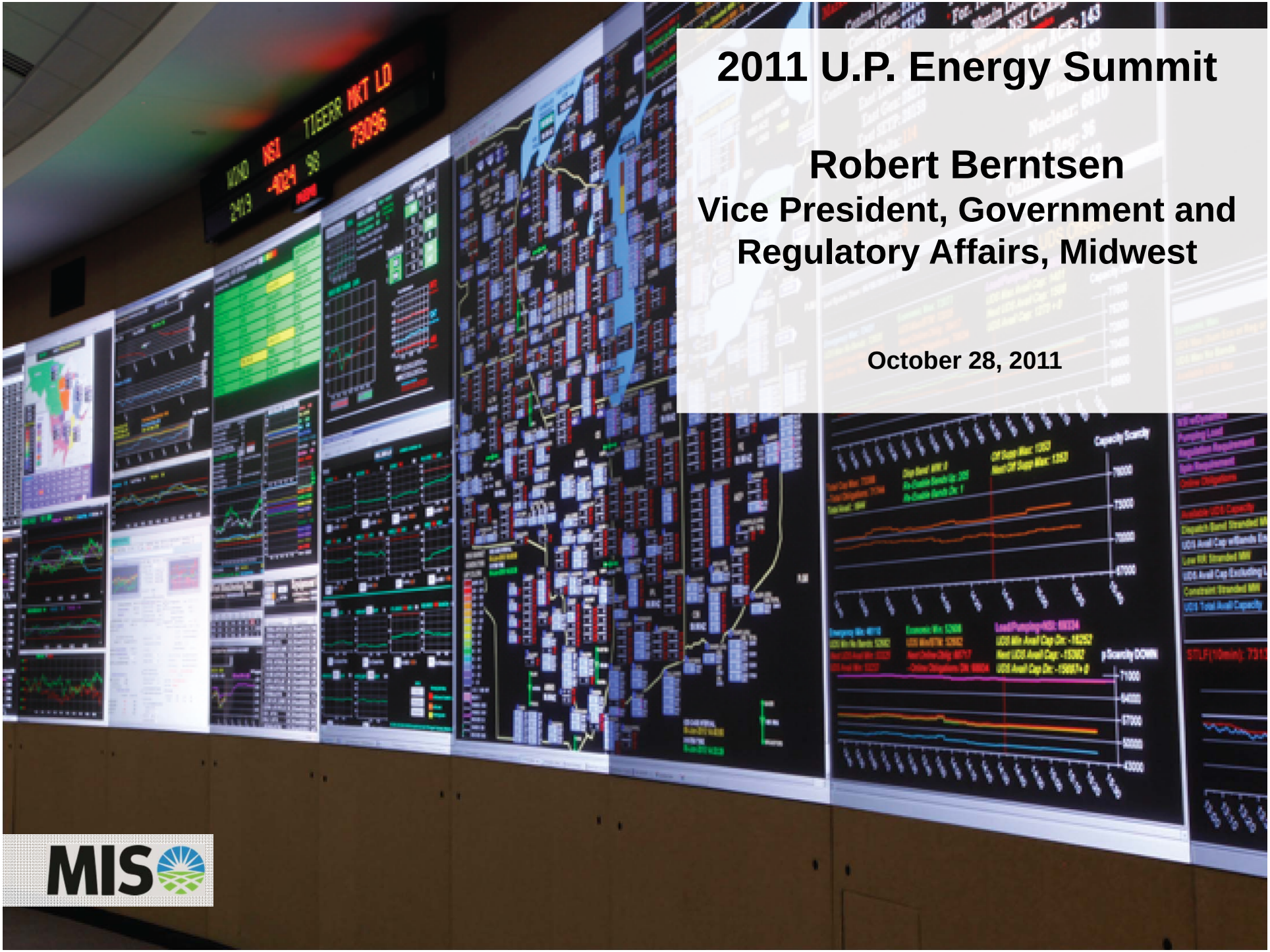


2011 U.P. Energy Summit

Robert Berntsen

Vice President, Government and Regulatory Affairs, Midwest

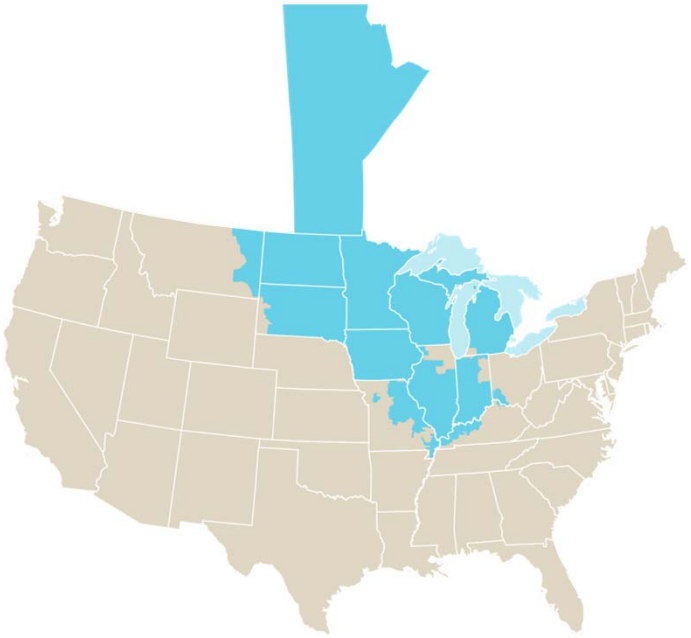
October 28, 2011

MISO's role is concentrated in a few key areas

What We Do	Implications
Provide independent transmission system access	>Equal and non-discriminatory access >Eliminate transmission rate pancaking
Deliver improved reliability coordination through efficient market operations	>Improved regional coordination >Independent lowest cost unit commitment, dispatch, and congestion management
Coordinate regional planning	>Integrated system planning >Balance transmission and generation tradeoffs
Provide price information transparency	>Market price/value discovery >Encourage prudent infrastructure investment

MISO

Scope of Operations: 12 States and 1 Canadian Province

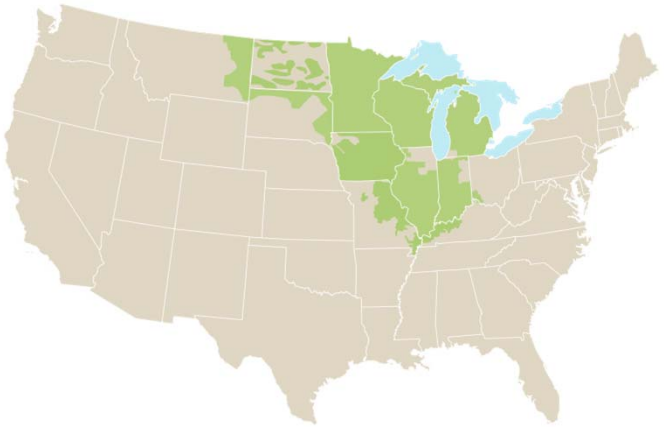


Reliability footprint

Installed Generation Capacity
146,497 MW

Peak Demand
110,032 MW

53,203 miles of transmission



Market footprint

Installed Generation Capacity
134,850 MW

Peak Demand
103,975 MW

Market Operations

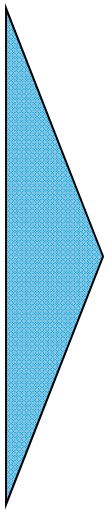
- ~ $27.5 billion per year settled in energy markets (2010)
- 5-minute dispatch
- 1,975 pricing nodes
- 5,833 generating units
- 374 market participants serving 40.3 million people

Transmission Planning
MISO follows a Value-Based planning methodology

In order to achieve its planning objectives, the Midwest ISO has transformed its transmission expansion planning model

Reliability-Based Model

- Focused primarily on grid reliability
- Typically considers a short time horizon
- Seeks to minimize transmission build



Value-Based Model

- Focused on value while maintaining reliability
- Reflects appropriate project time scales
- Seeks to identify transmission infrastructure that maximizes value
- Identification of the comprehensive value of projects

Scenario based planning is also a key element, allowing identification of transmission that is needed to meet a variety of potential generation outcomes. This identifies the "no regrets" transmission that can be built while the energy policy is still evolving.

MISO

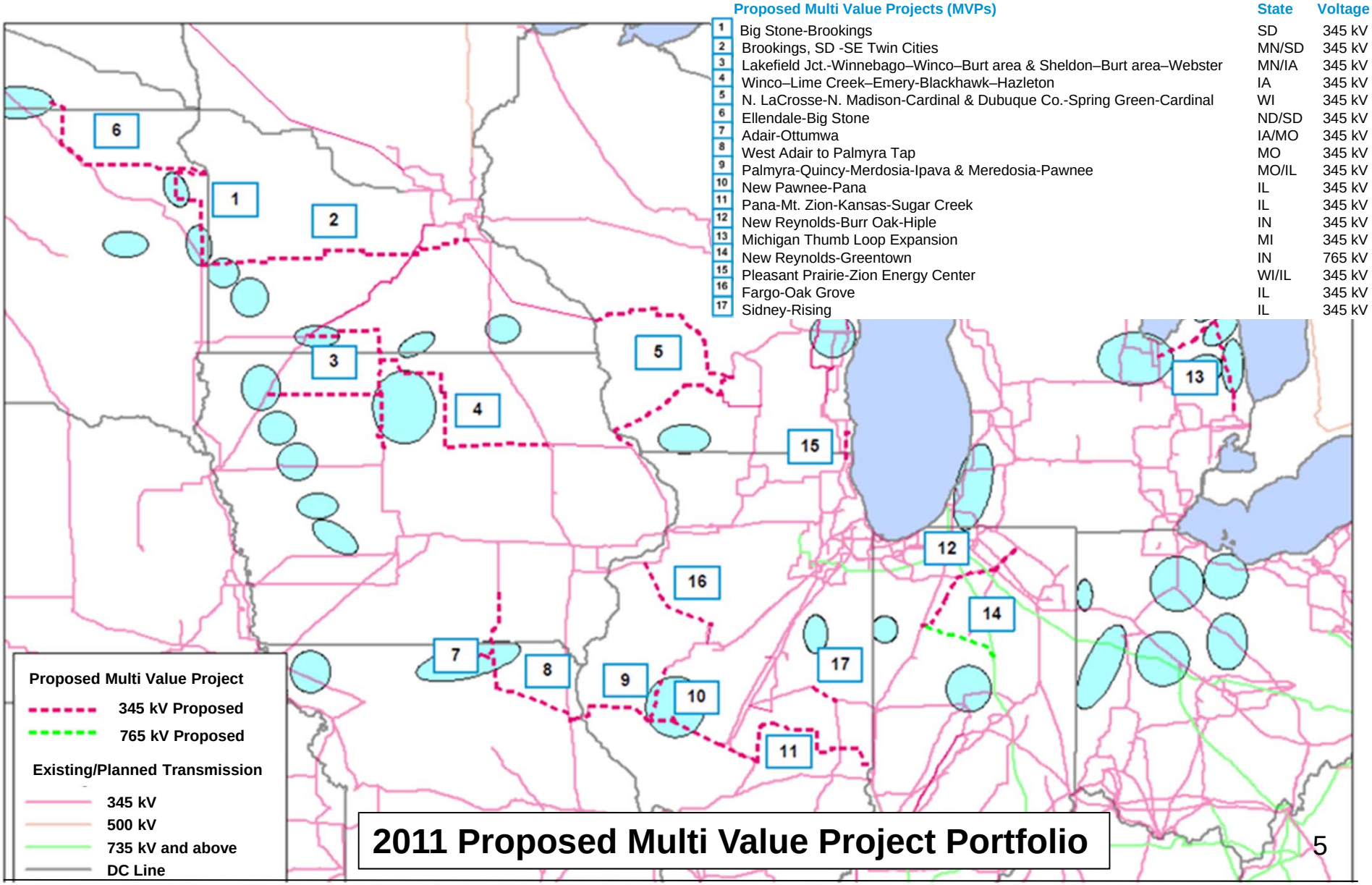
Multi Value Projects reliably and economically enable established energy policy choices

- The proposed Multi Value Project Portfolio creates a robust transmission system that provides value under a wide range of policy, economic, and operating conditions
- Specifically, it
  - Provides benefits in excess of its costs under all scenarios studied, with Benefit–to–Cost ratios ranging from 1.8 to 3.0
  - Maintains system reliability by resolving reliability violations on about 650 elements for more than 6,700 system conditions and mitigating 31 system instability conditions
  - Enables 41 million MWh of wind energy to meet renewable energy mandates and goals
  - Provides an average annual value of $1,279 million over the first forty years of service, at the cost of an average annual revenue requirement of $624 million*
  - Supports a variety of generation policies through utilizing a set of energy zones which support wind, natural gas, and other fuel sources
- The average residential customer's return on investment: $23 annual return on an $11 per year investment.

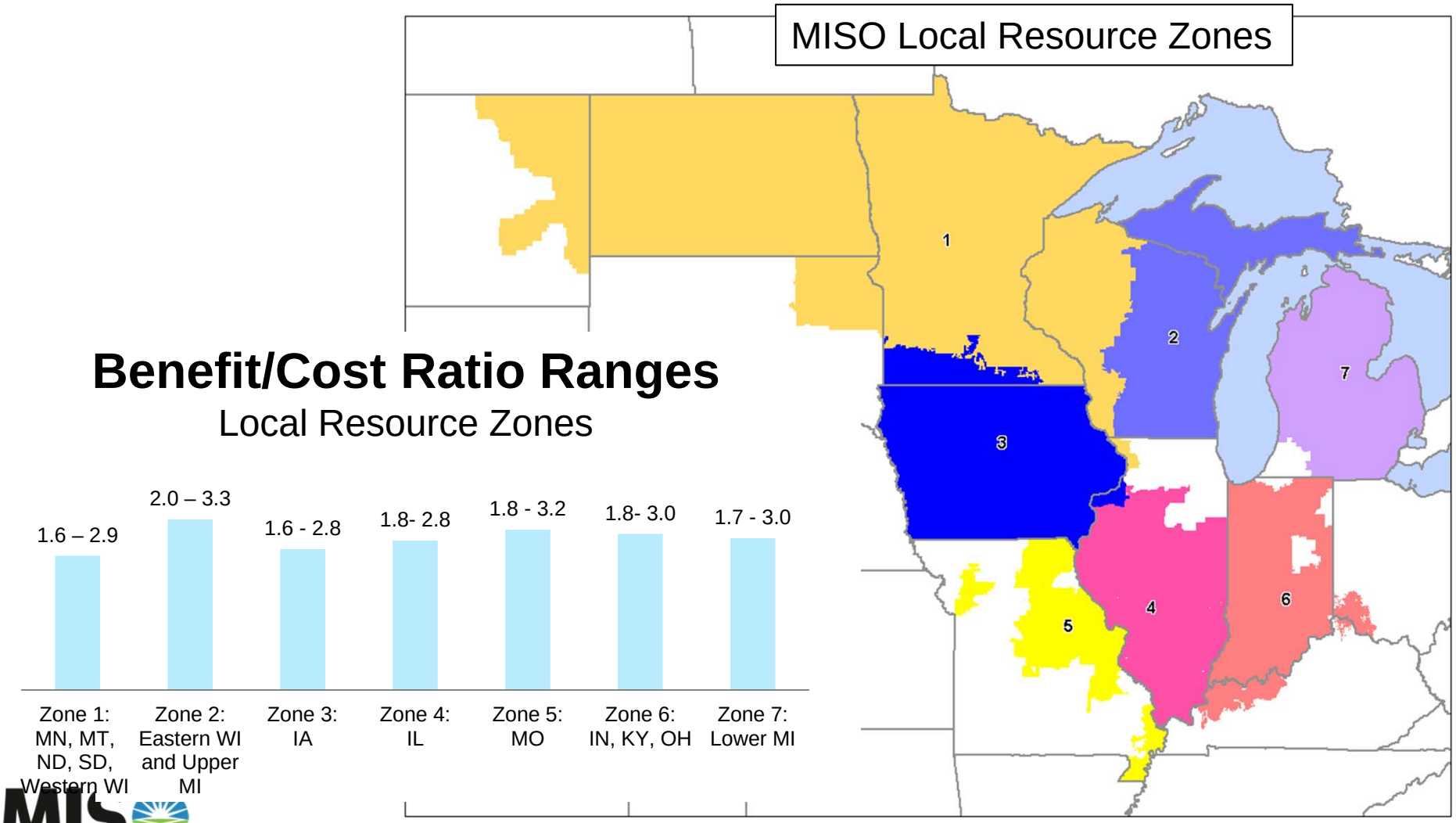
MISO

** Based on a total portfolio capital cost of $5.2 billion, in 2011 dollars*
Final costs are subject to change as actual construction estimates are received

Proposed Multi Value Project Portfolio



Multi-Value Projects will cost an average residential customer $11 a year but will provide $23 in annual benefits



Benefit/Cost Ratio Ranges

Local Resource Zones

Benefits for Zone 2

MISO's proposed Multi-Value Projects portfolio, or MVPs, will create thousands of jobs for Eastern Wisconsin and Upper Michigan. Estimates include the following:

- Creation of 1,900 - 4,500 direct (construction) jobs
- Between 3,200 and 8,400 total jobs will be created. This includes construction, supplier and other downstream opportunities.

As a result of MVPs, consumers will see economic benefits ranging from 2.0 to 3.3 times the costs. These benefits include:

- $1.7 billion to $5.4 billion from enabling low-cost generation to displace higher-cost generation
- $3 million to $11 million from more efficient dispatch of operating reserves
- $13 million to $48 million from reductions in energy wasted on transmission losses, reducing future generation investment required to serve those losses
- $219 million to $405 million in benefits through supporting a regional wind integration methodology
- $124 million to $618 million from reduced future Planning Reserve Margin Requirements, which reduces installation of future generation to meet this requirement.
- $43 million to $152 million in avoided costs for reliability projects that would otherwise need to be constructed.

Benefits for Zone 7

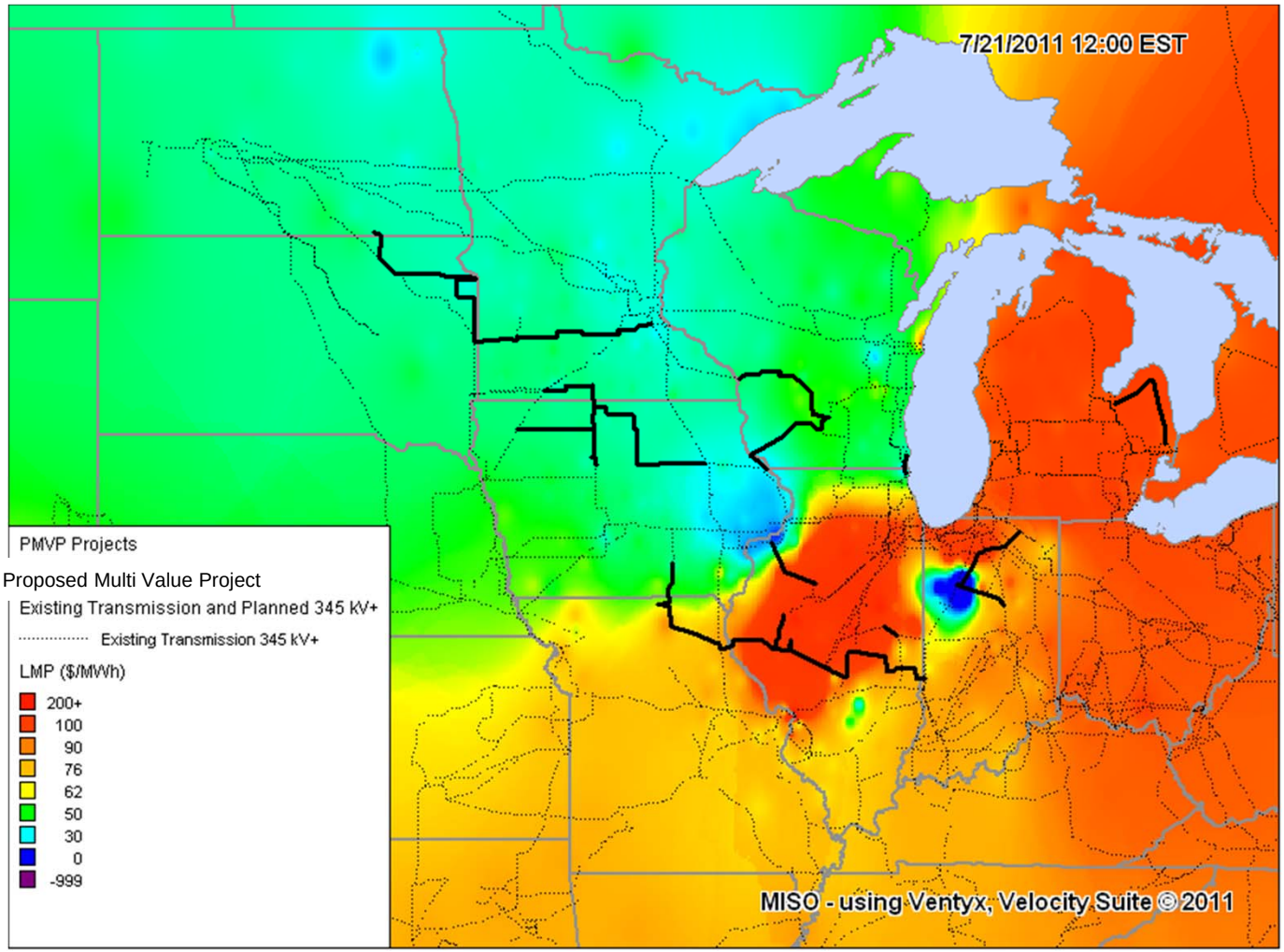
MISO's proposed Multi-Value Projects portfolio, or MVPs, will create thousands of jobs for Michigan. Estimates include the following:

- Creation of 1,600 - 3,700 construction-related jobs
- Creation of 2,600 - 7,000 total jobs, including construction, supplier and other downstream opportunities

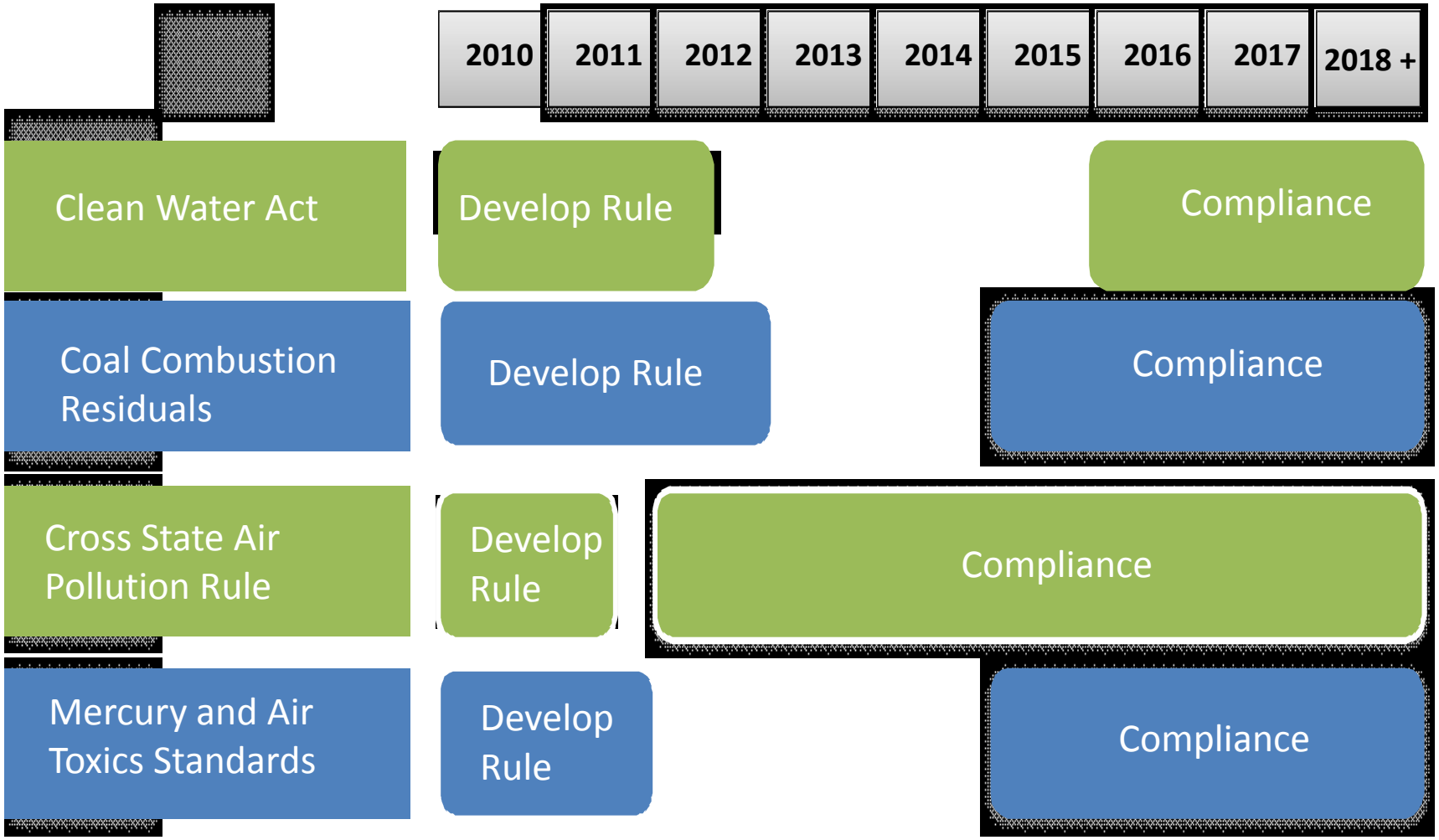
As a result of MVPs, Michigan consumers will see economic benefits ranging from 1.7 to 3 times the costs. These benefits include:*

- $2.8 billion to $8.8 billion from enabling low-cost generation to displace higher-cost generation
- $6 million to $18 million from more efficient dispatch of operating reserves
- $23 million to $80 million from reductions in energy wasted on transmission losses, reducing future generation investment required to serve those losses
- $208 million to $1,035 million from reduced future Planning Reserve Margin Requirements, which reduces installation of future generation to meet this requirement.
- $6 million to $23 million in avoided costs for reliability projects that would otherwise need to be constructed.

Proposed transmission expansion projects will greatly reduce system congestion allowing low cost generation to reach load



Environmental Protection Agency Proposing Four New Regulations



Overview of Impacts

- 12.6 GW of Coal Capacity Identified as at-risk, with 2.9 GW of capacity identified as likely to retire under more likely scenarios ($4.50 natural gas price and $0/ton carbon cost)
- Capital Investment of $31.6 to $33.0 Billion will be required to retrofit and/or replace units
    - 12.6 GW of retirement will require replacement of 10 GW to maintain reserve margins through year 2016
- Energy Prices will increase from $1/MWh to as high as $5/MWh

MISO

Midwest ISO Facing Potential Shift in Supply/Demand Paradigm

- Proposed EPA rules may force significant coal retirements
- Demand Response, Energy Efficiency programs and new technologies could gain traction and expand
- Wind generation continues to expand in response to Renewable Portfolio Standards

The ultimate resource mix will be determined by asset owners, but the Midwest ISO is evaluating potential impacts to ensure continued system reliability and market efficiency

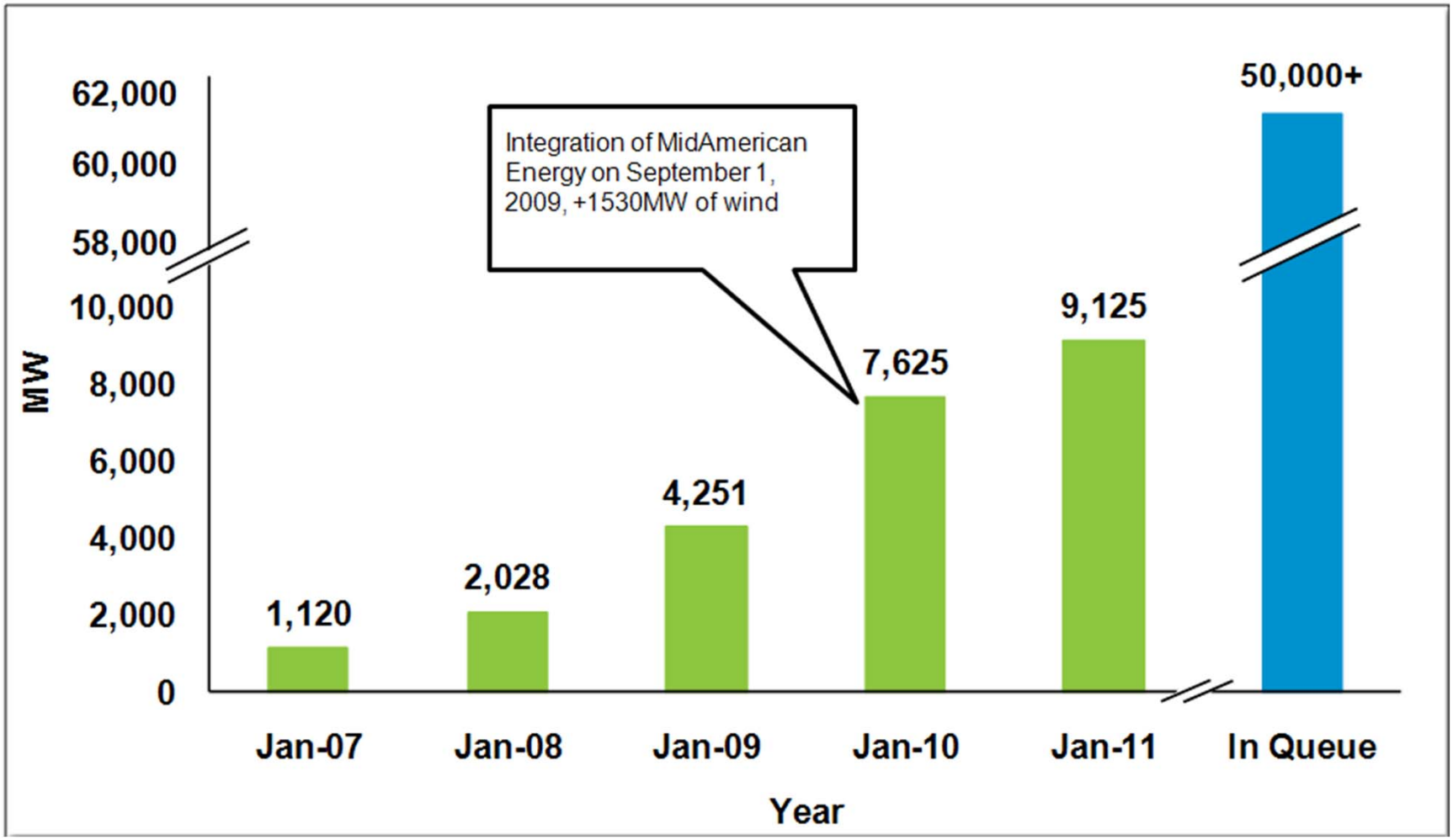
MISO

Assessment of Demand Response and Energy Efficiency Potential

- MISO sponsored study found significant potential for DR/EE in the MISO based on programs in place
  - Most of the potential impact is obtained in the first 10 years.
- Economic DR/EE is chosen in the Regional Resource Forecasting model and represents a smaller subset of the total potential
- Energy Efficiency (EE) programs are more economic than the Demand Response (DR) and provide substantial reductions to peak demand.
- Economic EE programs represent an 8 to 13% reduction to load growth, depending on the scenario.

MISO

Installed wind generation capacity has grown steadily in Midwest ISO footprint over past several years…



Recent Tariff Changes Reflect Preparation for Changing Resource Mix

- Dispatchable Intermittent Resources enable market to reflect value of wind generation and increases congestion management efficiency
- Demand Response filings (Aggregators of Retail Choice and Resource Adequacy) and planned future filings to enable energy efficiency and promote economic additions of demand response and energy efficiency
- Resource Adequacy Enhancements increase transparency (better information to enhance state planning processes), provide synergies with transmission planning, and enable after the fact Market Efficiency Assessment of investment decisions
- Multi Value Projects lay the ground work for building transmission, and sharing costs appropriately, when major shifts in generation mix and location occur

MISO

Resource Adequacy Enhancements

Period	• Annual future period requirement (currently monthly)
Resource Deliverability	• Zonal Assessment (currently assumed deliverable footprint-wide) – This is similar to how Operating Reserve Zones are currently assessed • Demand response and energy efficiency programs will qualify
State Rights	• States continue to review / establish Planning Reserve Margin • Existing state resource planning, certificate of need and related processes are not impacted
Retail Choice State Issues	• Adequacy requirement will follow load switching • Load Serving Entities continue to forecast their peak demand (following state procedures)

Satisfying Requirements	• Provide a Fixed Resource Adequacy Plan (as they can today)
	  • Owned Resources
	  • Contracted Resources
	• Participate in the auction

Benefits expected from the Resource Adequacy changes include:

- Increased reliability with current aggregate deliverability evaluation enhanced with zonal analysis
- Increased coordination at the seams including capacity portability/deliverability
- Enhanced resource adequacy planning and alignment of resource / transmission planning
- Eliminates free riders
- Consistency with energy market; market-based mechanism to address congestion and provide price transparency

MISO is focused on continuing market improvement to enhance the Value Proposition to members

- Transmission planning
- Seams coordination and optimization
- Market enhancements (ELMP, interchange optimization, capacity portability, look-ahead commitment and dispatch)
- Entergy integration