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## **Midwest ISO**



November 19, 2010

## Regional Generation Outlet Study

Table 3.2-1 below summarizes the results of the RGOS survey, identifying total and net renewable energy requirements, existing and planned renewable energy, and the net renewable capacity for 2027. Table 3.2-1 also identifies the amount (in percent) of each states RPS expected to be served by wind energy. The 'Total Energy Required' column is the net requirement after applying the "% of RPS by Wind" percentages. As can be seen in Table 3.2-1, some states have more existing renewable energy than required by their respective mandates or goals. Existing renewables were only counted towards the requirements of the respective state in which these renewables originate; thus, an excess of existing wind in one state was not counted towards the requirements in another state. In Iowa, for example, it was not fully known where an excess of that state's existing renewable energy is being supplied. Confining source to state also reduced the risk of double counting if an LSE is fulfilling part of its requirements by deriving some of its renewable energy from another state.

State	% of RPS by Wind	Total Energy Required (GWh)	Existing & Planned (GWh)	Net Needs (GWh)	Wind Zone Capacity (MW)
IA	100%	348	10,272	-	4,650
IL	75%	17,905	5,608	12,297	2,200
IN	-	-	2,263	-	1,000
MI	92%	7,884	365	7,519	3,150
MN	95%	22,786	6,929	15,857	3,875
MO	90%	6,591	439	6,152	1,000
MT	-	-	-	-	400
ОН	100%	26,244	3	26,241	5,075
WI	63%	14,630	1,959	12,671	2,325
ND	-	1,453	4,752	-	2,325
SD	-	1,294	626	668	2,325
Total	-	99,135	33,215	81,406	28,325
RTO					
Midwest ISO	-	78,707	32,165	62,028	21,582
PJM	-	20,428	1,050	19,378	6,743

## Table 2.2-1: RGOS Survey Results

Note the following:

- "Existing & Planned" refers to wind farms or other qualifying renewable energy source currently in operation or holding a signed Generator Interconnection Agreement.
- The Wisconsin RPS is 10% of energy served from renewable; however, it has been adjusted to 25% per direction from the State of Wisconsin.
- Several sources were considered in order to determine the most up-to-date levels of Existing and Planned renewable energy within the study footprint. Those sources included LSE surveys, Midwest ISO Operations data, and data compiled from the SMARTransmission<sup>2</sup> study.

<sup>&</sup>lt;sup>2</sup> SMARTransmission



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## Figure A1.3-3 Minimum Capacity Factor Metrics by State

Some other metrics developed for analysis include correlation of wind to load, ramp, and correlation of wind sites to distance from each other. The following figures demonstrate some of the results from this work.