

A Snapshot of MISO

Western Transmission Web Conference

April 20, 2004

Richard Sedano



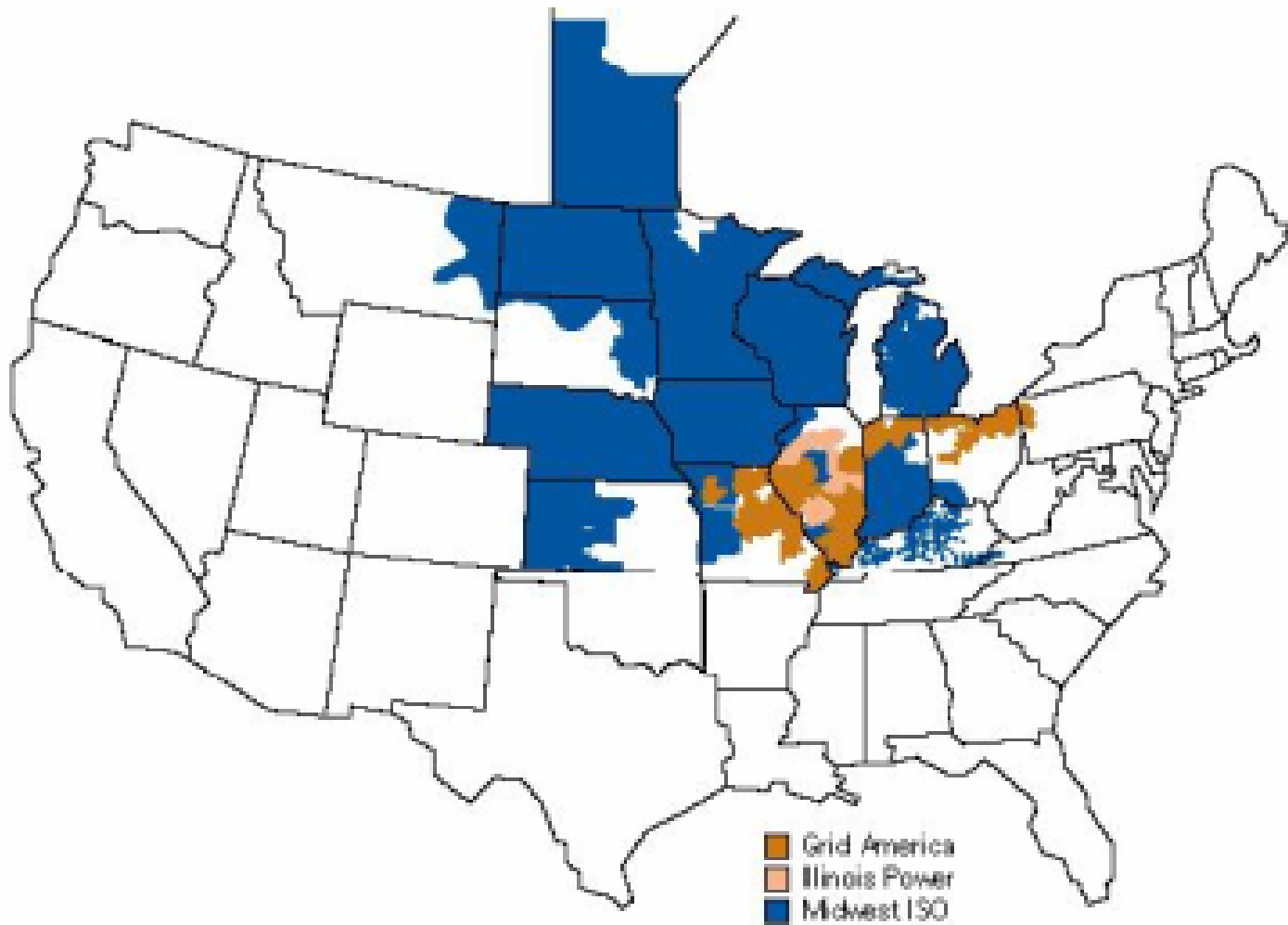
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MISO





MISO Data

- 15 states
- Over 30 control areas
- 110,000 MW peak load (incl. applicants)
- 122,000 MW generation (“
- 16,500,000 customers (“

MISO is the “reliability coordinator”

Control area operators (utilities) remain
“responsible” for reliability



Evolution from Control Areas

- MISO territory has no history of joint operation
 - ❖ Unlike tight pools of Northeast
 - ❖ Utilities historically operate control areas
 - ❖ Geographic discontinuities (Holes. Seams.)
- 2003 Blackout a symptom of evolutionary challenge
- Objective: **Real time** and **Day ahead** markets with demand resources (2007)

Focus on Two Western Regions

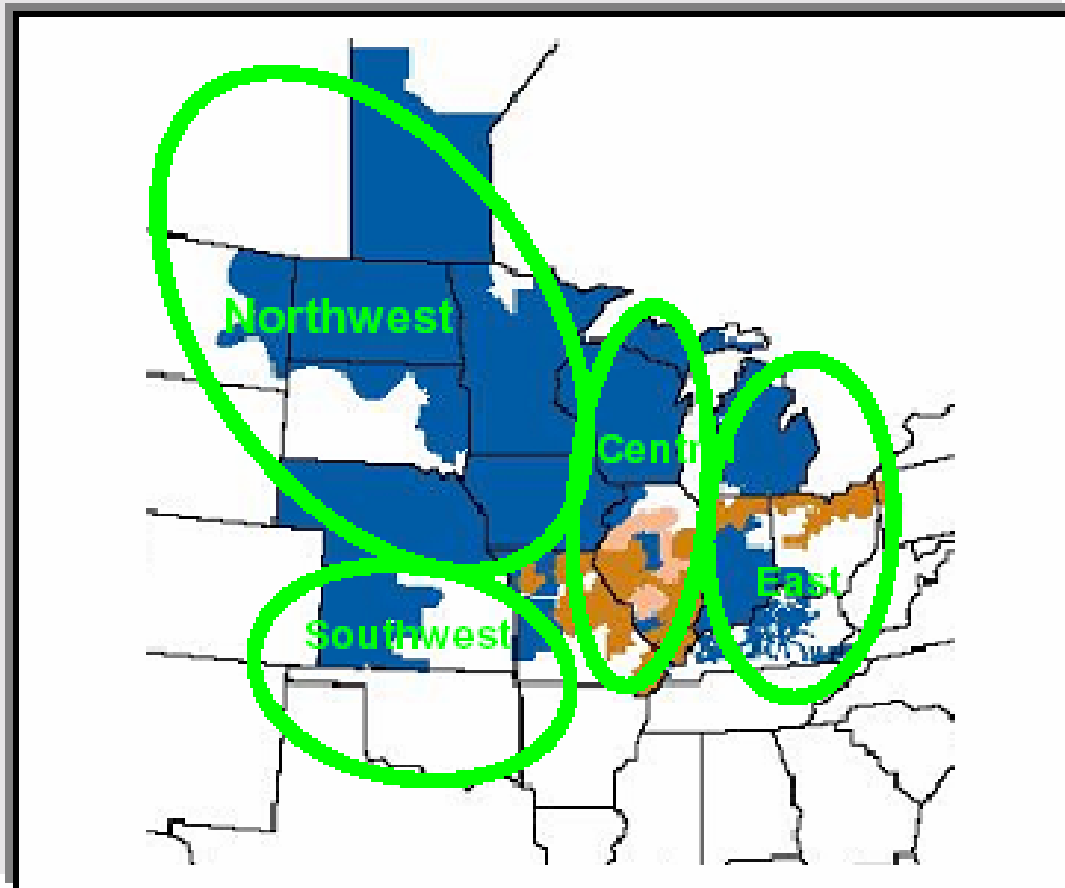
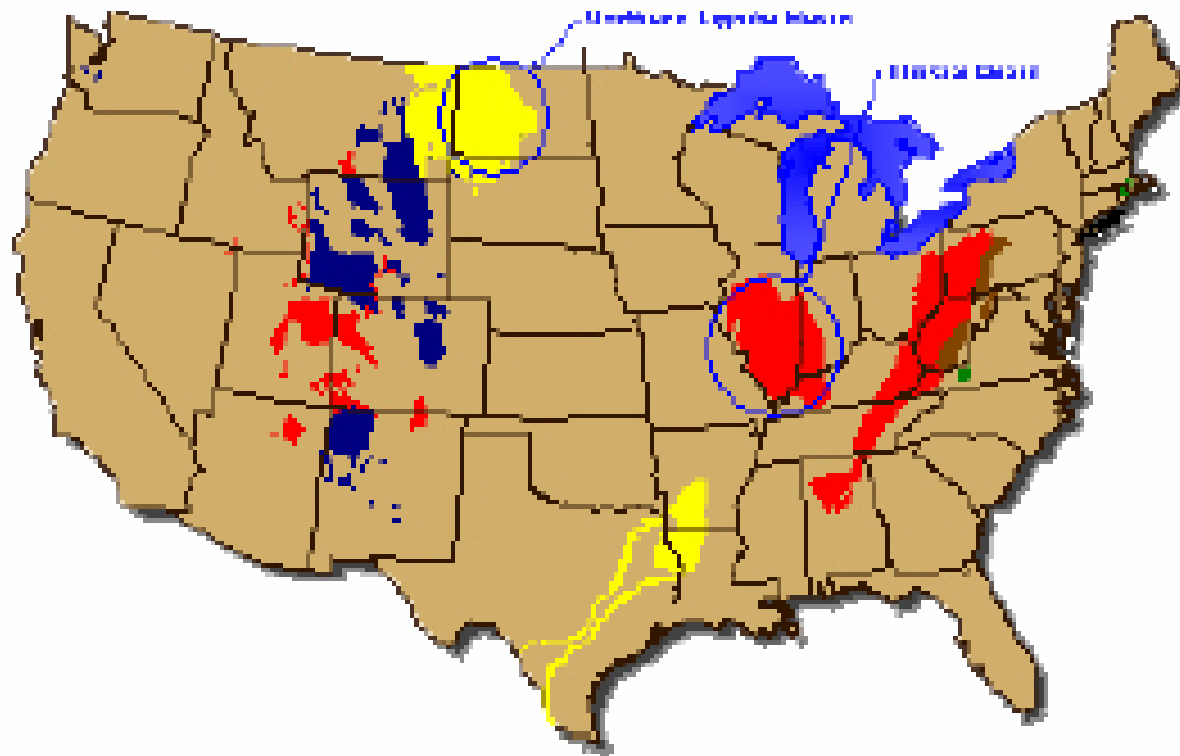


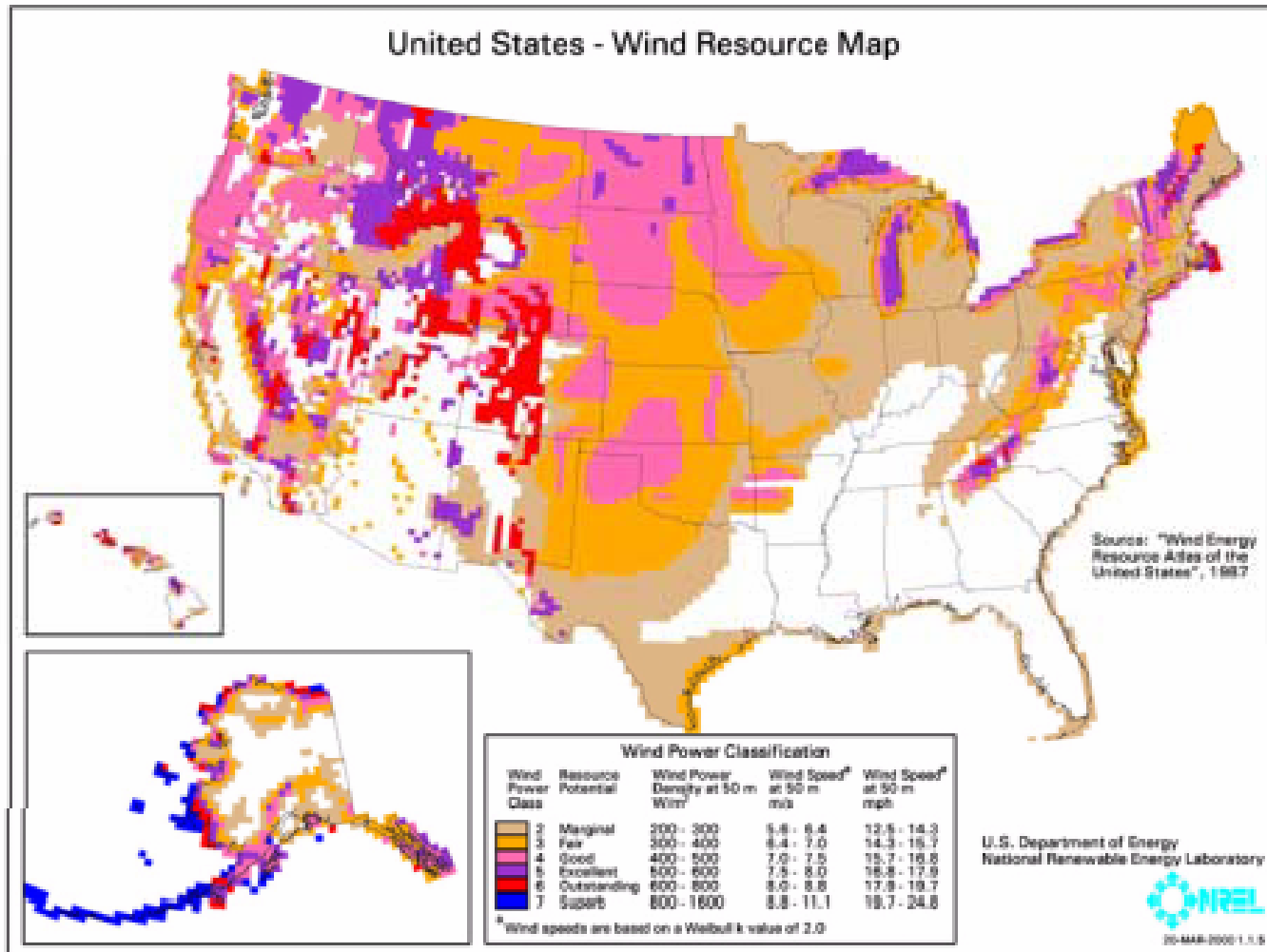
Figure 4.1-2. Planning Regions in MISO

Economic Resources in MISO



Major Coal Basins of the U.S.

Economic Resources in MISO





First Transmission Plan

➤ MTEP – 03

❖ Reliability

- ◆ MORE DETAILED ASSESSMENT FOR MTEP-04

❖ Congestion

- ◆ 19 NODES OF SIGNIFICANT CONGESTION

❖ Resources, forward looking commercial projects

- ◆ WIND
- ◆ COAL

❖ Projects

- ◆ RELIABILITY BASED
- ◆ COMMERCIAL INTEREST



Future Transmission Planning

- MTEP – 04 in June
- More integration and synthesis by MISO of utility plans
- Implementing lessons of Blackout
- Maturing of Markets
- Maturing of Organization of MISO States (OMS)