

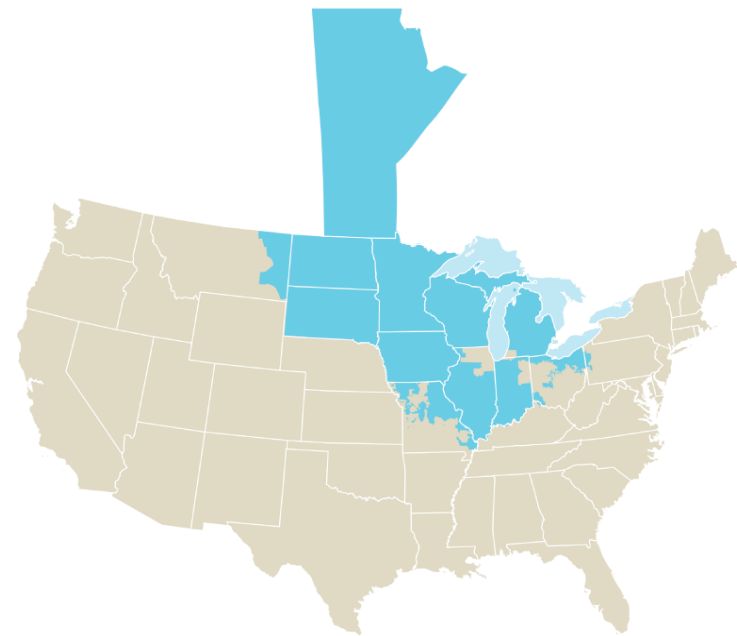
# Integrated Resource Planning for Electric Power

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Energy Regulatory Partnership Program  
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Michigan Public Service Commission  
Methodology for Long-Range Planning in its  
Generation, Transmission and Distribution  
Networks

# Midwest ISO

- The Midwest ISO is an independent, nonprofit organization that supports the constant availability of electricity in 13 U.S. states and the Canadian province of Manitoba.

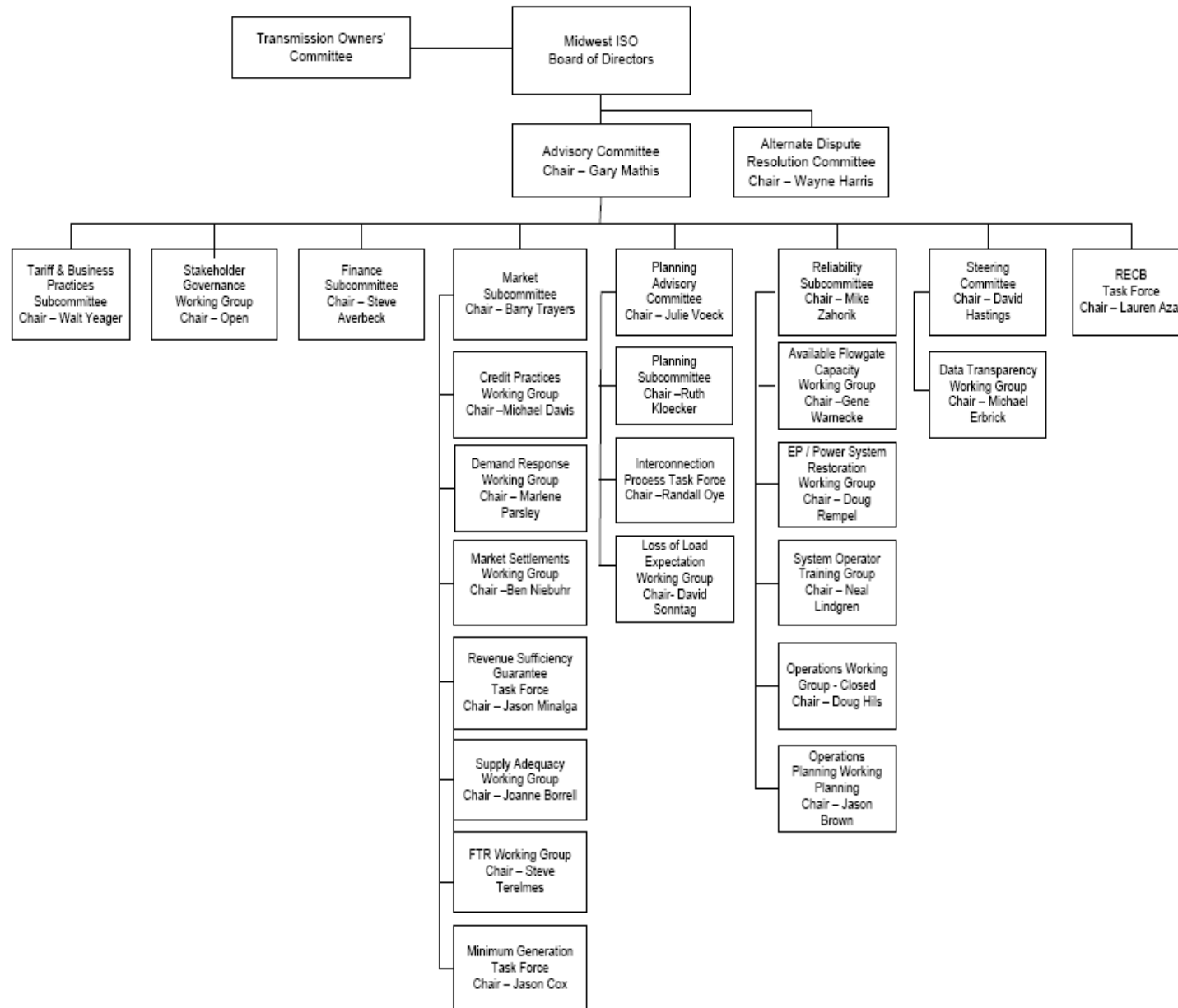


Midwest ISO Regional Reliability Area

# Midwest ISO Stakeholder Governance

- The Midwest ISO has three standing committees reporting to the Board of Directors, one of which is the Advisory Board. The Advisory Board has various Committees, Subcommittees, Working Groups, and Task Forces reporting to it.
- There are three defined leadership roles defined within the overall governance environment: Chair, Vice Chair, and Midwest ISO Liaison. The Chair must be held by a Stakeholder, unless the Stakeholders request a Midwest ISO employee to hold the position.
- Upon its acceptance as a Midwest ISO member, an organization must declare its sector affiliation. The member will belong to this sector for the calendar year, and may switch sectors annually by providing written notice to the Midwest ISO Legal Department.

## Midwest ISO Committee Organization



# Benefits of MISO:

- Safe, cost-effective delivery of electric power across much of North America.
- MISO is committed to working with all stakeholders to create cost-effective and innovative solutions for our changing industry.
- Assures industry consumers of unbiased regional grid management and open access to the transmission facilities under MISO's functional supervision.
- Optimizes the efficiency of the interconnected system, provides regional solutions to regional planning needs and continually minimizes any risk to reliability.

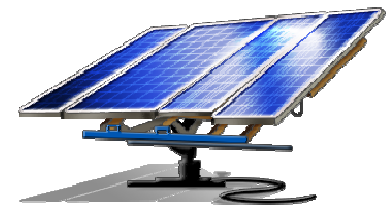
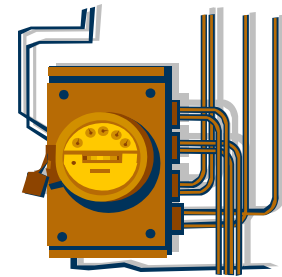
# Generation and Certificate of Need

## Goals of PA 295 and the MIPSC:

The Act promotes the development of clean and renewable energy and energy optimization through the implementation of standards that will cost-effectively provide greater energy security and diversify the energy resources used to meet consumers' needs, encourage private investment in renewable energy and energy efficiency and improve air quality.

# What is customer generation?

- Typical customer electric generation technologies include solar photovoltaic systems, wind turbines, and on-farm anaerobic digestion systems.
- Technical requirements (data, equipment, relaying, telemetry, metering) are defined according to type of generation, location of the interconnection, and mode of operation (Flow-back or Non-Flow-back).





# Wind Marketing Components

- State RPS
- Energy Market Sales from surplus energy
  - Capacity credit for wind is 15%
  - Capacity factors are 35-45% in MISO
  - Difference is added to surplus energy that is available to sell
- Sale of in state wind capacity or other capacity to out of state markets

# WERZB-Wind Energy Resource Zone Board

- An independent 11 member board appointed by the MPSC as required under the Clean, Renewable and Efficiency Energy Act of 2008 to identify potential commercial wind energy development areas in Michigan.
- After applying a series of criteria to Michigan's 37 million acres, the Board found the four top regions from the assessment having abundant and reliable wind resources, open space suitable for wind projects, and are free from other known development constraints.

# PA 295: Part 4 Wind Energy Resource Zones

- **Sec. 145.** (1) The wind energy resource zone board shall exercise its powers, duties, and decision-making authority under this part independently of the commission.  
(2) The board shall do all of the following:
  - (a) In consultation with local units of government, study all of the following:
    - (i) Wind energy production potential and the viability of wind as a source of commercial energy generation in this state.
    - (ii) Availability of land in this state for potential utilization by wind energy conversion systems.
  - (b) Conduct modeling and other studies related to wind energy, including studying existing wind energy conversion systems, estimates for additional wind energy conversion system development, and average annual recorded wind velocity levels. The board's studies should include examination of wind energy conversion system requests currently in the applicable regional transmission organization's generator interconnection queue.

(3) Within 240 days after the effective date of this act, issue a proposed report detailing its findings under subsection (2). The board's proposed report shall include the following:

- (a) A list of regions in the state with the highest level of wind energy harvest potential.
- (b) A description of the estimated maximum and minimum wind generating capacity in megawatts that can be installed in each identified region of this state.
- (c) An estimate of the annual maximum and minimum energy production potential for each identified region of this state.
- (d) An estimate of the maximum wind generation capacity already in service in each identified region of this state.

(4) The board shall submit a copy of the proposed report under subsection (3) to the legislative body of each local unit of government located in whole or part within any region listed in subsection (3)(a). The legislative body may submit comments to the board on the proposed report within 63 days after the proposed report was submitted to the legislative body. After the deadline for submitting comments on the proposed report, the board shall hold a public hearing on the proposed report. The board may hold a separate public hearing in each region listed under subsection (3)(a). The board shall give written notice of a public hearing under this subsection to the legislative body of each local unit of government located in whole or part within the region or regions that are the subject of the hearing and shall publish the notice in a newspaper of general circulation within the region or regions.

(5) Within 45 days after satisfying the requirements of subsection (4), the board shall issue a final report as described in subsection (3).

(6) After the board issues its report under subsection (5), electric utilities, affiliated transmission companies and independent transmission companies with transmission facilities within or adjacent to regions of this state identified in the board's report shall identify existing or new transmission infrastructure necessary to deliver maximum and minimum wind energy production potential for each of those regions and shall submit this information to the board for its review.

(7) The board is dissolved 90 days after it issues its report under subsection (5).

# Michigan Wind Zone Map



SOURCE: Public Sector Consultants Inc., 2009, using map from Michigan State University Land Policy Institute, 2009, prepared for WERZ Board.

## **PA 286** - Modify choice in purchase of electricity

- This statute requires comprehensive changes in the manner that the MPSC operates. The **MPSC now has authority to review and approve mergers and acquisitions.** To date, there have been no such requests.
- The MPSC also has authority under Section 6s of Act 286, MCL 460.6s, which provides an option for **a utility that seeks to add capacity to its system by construction, renovation, or long-term power purchase to seek one or more certificates of necessity** from the Commission and imposes an integrated planning requirement on utilities. On December 23, 2008, the MPSC adopted “Public Convenience and Necessity Application Instructions,” and “Integrated Resource Planning Guidelines,” for purposes of implementing MCL 460.6s(10) and (11).



# Continued.....

- Act 286 also provides that, within 90 days of the effective date of the act, the Commission “**shall adopt standard rate application filing forms and instructions for use in all general rate cases filed by utilities whose rates are regulated by the commission.**” The Commission did so in its February 20, 2009 in Case No. U-15895.
- Section 11(4) of Act 286 also provides that the Commission shall “**establish rate schedules which ensure that public and private schools, universities, and community colleges are charged retail electric rates that reflect the actual cost of providing service to those customers.**” The MPSC has issued several orders to implement this provision of Act 286.
- The Commission is now required to process rate cases in 12 months.

# Regulatory Coordination

- Society determines that a service is more efficiently provided by a monopoly than competition
- Regulation is invoked when a hybrid competitive market exists
- Regulation substitutes for competition
  - Attempts to mimic a perfectly competitive market as much as possible

# Goals of the MIPSC:

- Establish fair and reasonable rates for regulated services and adopt and administer fair terms and conditions of service for the State's utility customers.
- Assure adequate and reliable supplies of regulated services to all Michigan customers, and the safe and efficient production, distribution, and use of the State's energy, telecommunications and transportation services.
- Assure the security of the State's critical infrastructure by promoting homeland security.
- Promote the State's economic growth and enhance the quality of life of its communities through adoption of new technologies like broadband telecommunications and efficient renewable energy resources.
- Provide customers with the opportunity to choose alternative electric, natural gas, telecommunications and transportation providers.
- Provide regulatory oversight in a prudent and efficient manner while implementing legislative and constitutional requirements.

# Public-Private Partnerships

- Michigan State University
- University of Michigan
- Michigan Technological University
- Public Sector Consultants, Inc.
- DTE Energy
- Consumers Energy
- General Motors

# Citations

- Midwest ISO  
<http://www.midwestiso.org/home>
- PA295  
<http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0295.pdf>
- PA286  
[http://www.michigan.gov/mpsc/0,1607,7-159-16377\\_43420-152506--,00.html](http://www.michigan.gov/mpsc/0,1607,7-159-16377_43420-152506--,00.html)
- Michigan Windboard  
[www.michigan.gov/windboard](http://www.michigan.gov/windboard)