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The Voice of Michigan's Energy Efficiency Contractors

www.MEECA.info

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INTRODUCTION

In August of 2013, leaders in Michigan's energy efficiency industry formed an association to support energy efficiency contractors.

The Michigan Energy Efficiency Contractors Association (MEECA) is a contractor lead trade association created to serve our core members: Companies that design, recommend, install or evaluate energy efficiency solutions in residential, commercial, industrial and agricultural buildings.

MEECA works towards the following goals:

- Advocate that Michigan has the most robust, reliable, qualified and predictable energy efficiency industry in the nation.
- Increase the awareness of legislators and policy makers on how important the energy efficiency industry is for Michigan's economy, the health of its citizens, its environment, and the sustainability of its businesses.
- Support education, training and professional development programs that create, attract and retain a world-class energy efficiency workforce.
- Promote proven technologies, products and practices that increase the energy efficiency of Michigan's residential, commercial and industrial buildings.



INTEGRATED ENERGY EFFICIENCY MARKET

We advocate at the state legislative and regulatory levels to see that Michigan has the most *robust, reliable, qualified* and *predictable* energy efficiency industry in the nation.

On behalf of our members, MEECA works tirelessly across multiple sectors to build an *integrated energy efficiency market* for Michigan (see Figure 1).



75 CURRENT MEMBERS

1. **Advanced Energy Management**, Montague
2. **Allstate Energy Solutions**, Bloomfield Hills
3. **Behler-Young**, Grand Rapids
4. **Better World Builders**, Kalamazoo
5. **Blue Terra Energy, LLC**, Houghton
6. **Bright Green Ideas**, Mt. Clemens
7. **Building Performance Solutions**, Warren
8. **Cappy Heating & Air Conditioning**, Livonia
9. **CLEAResult**, East Lansing
10. **Comfort First**, Lansing
11. **Consumers Energy**, Jackson
12. **DeCiBel Energy**, Detroit
13. **Development Solutions**, Temperance
14. **DNV GL**, Okemos
15. **Dow Building Solutions**, Bay City
16. **Dr. Energy Savers**, Lansing
17. **Eco Refrigeration**, Greenville
18. **Ecotelligent Homes**, Farmington Hills
19. **Efficient NRG Consultants**, Brighton
20. **Electrical Security Management**, Grand Ledge
21. **Energy Alliance Group**, Ann Arbor
22. **Energy Savings Services**, Kalamazoo
23. **Energy Sciences**, Birmingham
24. **Energy Wise America**, Northville
25. **Franklin Energy**, East Lansing
26. **GreenFIT Homes**, Rockford
27. **Great Lakes Home Performance**, Eagle
28. **Green Home Energy**, West Bloomfield
29. **GreeningDetroit.com**, Detroit
30. **Homeland Builders of Michigan**, Ann Arbor
31. **ICF International**, Detroit
32. **The Insulation Man**, Chesterfield
33. **Lean & Green Michigan**, Southfield
34. **J&J Refrigeration Co., Inc.**, Clarkston
35. **Meadowlark Energy**, Ann Arbor
36. **Michigan Energy Options**, East Lansing
37. **Michigan Geothermal Energy Association**, West Bloomfield Hills
38. **Michigan Energy Innovation Business Council**, Grand Rapids
39. **Newman Consulting Group, LLC**, Farmington Hills
40. **Oscar W. Larson**, Clarkston
41. **Parker-Arntz Plumbing & Heating**, Greenville
42. **Pure Eco Environmental Solutions**, Troy
43. **6 Insulation Services**, Novi
44. **Solutions for Energy Efficiency Logistics (SEEL)**, Detroit
45. **Spark Building Energy Solutions**, Livonia
46. **T.A. Forsberg Realty Company**, Okemos
47. **Vantuara Energy Services**, Grand Rapids
48. **Wisconsin Energy Conservation Corporation**, Traverse City
49. **YouKnowWatt**, Belleville

26 INDIVIDUAL MEMBERSHIPS:

**Dr. Debra Rowe, Ph.D., Oakland
Community College
CLEAResult (25)**

BOARD OF DIRECTORS

MEECA is governed by a board of directors with the following structure. The president and vice-president must be Contractor Members.

- 9 – Contractor Representatives
- 2 – Associate Representatives
- 2 – Manufacturer Representatives
- 2 – Implementation Contractors

OFFICERS

PRESIDENT

Brad Bartholomew
Energy Savings Services

VICE PRESIDENT

Amanda Godward
Ecotelligent Homes

TREASURER

Todd O'Grady
Michigan Saves

SECRETARY

Shelley Sullivan
Energy Sciences

AT LARGE

Ryan Oswald

Pure Eco Environmental Solutions

Alex Van Rijn

Building Performance Solutions

Mark Allen

DNV GL

Shannon Morrow

SEEL

Bryan Houck

Vantaura Energy Services

Pete Kiser

Behler-Young

ENERGY EFFICIENCY WORKS FOR MICHIGAN!

- ❑ **Energy Efficiency Employs the Most Energy Cluster Workers**
 - Energy efficiency employs 46,000 or 55% of the Energy Cluster work force.
 - Demand for energy efficiency practices and services have increased as consumers seek ways to reduce energy cost in their homes and businesses. The Majority of the industries revolve around the construction-related activities that improve energy efficiency of buildings.¹

- ❑ **Energy Efficiency Contributes Billions of Dollars to the Economy**
 - According to a MEECA survey \$58-million of EO incentives targeted at commercial and industrial sectors in 2013 resulted in \$1.2 billion in efficiency upgrades, a \$1-to-\$21 ratio of incentive to project-related investment.²

- ❑ **Michigan Voters Support Energy Efficiency**
 - According to a poll commissioned by the Michigan Conservative Energy Forum, 84 percent of voters – including 95 percent of Democrats, 82 percent of independents, 74 percent of Republicans and 66 percent of self-identified Tea Party voters – support policies requiring Michigan’s electric utilities to provide more programs for customers to improve the energy efficiency of their homes and businesses.³

- ❑ **Michigan’s Energy Efficiency Manufacturing Companies Selling Growing Global Market**
 - According to a 2012 report from the Michigan Energy Innovation Business Council, energy efficiency manufacturing in Michigan contributes \$2.3 billion each year to the Michigan economy.⁴

- ❑ **Cost Effective Energy Efficiency Improvements are Still Possible**
 - A strong EO program without a program-spending cap could result in \$22 billion in total output, including more than 163,000 job-years supported and \$7.6 billion in employment compensation over 10 years. In comparison, continuing the program while retaining the cost cap could result in \$8.1 billion of total output, including over 60,000 job-years supported, and \$2.8 billion in employment compensation over 10 years.⁵

¹ Pure Michigan work force development agency. Energy cluster workforce analysis, January 2013.

² Michigan Energy Efficiency Contractors Association, “Evaluation of Michigan’s 2013 Commercial & Industrial Programs: A Measure of Energy Efficiency Economic Impact,” January 2014

³ Public Opinion Strategies, “Memorandum: New Michigan Polling Shows Strong Support for Renewable Energy and Energy Efficiency Initiatives,” prepared for the Michigan Conservative Action Forum, January 2014.

⁴ Michigan Energy Innovation Business Council, “Economic Impact of Residential/ Commercial Energy. Efficient Products in Michigan,” May 2012.

⁵ “Economic Impact of Energy Optimization Program. Scenarios in Michigan, 2014 to 2023.” Michigan Conservative Energy Forum. 2014.

RECOMMENDATIONS TO EXPAND MICHIGAN'S ENERGY OPTIMIZATION PROGRAMS

As a member of the Senate Energy Efficiency and Renewable Energy Workgroup convened in the summer of 2014, MEECA made the following recommendations to expand Michigan's efficiency industry.

1. Eliminate the 2% Spending Cap

Current law limits the amount of investment utilities can make into energy efficiency programs. It has been well documented that energy efficiency is the cheapest form of energy available for dispatch by utility companies. Further investment into energy efficiency provides solutions to a myriad of issues pressuring utilities.

2. Increase Savings Goals Period to 10 Years

Predictability in the energy efficiency market is critical to ensure investment made into businesses that manufacture, design and install energy savings technology will yield a return. State energy policy needs to take a long view to encourage investment into the energy efficiency industry.

3. Set Progressive and Achievable Savings Goals: Electric 14% and Gas 9.5%

MEECA proposes setting energy efficiency resource standards that are progressive and achievable: 14% for electric and 9.5% for gas over a 10-year period. Further, MEECA proposes incremental increase of energy savings that peak at a 2% per year electric goal and a 1.25% per year gas goal responsibly ramping up deployment of the energy efficiency resource.

4. Incent Utilities Appropriately with a Two-tiered System

It needs to be understood that investor owned utilities respond more favorably to state regulation should they be financially rewarded. PA 295 has an either/or utility incentive mechanism in place allowing utilities to earn incentives for hitting their savings goal. MEECA proposes a two-tiered incentive mechanism: one level for hitting the savings goal, a second for over-achieving that goal.

5. Deploy Deeper Measures

MEECA emphasizes the importance of deploying deeper savings measures (those that are more permanent, i.e. HVAC systems, air-sealing, insulation) as a way to increase the reliability of the energy efficiency resource. Installation of these types of measures employs more people and provides greater value over the life-cycle of the measure.

6. Increase EO Program Period to 3-years

Currently, programs are designed to run for a single-calendar year starting in January with operations stopping in November allowing time for submittal of reports. MEECA proposes extending EO program period to 3-years minimizing year over year changes and giving contractors and customers better predictability in program offerings.

ENERGY EFFICIENCY PROVIDES SOLUTIONS

MEECA works within a complicated framework of energy policy where other issues get more attention from legislators and the media. We advocate that energy efficiency should be considered first in policy discussions and in establishing Michigan's no regret energy policies as it provides solutions to these other issues garnering more attention. MEECA's ranking of energy issues and solutions provided by energy efficiency:

1. EPA Clean Power Plan

The least costly, most beneficial building block available to utilities for compliance with the proposed Clean Power Plan is expansion of our energy efficiency programs.

2. System Generation Capacity

Concern expressed about forecasted generation shortfall can be alleviated by lowering the base-load and flattening peak demand, both of which are best accomplished by expanding energy efficiency.

3. Customer Utility Choice

There is no question that cost-recovery of building and maintaining electric generation assets is a significant concern for Michigan's utility companies. Michigan's Energy Optimization programs have proven to successfully delay investment into new generation. Expanding energy efficiency is a way to further protect rate-payers from shouldering investment into what could otherwise be unnecessary generation.

4. Renewable Energy

Why build any unnecessary electric generation, including that from renewable sources? Expanded energy efficiency deployment will minimize the amount of investment into utility-scale renewable energy.

5. Energy Efficiency

By focusing on eliminating energy waste and expanding energy efficiency throughout Michigan, the policy discussions that are just now coming to a head would be more focused on rate-payers and helping them better manage their energy consumption.

ENERGY EFFICIENCY: THE CHEAPEST ENERGY RESOURCE

The current discussions focused on Michigan’s future energy policy need to be grounded in utilizing the least cost resource available energy efficiency. Policies that do not fully embrace mechanisms that ensure deployment of low-cost energy resources will foist unnecessary cost burdens on the shoulders of Michigan ratepayers.

On February 13, 2014 the Michigan Public Service Commission (MPSC) released their report titled, “Implementation of the P.A. 295 Renewable Energy Standard and the Cost-Effectiveness of the Energy Standards.” This report details the cost-effectiveness of the renewable portfolio standards (RPS) and the energy efficiency resource standards (EERS) contained in the act.

This report establishes the levelized cost of **\$133 per MWh** for a new conventional coal-fired power facility were such a unit to be constructed here in Michigan. Further, the MPSC establishes the average weighted levelized cost of renewable energy for Michigan as follows in Table 1:

Table 1: Weighted Average Levelized Renewable Energy Contract Prices

Consumers Energy					
Technology	Wind	Digester	Biomass	Landfill	Hydro
Weighted Average	\$90.60	\$137.77	NA	\$106.21	\$121.31
Detroit Edison					
Technology	Wind	Digester	Biomass	Landfill	Hydro
Weighted Average	\$64.59	NA	\$98.94	\$98.97	NA
Combined Weighted Average	\$74.52	\$137.02	\$98.94	\$104.05	\$121.31

Table 2 below captures the average weighted cost of renewables (**\$76.55/MWh**) compared to Energy Optimization cost of conserved energy weighted average (**\$20/MWh**).

This data clearly shows that Energy Optimization is the least cost resource available for Michigan ratepayers.

Table 2: Cost Effectiveness of Energy Optimization and Renewable Energy Standards

Energy Optimization Cost of Conserved Energy Weighted Average (\$/MWh)	\$20.00
Renewable Energy Weighted Average Cost (\$/MWh)	\$76.55
Combined Weighted Average Cost of Energy Optimization and Renewable Energy (\$/MWh)	\$37.00
Source: EO cost data assumes EO plans renew similar measures on a yearly basis through 2029 (corresponding to the 20 year period of the initial 2009 renewable energy plans) Renewable energy cost data is based on levelized costs provided as part of the renewable energy contract approval process.	

The MPSC report did not compare the cost of coal, renewables and energy efficiency compared to that of natural gas generation. That information can be found in the Energy Information Agency report titled, “Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2014.” The table below shows the levelized costs of all types of generation:

U.S. Average LCOE (2012 \$/MWh) for Plants Entering Service in 2019

Plant Type	Capacity Factor (%)	Levelized Capital Cost	Fixed O&M	Variable O&M (including fuel)	Transmission Investment	Total System LCOE	Subsidy¹	Total LCOE including Subsidy
Dispatchable Technologies								
Conventional Coal	85	60.0	4.2	30.3	1.2	95.6		
Integrated Coal-Gasification Combined Cycle (IGCC)	85	76.1	6.9	31.7	1.2	115.9		
IGCC with CCS	85	97.8	9.8	38.6	1.2	147.4		
Natural Gas-fired								
Conventional combined Cycle	87	14.3	1.7	49.1	1.2	66.3		
Advanced Combined Cycle	87	15.7	2.0	45.5	1.2	64.4		
Advanced CC with CCS	87	30.3	4.2	55.6	1.2	91.3		
Conventional Combustion Turbine								
Conventional Combustion Turbine	30	40.2	2.8	82.0	3.4	128.4		
Advanced Combustion Turbine	30	27.3	2.7	70.3	3.4	103.8		
Advanced Nuclear	90	71.4	11.8	11.8	1.1	96.1	-10.0	86.1
Geothermal	92	34.2	12.2	0.0	1.4	47.9	-3.4	44.5
Biomass	83	47.4	14.5	39.5	1.2	102.6		
Non-Dispatchable Technologies								
Wind	35	64.1	13.0	0.0	3.2	80.3		
Wind – Offshore	37	175.4	22.8	0.0	5.8	204.1		
Solar PV ²	25	114.5	11.4	0.0	4.1	130.0	-11.5	118.6
Solar Thermal	20	195.0	42.1	0.0	6.0	243.1	-19.5	223.6
Hydroelectric ³	53	72.0	4.1	6.4	2.0	84.5		



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