Michigan Renewable Energy Program

Net Metering Program Report

*to the Michigan Public Service Commissio*n

for the year ended June 30, 2009

January 2010

This document is an annual report prepared by Staff from the Michigan Public Service Commission's Electric Reliability Division, Renewable Energy Section. The main source for data used is reports filed by Michigan electric utility companies. Staff thanks all of the utilities for their efforts to provide timely and accurate data and information used in preparing this report.

To stay informed about Michigan renewable energy activities, readers are invited to visit the Commission's Michigan Renewable Energy Program website, at http://www.michigan.gov/mrep. At that website, readers will find a Michigan Renewable Energy Calendar of Events and the opportunity to subscribe to the MPSC-MREP email distribution list, which presently has over 675 subscribers.

Michigan's Net Metering Program
July 1, 2008 through June 30, 2009

Net metering in Michigan underwent significant changes during this report period. On October 6, 2008, Governor Granholm signed 2008 PA 295 (Act 295) which includes new provisions for net metering in Michigan. Act 295 also contains a renewable portfolio standard which creates a market for renewable energy credits generated by net metering projects. At the end of May 2009, administrative rules to streamline the electric utility interconnection process and implement the new net metering program became effective.

The new program requires each MPSC rate regulated electric provider and MPSC licensed alternative electric supplier (AES)[1] to offer net metering for a minimum of 10 years and to allow new customers to participate until the size of the electric provider's program reaches 1% of its peak load for the previous year. The 1% program size is allocated between three net metering categories:

- 0.5% – True Net Metering: 20 kW and Under Net Metering Projects
- 0.25% – Modified Net Metering: >20 kW up to 150 kW Net Metering Projects
- 0.25% – Modified Net Metering for Methane Digesters: >150 kW up to 550 kW

Net metering generators must utilize renewable energy resources and use interconnection equipment that has been certified to Institute of Electrical and Electronics Engineers (IEEE) 1547.1 testing standards and in compliance with Underwriters Laboratories (UL) 1741 scope 1.1A, effective May 7, 2007. A net metering project may include more than one generator and the sum of a customer's total generator capacity will determine the applicable net metering category. The generator must be located on the customer's premises but does not have to be owned by the customer. Net metering projects must be sized no larger than the customer's expected annual electricity needs. However, at the customer's option, net metering project size may be based on the customer's demand.

The new true net metering program for 20 kW and under net metering projects represents an increase in the net metering financial incentive. Customer billing is based on net usage, which means credit at the full retail rate for kWh deliveries to the grid. Billing based on net usage also simplifies the metering necessary to carry out the program.

Under the state's previous program, net metering was available for generators up to 30 kW. The new net metering program expands net metering in the form of modified net metering for certain generators as large as 550 kW. Information about the three categories of net metering is presented below.

[1] The Act 295 net metering program does not apply to municipal utilities or member-regulated cooperatives. Customers receiving service from these types of electric providers should check with their provider to determine net metering program eligibility and rules.

True Net Metering: 20 kW and Under Net Metering Projects

Net metering for these smallest renewable energy projects, also referred to as "true net metering" is greatly improved and simplified under the new program. True net metering is available to customers with generators 20 kW and under. Typically, residential customers would install generators in this size range. Small installations can also qualify for commercial, institutional, or industrial customers. Details of this net metering project category include:

- Billing is based on the net of the kWh deliveries from the utility and customer kWh deliveries to the grid.
- Customers receive credit at the full retail rate for excess kWh delivered to the grid.
- The utility shall use the customer's existing meter if it is capable of reverse registration (meaning spinning backwards, or otherwise accurately measuring net usage) or install an upgraded meter at no additional cost to the net metering customer.
- Utilities with fewer than 1,000,000 customers shall charge net metering customers at cost for an upgraded meter if the customer's existing meter is not capable of reverse registration. There will be no additional meter charges for customers of utilities with more than 1,000,000 customers (Consumers Energy and Detroit Edison).
- A generator meter shall be provided at cost, if requested by the customer. (The generator meter is for the customer's benefit. Utilities are not obligated to read a customer's generator meter.)
- Net metering inverters[2] must be certified to meet international standards for electrical safety. The commonly accepted standard is based on testing certified by UL; standard number 1741. The inverter manufacturer will be able to produce proof of this certification.
- Maximum interconnection costs will be the combined $100 interconnection and net metering application fees. Utilities will not charge any additional fees for studies, testing, or system inspections.
    - Customers installing non-inverter based projects may be required to pay all interconnection costs, distribution study fees and any costs required for upgrading the distribution system to enable their system to be safely and reliably interconnected.
- Net metering credits for excess generation can carry forward indefinitely.
- The electric provider will not require additional liability insurance.

[2] An inverter is an electronic device that changes direct current to alternating current.

Modified Net Metering: >20 kW up to 150 kW Net Metering Projects

Typically, these net metering projects would be for commercial, industrial, or institutional customers. Details of this net metering project category include:

- Customers pay the full retail rate for electricity deliveries from their electric provider and receive a credit equal to the generation portion of the retail rate or the regional wholesale market price[3] for deliveries of excess generation to the grid.
- No charge for the engineering review for interconnection.
- Customers pay all interconnection costs, distribution study fees and any required distribution system upgrade costs.
- Customers with generators up to 150 kW can use their generation on-site (behind the meter) without paying a standby charge.

Modified Net Metering – Methane Digesters: >150 kW up to 550 kW

This category of net metering is available only for on-farm methane digesters. Details of this net metering category include:

- Nearly the same as the >20 kW to 150 kW program.
- Customers pay the costs of any additional meters.
- Customers pay standby charges.

The Commission approved the standard category 1 net metering application and interconnection agreement for interim use on May 26, 2009 in Case No. U-15919. The new Electric Interconnection and Net Metering Standards rules and generic versions of the standard Category 1 net metering application and interconnection agreement are available on the Commission's website.[4]

[3] For most Michigan utilities, this will be the Midwest Independent System Operator (MISO) real-time locational marginal price (LMP). For more information about LMP, see http://www.midwestiso.org/publish/Document/10b1ff_101f945f78e_-74de0a48324a/Midwest%20Market%20FAQs.pdf?action=download&_property=Attachment page 4 of 18.

[4] See www.michigan.gov/netmetering.

Net Metering Data and Analysis

This section of the report includes data and analysis about net metering.

Table 1: Comparison Between Michigan's Previous Voluntary Net Metering Program (U-14346) and New (2008 Public Act 295) Net Metering Program for 20 kW and Under Projects

Program Feature	Previous Voluntary Program U-14346	New Program Act 295
Program Size	0.5% of previous year's peak load	0.5% of previous year's peak load
Generator Size	30 kW or less	20 kW or less
Electric Provider Participation	MPSC-rate regulated providers	MPSC-rate regulated providers & AESs
Billing Method (used by two largest utilities)	Customer paid full retail rate for kWh delivered by the utility and received the generation portion of retail rate for all kWh delivered to the utility	Net usage – 1 kWh delivered by the utility to the customer is equivalent to 1 kWh delivered by the customer to the utility
Net Metering Credits	Generation portion of retail rate, unused credits were granted to utility at end of net metering year and customer's account was reset to zero	Full retail rate – generation and distribution rates, credits carry forward indefinitely
Metering Used	Typically 2 or 3 meters	Typically 1 meter
Participation Costs	Usually, customers paid meter costs & testing/inspection costs	No meter costs for customers of Consumers Energy and Detroit Edison. No testing and inspection costs for any customers.
Liability Insurance	Certain level required by most utilities	No utility requirements
Disconnect Switch	At utility's discretion	At utility's discretion
Renewable Energy Credits	Belong to customer	Belong to customer

Table 2: Net Metering Installations by Utility, Year Ended June 30, 2009

Number of Customers		Utility Company	Zip Code	Starting Month & Year	Technology Type	Generator Size (kW)	Net Excess Generation (NEG, in kWh)
Total	Per Utility						
1	1	Alger Delta	49821	August 2003[1]	Hydro	3	1,488
2	2	Alger Delta	49806	May 2005[1]	Wind	2.5	1,312
3	3	Alger Delta	49821	August 2005[1]	Solar	2	1,460
4	4	Alger Delta	49987	April-08	Wind	1.9	64
5	1	Alpena Power	49746	November-06	Solar	10	682
6	2	Alpena Power	49707	December-06	Wind	3	0
7	3	Alpena Power	49707	April-08	Wind	1.8	0
8	4	Alpena Power	49707	June-08	Wind	1.8	0
9	5	Alpena Power	49747	June-08	Wind	1.8	0
10	6	Alpena Power	49747	June-08	Wind	1.8	0
11	7	Alpena Power	49707	July-08	Wind	1.8	0
12	8	Alpena Power	49707	August-08	Wind	1.8	0
13	9	Alpena Power	49707	August-08	Wind	1.8	0
14	10	Alpena Power	49766	August-08	Wind	1.8	0
15	11	Alpena Power	49747	August-08	Wind	1.8	0
16	12	Alpena Power	49707	November-08	Wind	1.8	0
17	13	Alpena Power	49707	February-09	Wind	10	0
18	14	Alpena Power	49707	September-08	Wind	3.6	0
19	15	Alpena Power	49707	October-08	Wind	1.8	0
20	16	Alpena Power	49744	October-08	Wind	1.8	0
21	17	Alpena Power	49707	December-08	Wind	1.8	0
22	18	Alpena Power	49707	January-09	Wind	1.8	0
23	19	Alpena Power	49777	January-09	Wind	1.8	0
24	1	AEP/Indiana Michigan	49022	June-07	Solar	7.1	0
25	2	AEP/Indiana Michigan	49038	July-07	Solar	3.6	0
26	3	AEP/Indiana Michigan	49022	September-08	Wind	1.9	0
27	4	AEP/Indiana Michigan	49098	April-08	Wind	1.9	0
28	5	AEP/Indiana Michigan	49107	September-08	Solar	2.1	0
29	6	AEP/Indiana Michigan	49120	January-09	Wind	1.9	0
30	7	AEP/Indiana Michigan	49113	January-09	Wind	1.9	0
31	8	AEP/Indiana Michigan	49042	January-09	Wind	1.9	0
32	9	AEP/Indiana Michigan	49120	October-08	Solar	3.5	0
33	10	AEP/Indiana Michigan	49120	January-09	Wind	10	0
34	11	AEP/Indiana Michigan	49128	May-09	Solar	5.3	0

Table 2: Net Metering Installations by Utility, Year Ended June 30, 2009 (continued)

Number of Customers		Utility Company	Zip Code	Starting Month & Year	Technology Type	Generator Size (kW)	Net Excess Generation (NEG, in kWh)
Total	Per Utility						
35	12	AEP/Indiana Michigan	49079	June-09	Solar	4	0
36	1	Cherryland	49643	January-07	Solar	0.66	0
37	2	Cherryland	49684	April-08	Wind	1.8	0
38	3	Cherryland	49684	June-08	Wind	1.8	0
39	4	Cherryland	49570	May-08	Wind	1.8	0
40	5	Cherryland	49690	February-08	Solar	2	0
41	1	Cloverland	49726	November-07	Wind	5	0
42	2	Cloverland	49725	August-08	Wind	1.8	0
43	3	Cloverland	49783	August-08	Wind	1.8	0
44	4	Cloverland	49715	June-09	Solar	2.4	0
45	1	Consumers Energy	49621	February-07	Solar	5.6	3,669
46	2	Consumers Energy	49058	February-07	Wind	3.7	0
47	3	Consumers Energy	49341	April-07	Solar	2.5	0
48	4	Consumers Energy	48145	May-07	Wind	1.8	0
49	5	Consumers Energy	49546	May-07	Wind	3.7	0
50	6	Consumers Energy	49635	October-07	Solar	1.8	0
	N/A**	Consumers Energy	49331	December-07	Wind	5	0
51	7	Consumers Energy	49421	December-07	Wind	1.8	0
52	9	Consumers Energy	48838	March-08	Solar	2.5	0
53	10	Consumers Energy	49341	March-08	Solar	2	0
54	11	Consumers Energy	48858	April-08	Solar	5	1,012
55	12	Consumers Energy	49675	August-08	Wind	3.7	0
56	13	Consumers Energy	49058	August-08	Solar	5	0
57	14	Consumers Energy	49601	August-08	Solar	2.5	0
58	15	Consumers Energy	48740	August-08	Wind	3.7	0
59	1	Detroit Edison	48755	October-06	Wind	10	
	N/A**	Detroit Edison	48755	October-06	Wind	10	
60	2	Detroit Edison	48895	April-07	Wind	2.4	
61	3	Detroit Edison	48130	August-07	Solar	2	
62	4	Detroit Edison	48103	September-07	Solar	4	
63	5	Detroit Edison	48198	January-08	Solar	1.1	
64	6	Detroit Edison	48187	February-08	Solar	2	
65	7	Detroit Edison	48063	April-08	Wind	17	

Table 2: Net Metering Installations by Utility, Year Ended June 30, 2009 (continued)

Number of Customers		Utility Company	Zip Code	Starting Month & Year	Technology Type	Generator Size (kW)	Net Excess Generation (NEG, in kWh)
Total	Per Utility						
66	8	Detroit Edison	48302	May-08	Solar	3	
67	9	Detroit Edison	48472	May-08	Wind	3.7	
68	10	Detroit Edison	48843	August-08	Wind	1.8	
69	11	Detroit Edison	48723	September-08	Wind	1.9	
70	12	Detroit Edison	48022	September-08	Wind	2.4	
71	13	Detroit Edison	48726	October-08	Wind	10	
72	14	Detroit Edison	48723	September-08	Wind	1.9	
73	1	Great Lakes Energy	48944	August-09	Wind	1.8	0
74	2	Great Lakes Energy	49050	February-09	Solar	4	0
75	1	Edison Sault	49783	September-08	Wind	1.8	31
76	2	Edison Sault	48684	December-08	Wind	2	9
77	3	Edison Sault	49719	May-09	Wind	2.4	3
78	4	Edison Sault	49719	May-09	Wind	1.2	<1
79	1	HomeWorks Tri-County	48875	December-08	Solar	5	0
80	1	Midwest	49002	February-08	Solar	2	0
81	2	Midwest	49220	March-08	Wind	5	0
82	3	Midwest	49097	August-08	Solar	3	0
83	4	Midwest	46514	November-08	Wind	10	0
84	5	Midwest	49279	December-08	Wind	5	0
85	6	Midwest	43521	January-09	Wind	1.8	0
86	7	Midwest	46530	February-09	Wind	1.8	0
87	8	Midwest	49065	April-09	Solar	2.8	215
88	9	Midwest	49031	June-09	Wind	1.8	0
89	1	Northern States/Xcel	49911	June-09	Wind	3.7	0
90	1	Ontonagon County	49930	Late 1990s[1]	Hydro & Solar	10	0
91	2	Ontonagon County	49913	June-06	Solar	10	0
92	3	Ontonagon County	49930	September-06	Solar	10	0
93	1	Presque Isle	49746	July-08	Wind	2.8	0
94	2	Presque Isle	49776	August-08	Wind	2.8	0
95	3	Presque Isle	49753	August-08	Wind	2.8	0
96	4	Presque Isle	49709	November-08	Wind	2.8	0
97	5	Presque Isle	49709	November-08	Wind	2.8	0
98	6	Presque Isle	49776	September-08	Wind	2.8	0

Table 2: Net Metering Installations by Utility, Year Ended June 30, 2009 (continued)

Number of Customers		Utility Company	Zip Code	Starting Month & Year	Technology Type	Generator Size (kW)	Net Excess Generation (NEG, in kWh)
Total	Per Utility						
99	7	Presque Isle	49707	September-08	Wind	2.8	0
100	8	Presque Isle	49707	January-08	Wind	2.8	0
101	9	Presque Isle	49776	October-08	Wind	2.8	0
102	10	Presque Isle	49746	October-08	Wind	2.8	0
103	11	Presque Isle	43586	November-08	Wind	2.8	0
104	12	Presque Isle	43575	February-09	Wind	2.8	0
105	13	Presque Isle	43590	January-09	Wind	2.8	0
106	14	Presque Isle	49707	June-08	Wind	2.8	0
107	15	Presque Isle	43594	June-08	Wind	2.8	0
108	1	Thumb	48744	June-08	Wind	1.9	0
109	2	Thumb	48744	July-09	Wind	1.9	0
110	1	UPPCo	49829	December-06	Wind	2	0
111	2	UPPCo	49829	May-08	Wind & Solar	7.6	0
112	3	UPPCo	49931	December-08	Wind	1.9	0
113	4	UPPCo	49931	December-08	Wind	1.9	0
114	5	UPPCo	49913	February-09	Wind	3.7	0
115	6	UPPCo	49945	February-09	Wind	3.7	0
116	7	UPPCo	49953	May-09	Wind & Solar	3.1	0
117	8	UPPCo	49916	June	Wind	3	0
118	9	UPPCo	49829	June-09	Wind	1.8	0
119	10	UPPCo	49945	June-09	Solar	2	0
120	11	UPPCo	49807	July-09	Solar	2	0
121	12	UPPCo	49931	August-09	Wind	1.5	0
122	13	UPPCo	49913	August-09	Wind	2.4	0
123	14	UPPCo	49934	August-09	Wind	2.4	0
124	15	UPPCo	49807	August-09	Solar	2.7	0
125	16	UPPCo	49849	August-09	Wind	1.8	0
126	17	UPPCo	49805	September-09	Wind	2.4	0
127	18	UPPCo	49805	September-09	Wind	2.4	0
128	1	We Energies	49886	April 1986[1]	Hydro	2.5	0
129	2	We Energies	49801	November 1983[1]	Hydro	2.5	0
130	3	We Energies	49896	May 1980[1]	Wind	1.8	0
131	4	We Energies	49807	April-07	Solar	0.7	0

Table 2: Net Metering Installations by Utility, Year Ended June 30, 2009 (continued)

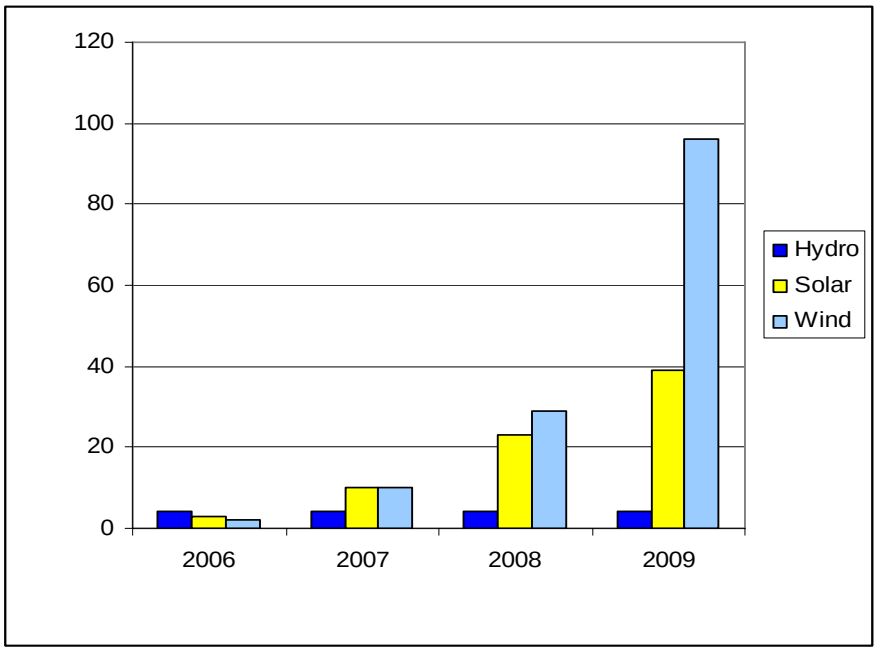
Number of Customers		Utility Company	Zip Code	Starting Month & Year	Technology Type	Generator Size (kW)	Net Excess Generation (NEG, in kWh)
Total	Per Utility						
132	5	We Energies	49874	July-08	Solar	10	0
133	6	We Energies	49896	September-08	Solar	1.2	0
134	7	We Energies	49880	November-08	Wind	5.5	0
135	8	We Energies	49801	December-08	Wind	5.5	0
136	9	We Energies	49812	May-09	Wind	6	0
137	1	WPSC	49893	April-08	Wind	2.5	0
Michigan Total			137 Customers			468.06	15,071

[1]Began operation prior to net metering tariff effective date.

**Customers no longer participating in Net Metering

Alger Delta and Cherryland are now member-regulated and no longer required to submit annual net metering reports. Data for these electric providers is only updated through 2007.

Figure 1: Number of Michigan Net Metering Installations by Technology Type



Note: The total number of installations is higher than the number of customers because a few customers have installed two types of renewable energy (i.e., combined wind and solar generation, or solar and hydro).

Figure 2: Number of Net Metering Customers (through year ending June 30, 2009)

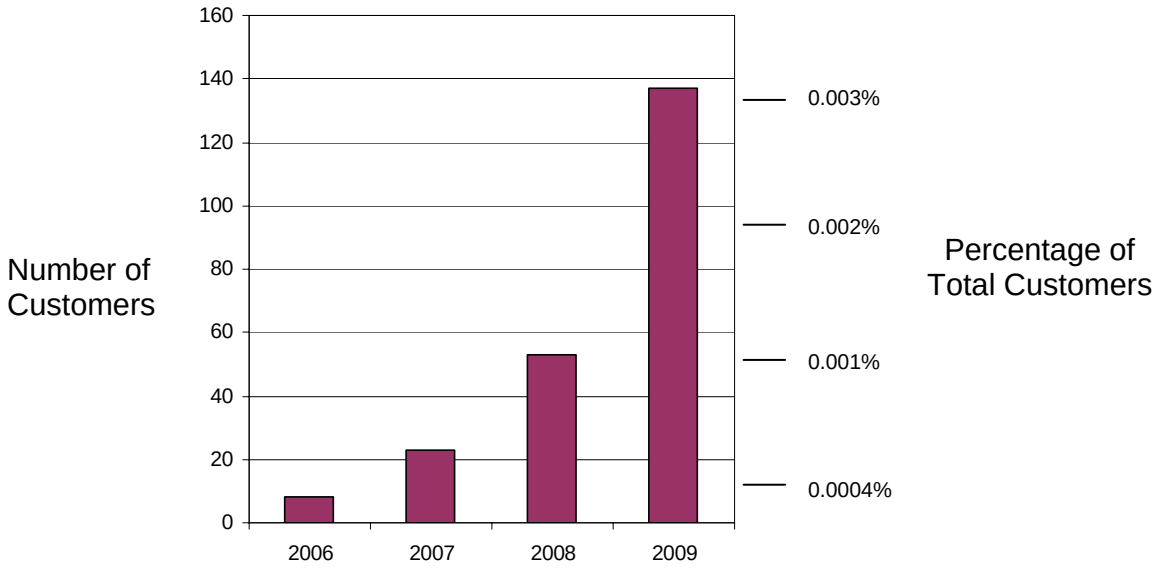


Table 3: PA 295 Minimum Program Size and Net Metering Participation For Category 1, Under 20 kW, Projects

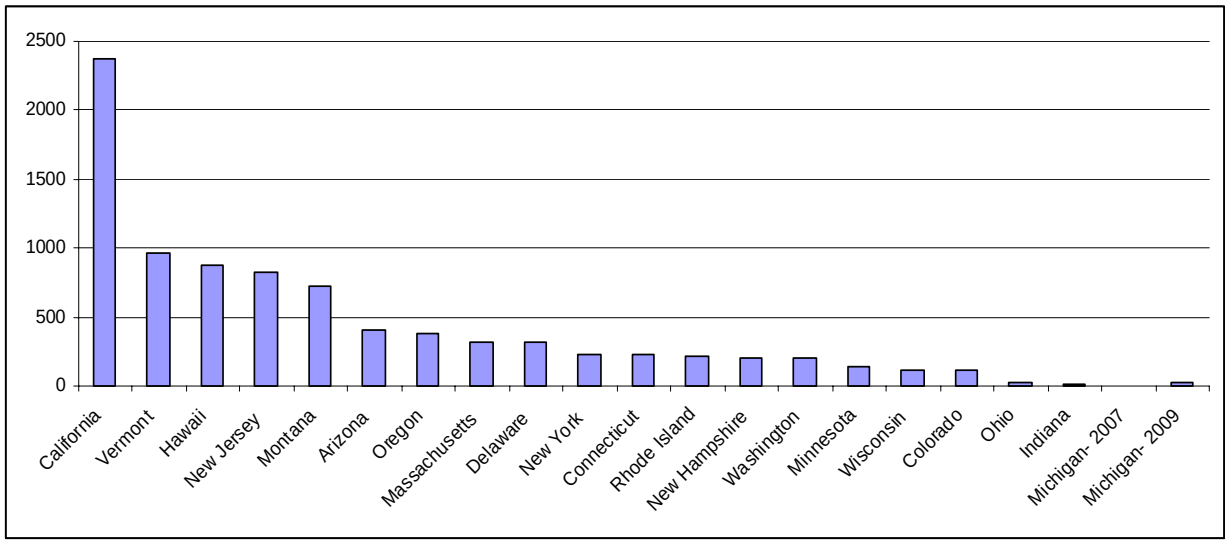
Company	2008 In-State Peak MW	Category 1 PA 295 Minimum Program Size kW	Current Category 1 Actual Participation kW
AEP/Indiana Michigan	629	3,145	45
Alpena	60	300	54
Cloverland	42	210	11
Consumers Energy	7,488	37,440	50
Detroit Edison	10,744	53,720	73
Edison Sault	145	725	7
Great Lakes	236	1,180	6
Homeworks Tri County	74	370	5
Midwest	120	600	33
Northern States/Xcel	31	155	4
Ontonagon	6	30	30
Presque Isle	43	215	42
Thumb	30	150	4
Uppco	144	720	50
We Energies	385	1,925	36
WPSC	154	770	2

Source: The source for in-state peak data for multi-state electric providers is the electric provider. In-state peak data for all other electric providers is from annual reports to the MPSC.[5]

Data for member-regulated providers, Alger Delta and Cherryland, is not shown.

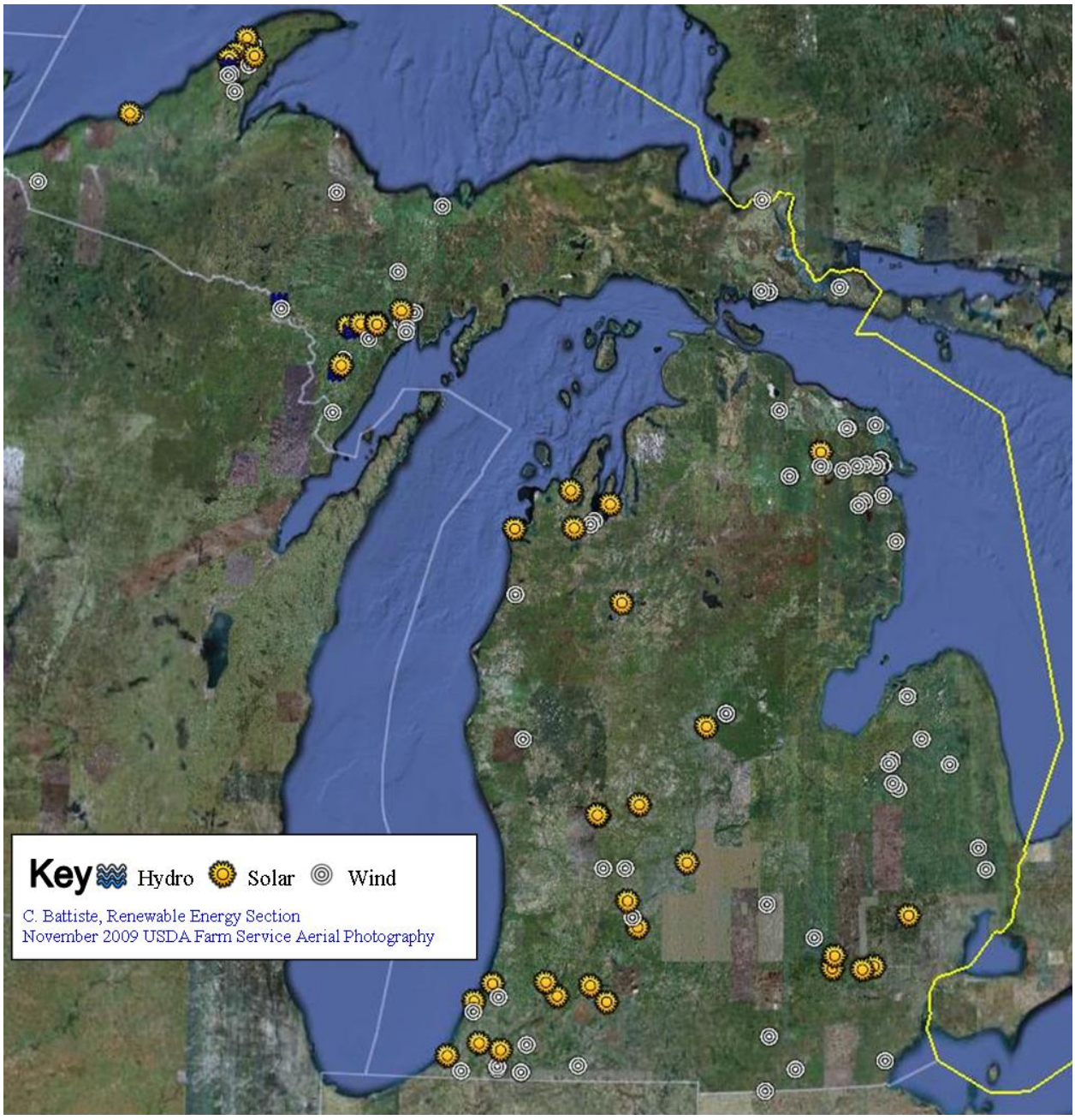
[5] See http://www.michigan.gov/mpsc/0,1607,7-159-16377_41871-214349--,00.html.

Figure 3: Comparative Net Metering Program Participation Rates in Selected States (2007 Net Metering Customers per Million Total Utility Customers)



Source: http://www.eia.doe.gov/cneaf/solar.renewables/page/greenprice/table5_2.xls

Figure 4: Locations of Michigan Net Metering Customers
(Cumulative Installations through June 30, 2009, by Zip Code)



Source: Zip codes of participating net metering customers, provided to MPSC Staff by Michigan electric service providers. Customer identification information (name, address, account number, etc.) is confidential and protected from disclosure by Michigan electric suppliers.

Michigan Net Metering Activities through November 2009

Net Metering Filings

The Commission's *Electric Interconnection and Net Metering Standards* rules include several filing requirements and a waiver option. The various filings are described in this section of the report.

Category 1 Net Metering & Interconnection Application and Interconnection Agreement

On May 1, 2009, electric providers made a joint filing with proposed net metering and interconnection applications and an interconnection agreement.[6] The same application forms and agreement documents are to be used statewide, by all MPSC-regulated electric providers. The Commission approved these documents on an interim basis on May 26, 2009.[7]

Net Metering Tariff Sheets

Rule 40 (1) directs each electric provider to file initial net metering program tariff sheets within 30 days of the effective date of the rules or June 30, 2009, whichever is sooner.[8] [9] However, in an effort to make Category 1 net metering available to customers within the six month goal contained in the legislation, the Commission issued a Minute Action on April 16 urging utilities to strive to file tariffs as soon as possible. The electric providers filed Category 1 net metering tariff sheets early. MPSC Staff and electric providers worked out the details of the tariff sheets. Category 1 tariff sheets have been accepted into each electric provider's rate book.[10]

At the time of this report, all Category 2 and 3 net metering tariff sheets are accepted into electric provider's rate books with the exception of Edison Sault and the cooperative utilities. Staff expects final details will be worked out and these tariff sheets will be accepted into rate books within the next several weeks.

Net Metering Plans for Alternative Electric Suppliers

Rule 40 (2) directs each Alternative Electric Supplier (AES) to file initial net metering program tariff sheets within 30 days of the effective date of the rules or June 30, 2009; whichever is sooner. The The following AESs filed net metering plans in the U-15787 electronic docket: BlueStar Energy Services, Integrys Energy Services, Sempra Energy Solutions, RBS Sempra Energy Solutions, and Constellation NewEnergy.[11]

---

[6] See http://efile.mpsc.state.mi.us/efile/docs/15919/0004.pdf.
[7] See the Commission's May 26, 2009 order at http://efile.mpsc.state.mi.us/efile/docs/15919/0015.pdf.
[8] See http://www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin_Num=46000601.
[9] See http://www.dleg.state.mi.us/mpsc/orders/electric/2009/u-15787minact_04-16-2009.pdf.
[10] Up to date utility rate books for all MPSC-regulated utilities can be found on the Commission's website at http://www.michigan.gov/mpsc/0,1607,7-159-16377_52818_53477-214344--,00.html.
[11] See http://efile.mpsc.state.mi.us/efile/viewcase.php?casenum=15787.

Net Metering Waivers

Rule 12 provides that upon a showing of good cause, an electric utility, AES or other applicant may obtain from the Commission a waiver from one or more provisions of the rules. Through orders approved in MPSC Case No. U-15919, the Commission approved net metering waivers for the following AESs: Spartan Renewable Energy, Wolverine Power Marketing, Commerce Energy, and Direct Energy Services.[12] A waiver was also granted to Bayfield Electric Cooperative. A request from Direct Energy Business is pending. Generally, these waivers allow an AES to delay filing a net metering plan until it begins serving customers in Michigan or in some instances, upon request of net metering service by a customer.

Interconnection Procedures

Rule 15 requires each electric utility to file proposed interconnection procedures and forms within 90 days of the effective date of the rules or by August 3, 2009, whichever is sooner. The electric utilities made a joint filing on August 3, 2009. Pursuant to Rule 15 (7), the Commission established a 30-day comment proceeding with comments due on October 16, 2009. Sixteen parties filed comments during the comment period. Staff is presently reviewing and analyzing the comments, and will prepare a summary for Commission review.

Annual Electric Provider Net Metering Reports

The requirement for annual net metering reporting by each electric provider is contained in Rule 40 (3). MPSC Staff and electric providers are working together to develop a consistent report format to be used in future years.

Additional Programs for Small Renewable Generators

Both Consumers Energy and Detroit Edison have established programs for small solar photovoltaic (solar PV) generators. Consumers Energy's Experimental Advanced Renewable Program (EARP) is designed to offer an alternative to net metering. The Detroit Edison SolarCurrents Pilot program is designed to work in conjunction with net metering, providing additional financial incentives. Here are brief summary descriptions of both programs:

Consumers Energy – Experimental Advanced Renewable Program

- Limited to a total of 2 MW PV, 500 kW reserved for residential customers
- Solar PV only
- Residential generators must be no larger than 20 kW and non-residential generators must be at least 20 kW but not more than 150 kW

[12] See http://efile.mpsc.state.mi.us/efile/viewcase.php?casenum=15919.

- Energy will be purchased from customers under contracts for up to 12 years, with prices ranging from $0.65/kWh to $0.375/kWh, depending on the type of installation (residential versus commercial), and the date when the installation is completed.
- Customers in this program do not participate in net metering
- RECs belong to the utility

Detroit Edison – SolarCurrents Program[13]

- Participants must be full-service electric customers of Detroit Edison
- Participating customers must enroll in net metering
- Limited to 5 MW capacity with the maximum generator size of 20 kW
  - At least half (2.5 MW) is reserved for residential customers
- Solar PV only
- Contract term of 20 years
- Up front REC payment of $2,400 per installed kW and payments of 11 cents/kWh.
  - These payments are expected to total an estimated 50% of the total installed system cost, including a reasonable return on investment
  - Customers will also benefit from the cost savings associated with net metering, which is estimated to provide the remaining 50% of cost
- RECs belong to the utility

Pending Issues

MIRECS Aggregation

A system to aggregate Michigan renewable energy credits (MIRECs) from small renewable energy projects is under development.[14] RECs from net metering projects are owned by the customer and may be sold to any willing purchaser, including any Michigan electric provider. Electric providers will use MIRECS to demonstrate their compliance with the state's renewable energy standard. It would not be cost effective, though, for very small electric generators (like net metering customers) to individually register their generators with MIRECS; the Michigan Renewable Energy Credit Certification and Tracking System. Additionally, generator meters are not required for net metering participation and the expense of installing such a meter may not be insignificant. MPSC Staff is working with the MIRECS contractor, electric providers, and interested stakeholders to develop workable methods for allowing small generators to be aggregated into groups for the purpose of receiving MIRECS certification and tracking at a reasonable cost.

[13] See www.dteenergy.com/solar.
[14] To participate in this stakeholder process, email mirecs@apx.com and ask to be included in the aggregation working group. For more information about Michigan Renewable Energy Certificates, see the MIRECS website, at www.mirecs.org. At the website, interested parties can subscribe to a MIRECS updates email distribution list.

Non-Inverter Based 20 kW and Under Net Metering Projects

Rule 1a of the Commission's Electric Interconnection and Net Metering Standards rules defines a Category 1 Project: :

> "Category 1" means an inverter based project of 20 kW or less that uses equipment certified by a nationally recognized testing laboratory to IEEE 1547.1 testing standards and in compliance with UL 1741 scope 1.1A.

One of the reasons this definition was adopted was to keep Category 1 interconnections simple, so they could be completed in a short time, using a streamlined process. At the time the rules were under development, almost all small renewable energy projects were inverter-based. However, MPSC Staff and utilities have recently become aware of several small wind generator designs that are not inverter-based.

The Commission's March 18, 2009 Order in Case No. U-15787 provides guidance on how to process an application that falls within the Category 1 20 kW and under size criteria, but is not inverter-based:

> The Electric Providers point out that category 1 projects, according to the definition provided in R 460.601a(f), must be inverter based and ask where 20 kilowatt (kW) and under non-inverter based projects are included, if anywhere. The Commission Staff (Staff) has indicated that virtually all 20 kW and under projects are inverter based and that to include small projects that do not conform to the category 1 requirements adds a high level of complexity to the rules to cover a situation that is practically nonexistent. In the rare instance where an applicant proposes a small project that does not fully comply with the category 1 definition, the utility shall process the application using the procedures for category 2 projects. (page 3)

The major difference between the Category 1 and Category 2 application process is that Category 2 project applicants must pay for distribution studies and distribution system upgrades, if necessary, but Category 1 project applicants do not pay for these activities. While it is very unlikely that distribution system upgrades would be necessary for a 20 kW and under project, this situation has already occurred in at least one instance. MPSC Staff is presently researching this issue.

PA 295 Program Size

Table 3 shows the Category 1 net metering program sizes for each electric provider. All electric providers have significant space available below the minimum program size with the exception of Ontonagon. Program participation has reached its minimum program size of 30 kW. Rule 44 of the Electric Interconnection and Net Metering Standards addresses this situation.

> Rule 44. If an electric provider or alternative electric supplier reaches the net metering program size limits in section 173(2) of 2008 PA 295, MCL 460.1173(2), the electric provider or alternative electric supplier shall provide notice to the commission and to all customers that its net metering program is closed and that no new applications will be accepted. All completed applications that are pending at the time the net metering program closes shall be processed and the applicants shall be allowed to participate in the net metering program.

One option to resolve this issue would be for Ontonagon to request a waiver, pursuant to Rule 12, from the Commission to continue accepting net metering applications. Staff will work with Ontonagon on this matter.

Conclusion

Based on MPSC Staff contacts with the public, the new net metering program is viewed as a big step in a positive direction for small renewable energy systems in Michigan. This impression especially applies to the true net metering program available to customers with 20 kW and under net metering projects. In fact, MPSC Chairman Orjiakor Isiogu made this comment in a March 18, 2009 press release:

> "The new statewide net metering program means residential and business customers can add small renewable energy electric generation projects onsite and get credited for the energy they produce in excess of their needs - at the full retail rate. As a result, my fellow Commissioners and I expect the number of net metering customers to skyrocket."[15]

The impact of this new net metering program is not yet reflected in the data in this report because this reporting period ends on June 30, 2009. However, the next reporting period which ends on June 30, 2010 will include almost a full year with the new net metering tariff sheets in effect. All indications are that Michigan consumer interest in small renewable energy systems is growing.

[15] See press release at http://www.michigan.gov/mpsc/0,1607,7-159-16400_17280-210972--,00.html.