

Applicants' Witness Peter Koegel

Project Manager
MAPPCOR

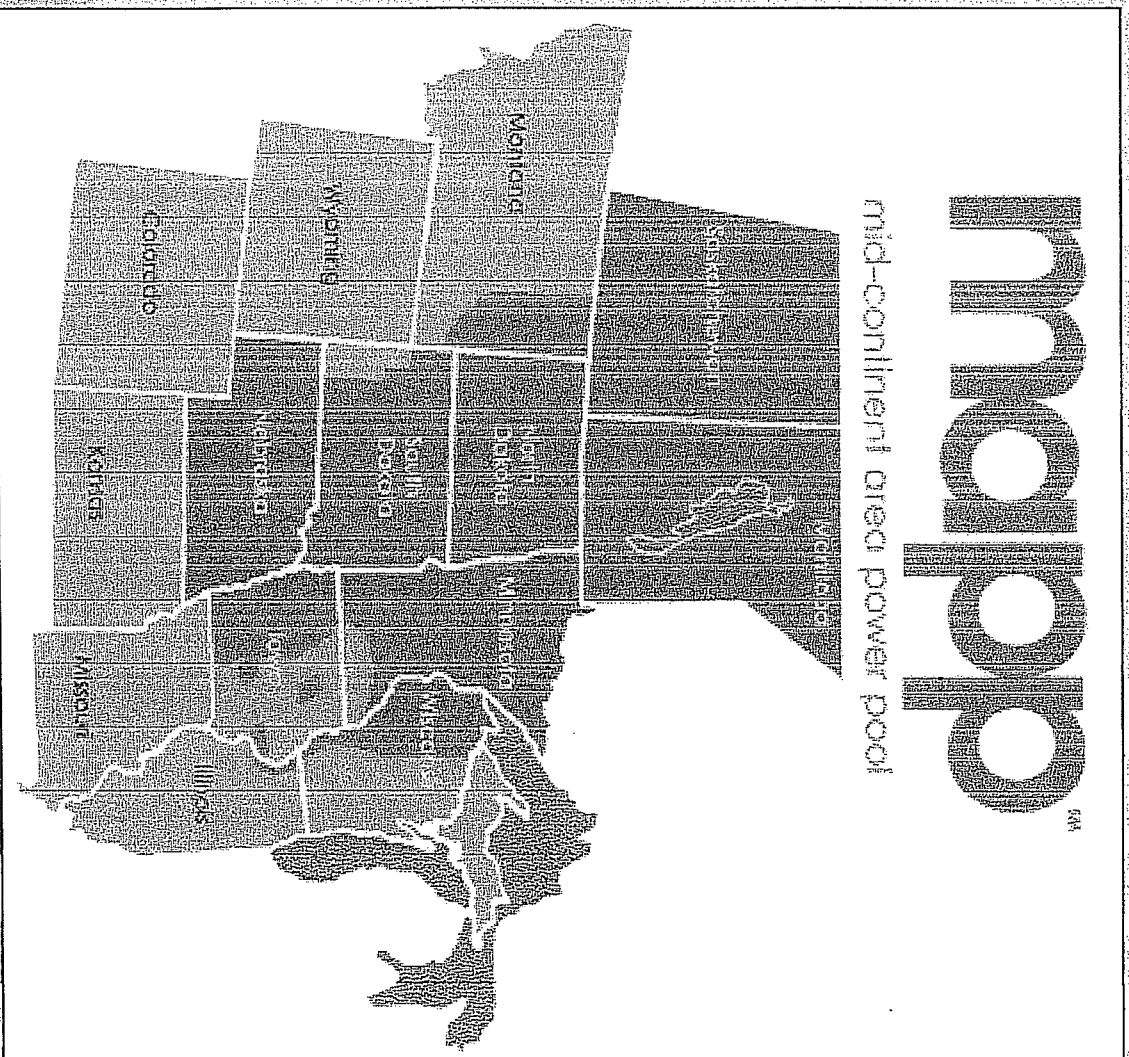
Summary

Applicants' Exhibits 9 and 50

Overview

- MAPP is an association of electric utilities and other electric industry participants
 - ▣ Members in seven states and two Canadian provinces
 - ▣ Service area of 1 million square miles
 - ▣ Primary focus is system reliability
 - ▣ MAPPCOR is a contractor service organization to MAPP
- MAPP has a minimum installed Generation Reserve Obligation of 15% of each member's peak demand
 - ▣ Ensures adequate installed generation for reliability
 - ▣ Reserves are shared between member utilities to lower costs
 - ▣ MAPP audits after-the-fact for compliance

Overview (continued)

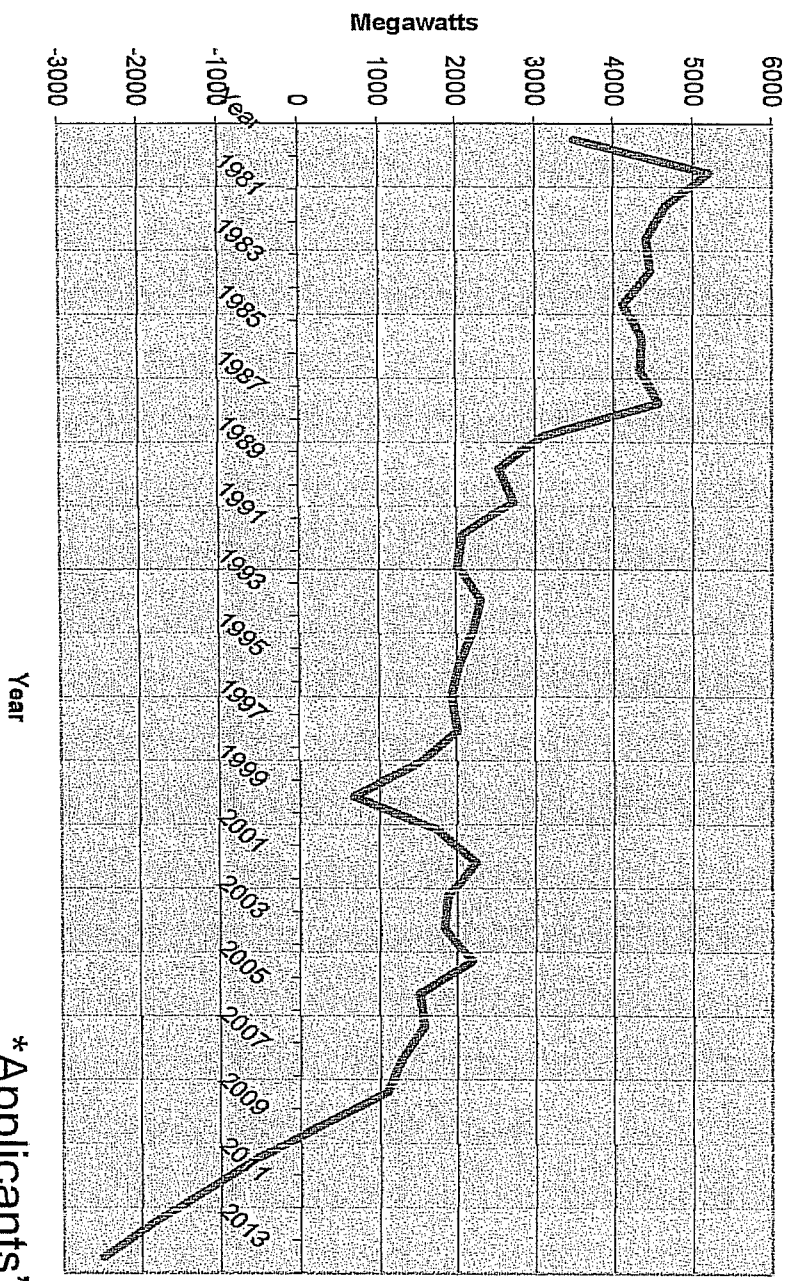


MAPP Capacity Outlook

- Based on 15% minimum reserves:
 - MAPP-US:
 - Will go capacity-deficit in summer seasons without the 600 MW, Big Stone Unit II
 - Over 800 MW deficit in 2011, and 2,400 MW by 2014
 - All capacity reserves in summer season 2011 and winter season 2011/2012 will be natural gas- and oil-fired
 - Why will deficits occur?
 - Continued customer load growth, and few planned generation additions
 - MAPP-Canada shows capacity surpluses in 2011, but availability for purchase is subject to transmission availability and economics

MAPP Capacity Outlook* (continued)

MAPP-U.S. Reserve Margins without Big Stone Unit II
1980-2005 Actuals
2006-2014 Projected



Surplus Above
Reserve Obligation

*Applicants' Exhibit 50-A

Capacity Reserves

- Several reasons why a utility may want to maintain installed reserves greater than 15% in any particular year:
 - ▮ Risk of weather uncertainty on actual peak demands
 - ▮ Adjustment in fuel mix
 - ▮ New generation additions may need to serve several years of load growth
- Nearly all new generating capacity installed in MAPP since the late 1980s has been fueled by oil or natural gas.
 - ▮ Some coal units now being proposed, starting in 2006 to 2009 time frame.

Accrediting Wind Capacity

- MAPP accredits monthly capacity value to wind energy
 - Based on actual wind machine performance in its wind regime, correlated in time to the utility's peak demand periods.
- Nominal accredited wind capacity values observed by MAPP.*
 - 5% to 20% in the summer season
 - 10% to 35% in the winter season

*Accredited capacity value/nameplate installed capacity