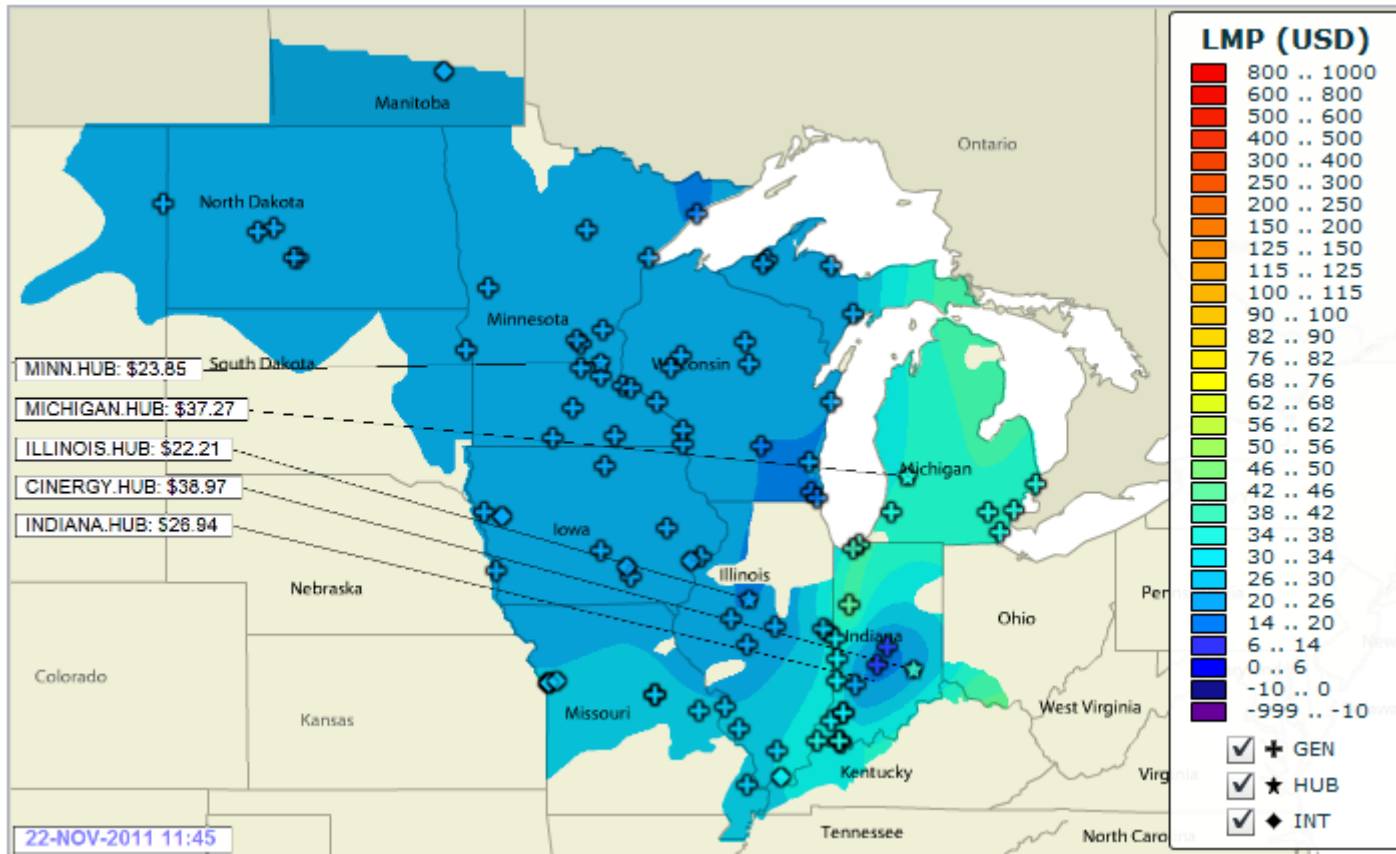


Congestion in the Midwest

- Energy flows from west to east
 - Low cost generation in the west
 - Load in the east
- CapX2020 and MISO CMVP transmission projects will alleviate congestion while adding reliability
- Additional renewable energy transfer dependent upon national policy, appetite for EHV transmission facilities
- Regional planning approach is working in MISO

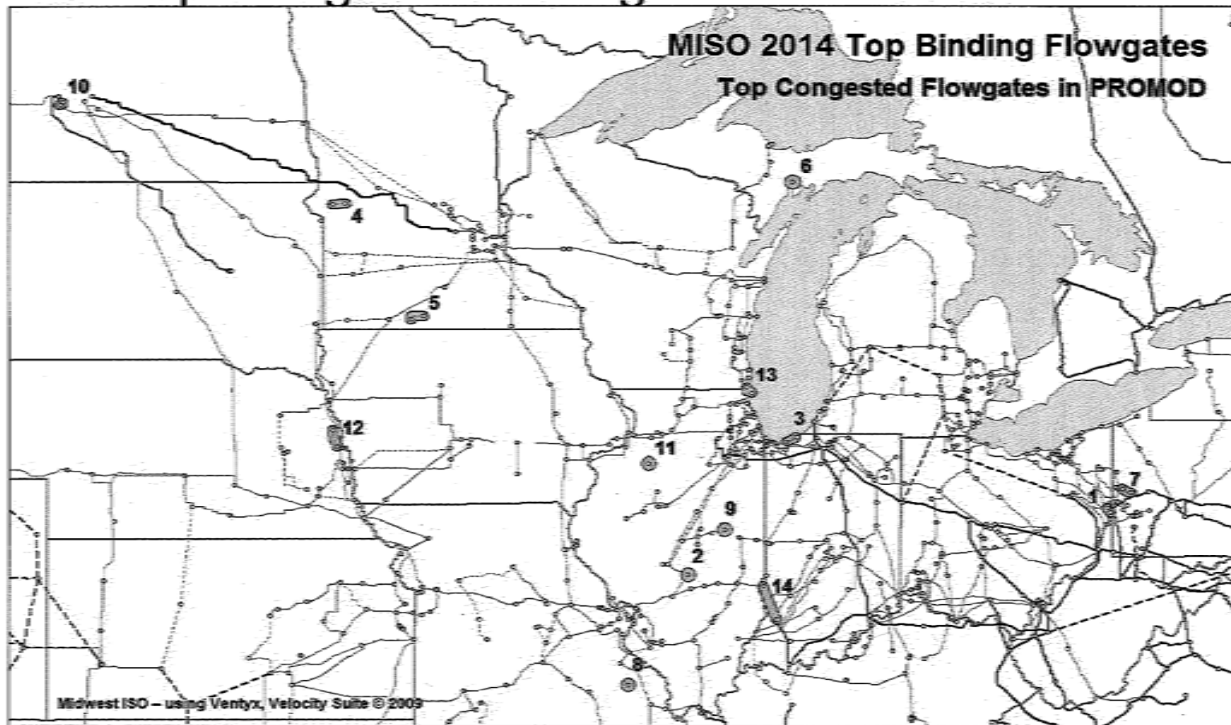


MISO Pricing Map



MISO Top Congested Flowgate Study

Top Congested Flowgates from PROMOD



Data Sources

Data sources to identify congestion in the Midwest

- MISO LMP's
- MISO Top Congested Flowgate Study
- MISO MTEP and CMVPs
- Interconnection and queue requests
- NREL Studies: JCSP, EWITS, ERGIS
- EPA Requirement evaluations: MISO, NERC
- MISO / WAPA Seam
- EIPC: consider generation plans to identify where transmission will be needed

Thank you

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