

Midwest Energy Solutions Conference

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Inspiring Energy Efficiency Award - Impact

Michigan Farm Energy Program



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Importance of Food and Agriculture in Midwest States



USDA Farm Statistics

Midwest States +

State	Farms	Acres	Ave. Acres	National Rank
Illinois	72,000	27,000,000	375	7th
Indiana	56,100	15,000,000	267	10th
Iowa	86,000	30,600,000	356	2nd
Kansas	58,900	45,800,000	778	6th
Michigan	47,000	9,800,000	209	18th
Minnesota	68,500	25,500,000	372	5th
Ohio	77,800	13,900,000	179	13th
Wisconsin	64,800	14,300,000	221	9th

Michigan's Leading Industries

- Manufacturing
 - Food & Agriculture (\$105B)
accounts for about 22 percent of the state's
employment.
 - Tourism
 - Services
- Forestry & Lumber



Michigan Farm Energy Program

The Michigan Farm Energy Program (MFEP) operations started in Fall of 2009, in response to the low numbers of USDA-REAP funded energy efficiency projects (tied for 50th in two of the initial USDA program's 7 years, no higher than 46th).

The activities of the MFEP and partner organizations resulted in a dramatic rise to 5th by 2012. Michigan has maintained a top 8 ranking ever since and starting 2023,

has the highest USDA-REAP energy efficiency and renewable energy budget allocation in the Midwest.

Since then, the MFEP has expanded beyond certified farm and rural business energy audits to renewable energy assessments and funding assistance, working with Utilities in developing agricultural energy waste reduction programs, inclusion of over 45 agriculture specific energy efficiency options for the Michigan Public Service Commission's (MPSC) Michigan Energy Measures Database.

It also is an advocate of energy issues covering electrical and natural gas line distribution, energy access, energy policy and development. To date, all the major Michigan Utilities have Agricultural measures included in their program, which was not the case before.

Michigan Farm Energy Program (MFEP)

Number of USDA Energy Efficiency Awarded Projects

State	2003-2009 (Average Ranking)	2012-2013 (Average Ranking)	2014-2022 (Average Ranking)	2023-2024 (Average Ranking)
Iowa	1 st	1 st	1 st	
Nebraska	2 nd	2 nd	2 nd	
Minnesota	3 rd	4 th	3 rd	
Illinois	4 th	7 th	4 th	
North Carolina	5 th	3 rd	5 th	
Michigan	48 th	5 th	8 th	1 st



Michigan Farm Energy Program

Potential Savings

No.	Operation	Savings (kWh)	% Savings	Total Annual Savings (\$)	Total Owner cost to Implement (\$)	Payback Time (years)	Potential Average Annual Savings (\$)
137	Dairy Farms	12,118,276.69	34.09	\$1,345,360.47	\$3,020,553.36	2.25	9,820.15
86	Grain Drying	28,934,266.53	28.74	\$1,471,091.20	\$14,345,683.31	9.75	17,105.71
85	Greenhouse	78,023,166.85	27.14	\$2,339,792.62	\$11,875,952.42	5.08	27,526.97
31	Food/Fruit Process	2,963,535.08	40.27	\$405,878.00	\$2,308,154.52	5.69	13,092.84
25	Irrigation	6,196,992.63	54.98	\$519,823.89	\$2,026,804.00	3.90	20,792.96
14	Crops	738,090.93	7.34	\$61,808.00	\$204,272.00	3.30	4,414.86
5	Beef	69,076.00	13.58	\$9,913.00	\$19,476.00	1.96	1,982.60
4	Hogs	198,264.00	14.34	\$18,002.00	\$59,718.00	3.32	4,500.50
7	Poultry	55,506,149.16	59.40	\$1,174,644.00	\$3,987,262.00	3.39	167,806.29
55	Rural Business	16,314,709.53	35.94	\$1,007,076.93	\$3,368,851.84	3.35	18,310.49
1	Integrated Farm	11,358.00	93.59	\$1,693.00	\$3,480.00	2.06	1,693.00
6	Maple	262,103.48	61.37	\$25,957.31	\$210,911.07	8.13	4,326.22
6	Fish Hatcheries	2,854,659.70	14.45	\$174,334.00	\$320,399.00	1.84	29,055.67
1	Biomass	837,391.77	87.03	\$42,595.00	\$394,116.00	9.25	42,595.00
29	Solar	5,499,258.00	50.30	\$2,166,267.65	\$10,082,082.00	4.65	74,698.88
462	Audit Total	204,190,648.58	33.29	\$8,555,374.42	\$41,751,517.52	4.88	18,518.13
194	Renewable Energy	39,642,794.77	67.68	\$4,114,813.14	\$26,671,157.11	6.48	21,210.38
656	Grand Total	243,833,443.35	36.29	\$12,670,187.56	\$68,422,674.63	5.40	19,314.31

In the Farming and Rural Business Community “Word by Mouth” still plays an important role in this AI world.

Don't take my word for it. Hear what Michigan farmers have to say about our energy audit activity.

What is a Farm Energy Audit?

<https://www.youtube.com/watch?v=yp3apNcdi-I>

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MICHIGAN FARM ENERGY PROGRAM



**MICHIGAN STATE
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