Advancing Wind Power in Illinois Conference 2011

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MISO

Transmission Expansion for Wind Energy Breakout Session

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Transmission Expansion for Wind Generation

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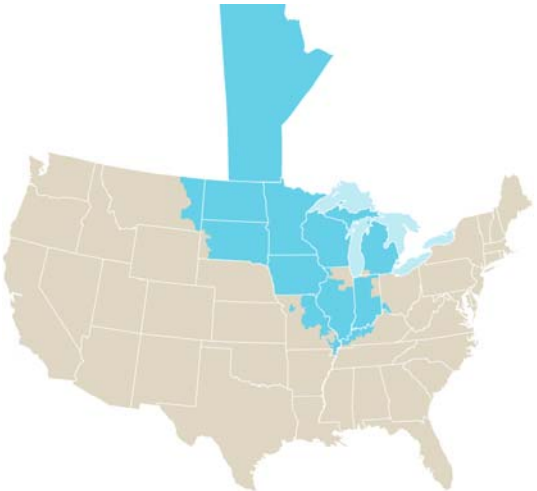
July 22, 2011

MISO Overview

- Independent, non-profit organization responsible for maintaining reliable transmission of power in 12 states and one Canadian province



MISO Reliability Coordination Area, June 2011

MISO Planning Objectives

Fundamental Goal

The development of a comprehensive expansion plan that meets reliability needs, policy needs, and economic needs

MISO Board of Director Planning Principles*

- Make the benefits of an economically efficient energy market available to customers by providing access to the lowest electric energy costs
- Provide a transmission infrastructure that safeguards local and regional reliability and supports interconnection-wide reliability
- Support state and federal energy policy objectives by planning for access to a changing resource mix
- Provide an appropriate cost mechanism that ensures the realization of benefits over time is commensurate with the allocation of costs
- Develop transmission system scenario models and make them available to state and federal energy policy makers to provide context and inform the choices they face

* As modified and approved by MISO Board of Directors System Planning Committee 5/16/2011; pending full board approval

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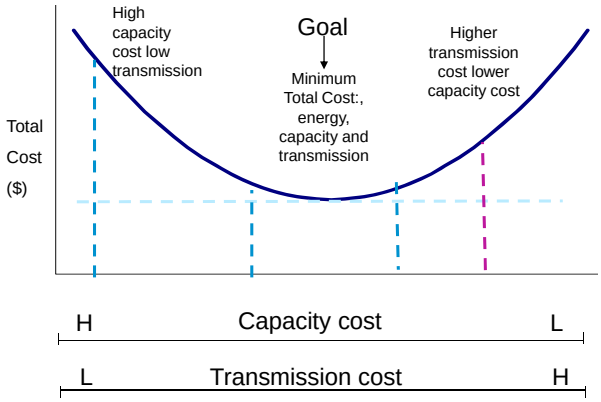
Balancing Generation and Transmission Investment



The Midwest ISO's transmission planning process is focused on minimizing the total cost of delivered power to consumers: energy, capacity and transmission

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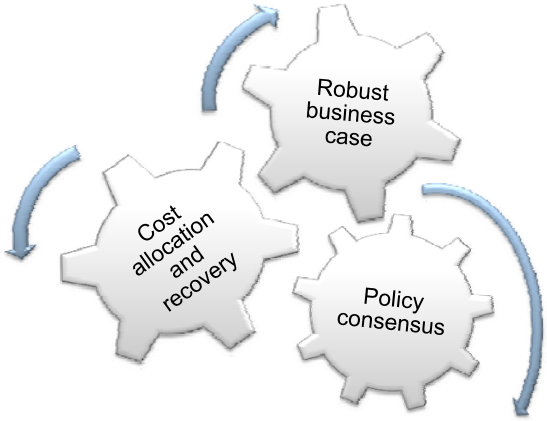
Conditions Precedent to Increased Transmission Build



Before transmission is built a number of conditions must be met

- Increased consensus on energy policies (current and future)
- A robust business case that demonstrates value sufficient to support the construction of the transmission project
- A regional tariff that matches who benefits with who pays over time
- Cost recovery mechanisms that reduce financial risk

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Cost Allocation Overview

Allocation Category	Driver(s)	Allocation to Beneficiaries
Participant Funded ("Other")	Transmission Owner identified project that does not qualify for other cost allocation mechanisms.	Paid by requestor (local zone)
Generator Interconnection Project	**Interconnection Request**	**Paid for by requestor; 345 kV and above 10% postage stamp to load**
Market Efficiency Project[1]	Reduce market congestion when benefits are 1.2 to 3 times in excess of cost	Distribute to planning regions commensurate with expected benefit; 345 kV and above 20% postage stamp to load
Baseline Reliability Project	NERC Reliability Criteria	Primarily shared locally through Line Outage Distribution Factor Methodology; 345 kV and above 20% postage stamp to load
Multi Value Project	**Address energy policy laws, economic and/or reliability and provide widespread benefits across footprint**	**100% postage stamp to load**

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1. Market Efficiency Project cost allocation methodology currently under review at the RECBTF

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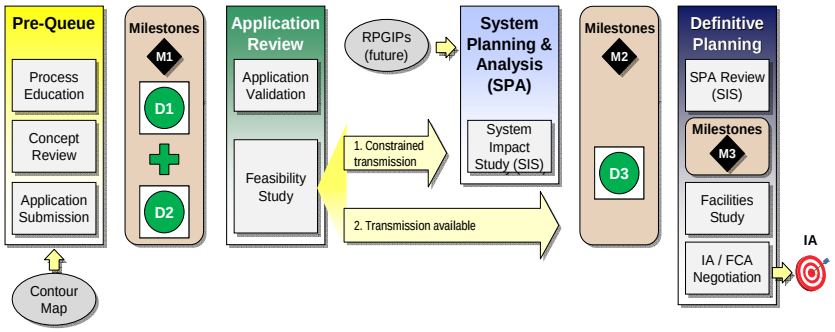
Queue Process Overview

First ready, first served process



Ref	Description	Refund	< 6 MW	≥ 6 but ≤ 20 MW	> 20 but ≤ 50 MW	> 50 but ≤ 100 MW	> 100 but ≤ 200 MW	> 200 but ≤ 500 MW	> 500 but < 1000 MW	≥ 1000 MW
D1	Application Fee/FeS*	No	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
D2	Fund System Impact Study	Yes	$10,000	$20,000	$30,000	$60,000	$60,000	$60,000	$90,000	$120,000
D3	Fund DPP and Restudies	Partial	$40,000	$100,000	$150,000	$210,000	$260,000	$360,000	$440,000	$520,000

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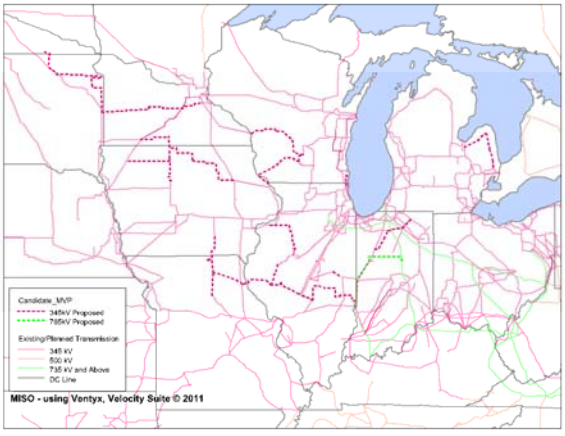
Multi Value Projects Enhance the Regional Nature of the Grid



Candidate MVP Transmission Portfolio shown as of 7/11/2011

- Candidate MVPs combined with the existing system and other planned projects increase transfer capability throughout the footprint, offering increased access to import and export power
- Aggregate of wind generation lowers prices across the footprint given sufficient transmission
- In addition to production cost savings, additional benefits will be realized
  - A more robust system improves reliability
  - Increasing transfer capability increases the size of the risk pool resulting in lower ancillary services costs and overall capacity costs

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