

Applicants' Witness Peter Koegel

Project Manager
MAPPCOR

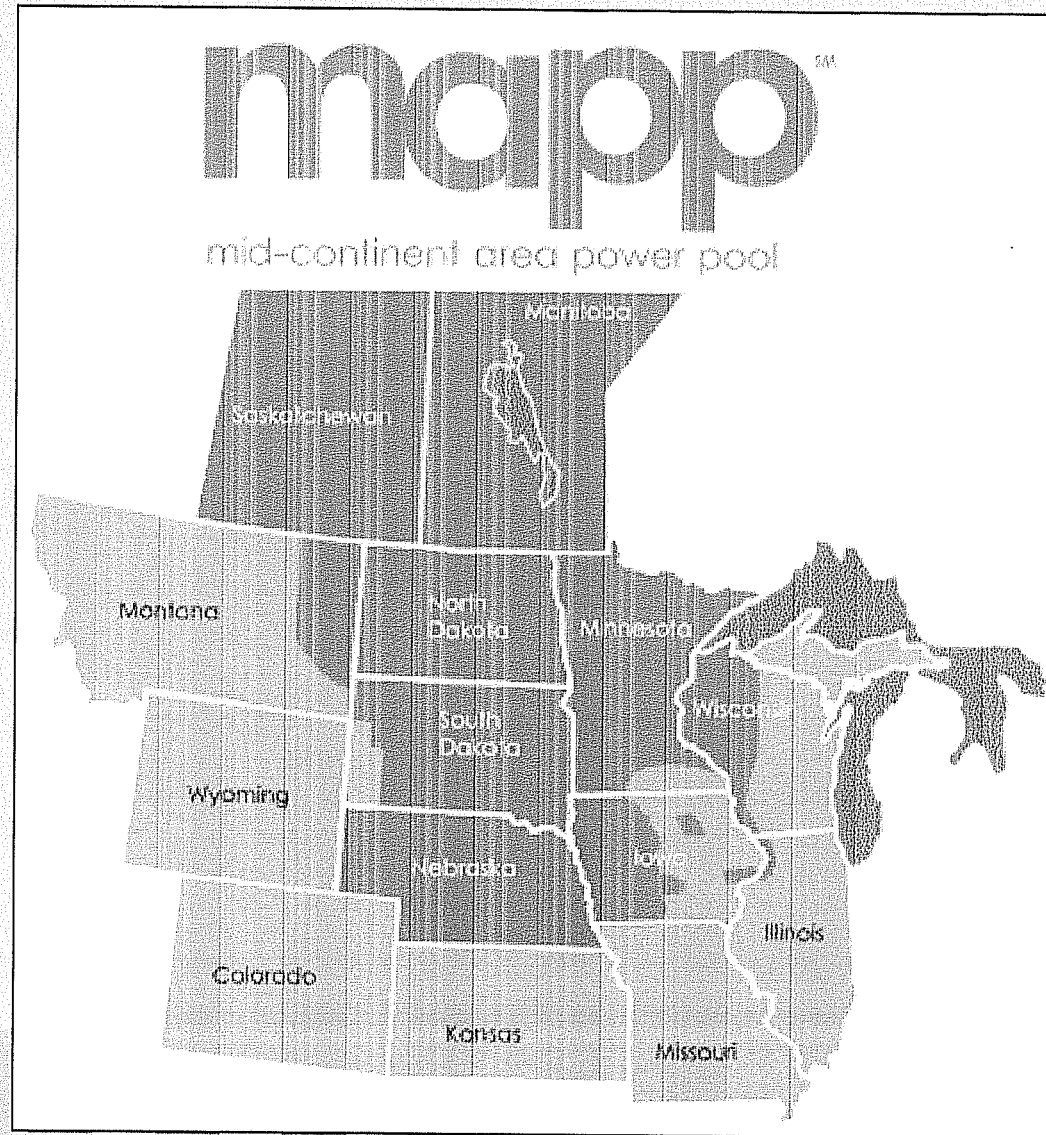
Summary

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

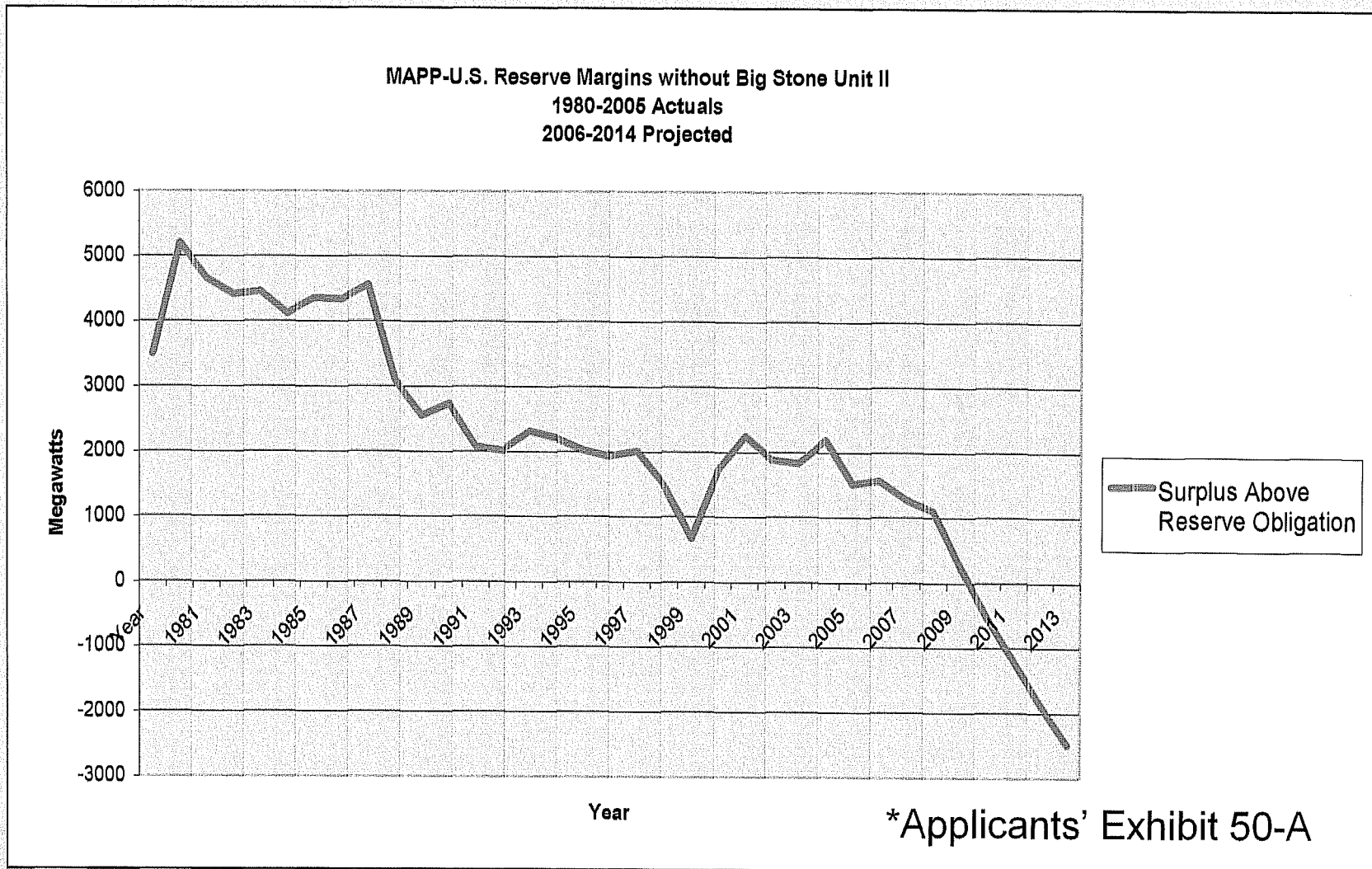
Overview (continued)



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)



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