Studying the Transmission of Wind Power in Michigan (and Beyond)

Transmission Study Name (includes hyperlink)	**Expected Timeframe** (sorted by end date)	**Summary Notes on Approach, Participants and Result**
Thumb Area Generation Study (TAGS) and TAGS Re-Study *Study revised as some participants withdrew*	First study completed November 2005. Final group study April 2007.	*Approach*: Feasibility of integrating 600MW wind generation (re-study 108MW) *Participants*: DTE, MISO, ITC and Thumb Electric Cooperative (TEC) *Result*: With original eight participants and larger generation capacity: $150M estimated system upgrade costs. Final: $14.5M for system upgrades for two wind farm interconnections
MISO Transmission Expansion Plan 2008 (MTEP-08)	Complete	*Approach*: Different 2018 peak scenarios. Generally assumed all mandated RPS generation in one scenario; 20% RPS scenario; (3 or 4 scenarios in total). *Participants*: MISO states *Result:* 40,000 MW potential of wind modeled in MGA region Recommendation of $6.2B in project implementation (see appendixes of report)
Joint Coordinated System Plan 2008 (JCSP)	November 2007 - February 2009	*Approach*: Two scenarios: status quo and 20% wind mandate by 2024 Focus on economic assessment Coordinated with EWITS *Participants*: MISO/PJM/TVA/SPP/NY/MAPP/New England *Result*: Status quo: 10K miles of transmission lines added at cost of ~$50B, 20% Wind: 15K miles of transmission lines added at cost of ~$80B, 90,000 to 120,000 MW in 20% scenario
Regional Generator Outlet Study (RGOS)	April 2009	*Approach*: 15,000 MW, 5-15 year plan to meet RPS mandates *Participants*: Initial states chosen because of pre-existing RPS mandates[1] ND/SD/MN/IA/IL/WI (A portion of Michigan's Upper Peninsula is included in RGOS, because it is included in ATC's network)

[1] MI, MO, and OH were not included because RPSs had not yet passed. MISO now plans RGOS II study (see below) to include those states.

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Michigan Wind Energy Transmission Study (MI-WETS) I	Spring 2009	*Approach*: Different scenarios: 1,500 MW, 3,000 MW and 4,500 MW on-shore projects Also includes two speculative 500 MW off-shore projects for total of 5,500 MW Modeling to be completed by MI Transmission companies *Participants*: Both upper and lower peninsulas of Michigan *Result*: Data will feed into MI-WETS II
Michigan Wind Energy Resource Zone Board (MI WERZB)	Preliminary: May 2009/ Proposed: June 2009/ final: September 2009	*Approach*: Per 2008 PA 295 and Commission Order in Case Number U-15899: "The board's proposed report shall include a list of regions in the state with the highest level of wind energy harvest potential" and "a description of the estimated maximum and minimum wind generating capacity in megawatts that can be installed in each identified region". *Participants*: Eleven member board, representing government, utility, renewable, environment and public at large groups. *Result:* Based on Board findings and other appropriate factors, the Commission is to issue an order and submit a report to the legislature on the Zones suggested for wind siting and the impact of those Zones on local ordinances.
Michigan Planning Consortium	Formed in July 2008, report due: July 1, 2009	*Approach*: "Improve the planning process for electricity infrastructure projects" through collaboration and review of transmission and infrastructure studies and proposals *Participants*: Michigan
MISO Transmission Expansion Plan (MTEP) 2009	September 2008-July 2009	*Approach*: Final MISO TEP approval is slated for October each year *Participants*: MISO states
DOE Eastern Wind Integration and Transmission Study (EWITS)	November 2007-August 2009	*Approach*: 185-188 GW based on scenario, capacity factors of 20-30% Both on and off shore sites. Coordinated with JCSP 2008 *Participants*: Mid and Eastern US - MISO, SPP, TVA, NEISO, NYISO, PJM

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Great Lakes Wind Council	January - September 2009	Not a study. This is an Executive Order by Governor Granhom to create a report on the viability of off-shore wind in Michigan.
Upper Midwest Transmission Development Initiative (UMTDI)	October 2009: Report to Governors	*Approach*: Developed "zones" different scenarios: T-Z "ranging from west to east" *Participants*: Five states with RPS and obligation to serve clauses (IA/ND/MN/SD/WI) *Result*: "Agreed upon transmission projects" to MTEP 2009
Regional Generation Outlet Study (RGOS) II	Kick-off Meeting April 23, 2009 - End date of October 2010	*Approach*: Data inputs from MI WETS II and GLWC *Participants*: MISO states with RPS mandates
Southwest Power Pool (SPP) Regional Transmission Study	2009 and 2010	*Approach*: 2,000 to 12,000 MW *Participants:* Kansas, Nebraska Missouri for MGA region *Result*: Site chosen based on economic factors and access to grid
Michigan Wind Energy Transmission Study (MI-WETS) II	Coordinate timing with MISO MTEP-09 Process	*Approach*: Still to determine scope and assumptions, to use WERZB preliminary zone results Possible 5-10-15 year planning scenarios *Participants*: Michigan *Result*: Data will feed into RGOS II by June 2009

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