



# UWIG Annual Meeting

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*Wind Integration:*

*Focus on System Operation*

Minneapolis, MN

April 11-13, 2005



# UWIG – Meeting Overview

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- ◆ System Operations – So You Want To Be a Balancing Authority
- ◆ System Interconnection: Reactive Power Support and Low Voltage Ride-through
- ◆ Regional Wind Project Developments
  - Transmission Considerations
  - Community Wind Energy
  - Large Wind Plants
- ◆ User Group meetings
- ◆ Annual Meeting and Utility Roundtable
- ◆ McNeilus Wind Farm Site Visit



# Recent Industry Developments

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- ◆ PTC extended to end of 2005
- ◆ Kyoto Protocol takes effect without US
- ◆ 73,000 MW coal on the drawing boards
- ◆ State RPS legislation continues to expand
- ◆ With increasing oil and natural gas prices, wind energy often least cost option
- ◆ Further consolidation in the industry
- ◆ UWIG expanding scope and membership, and pursuing strong technical agenda with 4 UGs



# Wind Industry Is Maturing

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- ◆ Number and size of wind plants growing
- ◆ ISOs are taking note
- ◆ Domestic Activities
  - FERC TCs and Order 2003A
  - NERC Wind Task Force
  - AWEA Transmission Comm.
  - UWIG Modeling User Group
- ◆ International Activities
  - National Grid Codes
  - IEC and CIGRE Activities
- ◆ Application of Traditional Power System Engineering Disciplines to Interconnection and Integration Studies



# Significant Current Events

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- ◆ Dec 1- FERC Technical Conference on policy changes necessary to better accommodate wind energy in wholesale markets
- ◆ March 3 – PJM Wind Plant Forecasting Workshop
- ◆ March 16-17 – FERC Technical Workshop with BPA and WECC on wholesale electric transmission services to explore a conditional firm transmission service product for the OATT
- ◆ April 1 – NERC Reliability Standards implementation
- ◆ April 1 – MISO market implementation
- ◆ April 5 – SCE petition for FERC declaratory order seeking rolled-in rate treatment for renewable energy trunk line
- ◆ May 16-18 – Annual AWEA WindPower Conference
- ◆ June 12-16 – IEEE PES meeting and grid code panel

