



The Source on Energy Efficiency



Energy Efficiency: The Impact on Michigan's Economy

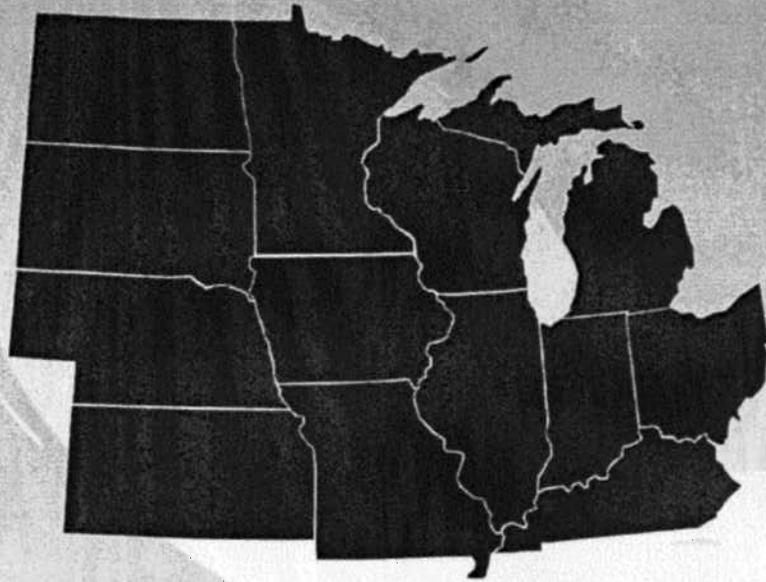
**March 25, 2013
Governor's Energy Forum**

**Stacey Paradis, Deputy Director
Midwest Energy Efficiency Alliance**

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Midwest Energy Efficiency Alliance (MEEA)



- ❖ **MEEA is a non-profit membership organization with 150+ members, including:**
 - Utilities
 - State and local governments
 - Manufacturers and retailers
 - Academic and research institutions
 - Energy service companies and contractors
 - Advocates
- ❖ **Since 2000, MEEA has been the leading source for raising awareness and advancing sound EE policies and programs** in the 13 Midwestern states – including Michigan
 - Support sustainable economic development
 - Cost effective efficiency programs
 - Advanced building energy codes
- ❖ **MEEA balances the diverse interests of its members and network** across the public and private sectors, creating a common ground to affect positive change for EE in the Midwest.

Michigan is one of MEEA's core states

MEEA's Michigan-based members include:

- ❖ Building Science Energy Services
- ❖ Consumers Energy
- ❖ DTE Energy
- ❖ Holland Board of Public Works
- ❖ Inspired Green
- ❖ Michigan Economic Development Corporation, Michigan Energy Office
- ❖ Michigan Electric Cooperatives Association
- ❖ Michigan Energy Options
- ❖ SEEL, LLC.



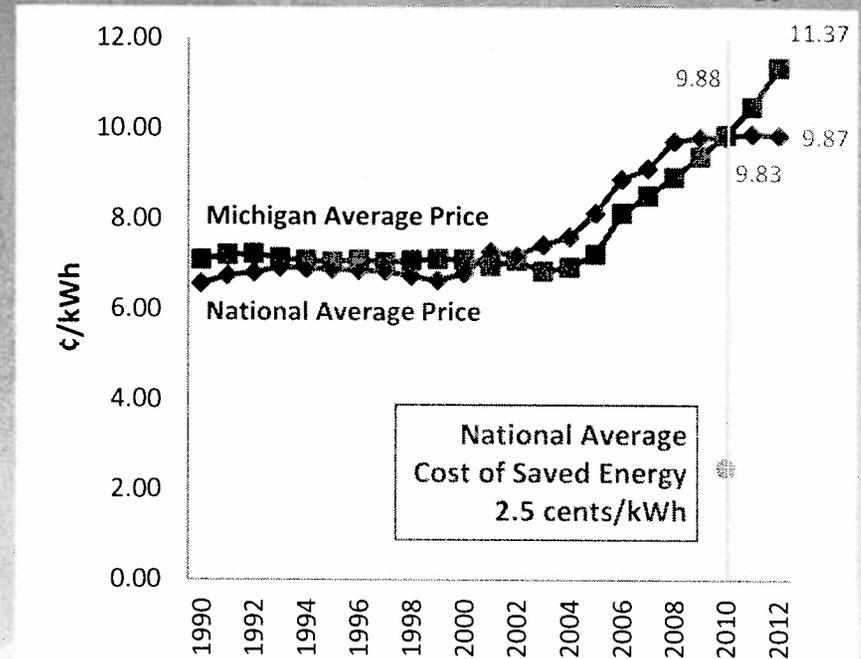
MEEA's extensive EE activities in MI include:

- ❖ Support & collaboration on MI's Building Energy Codes
- ❖ Energy Expos, involving major MI industry (*Dow Building Solutions, Guardian Industries, Whirlpool*)
- ❖ SSL workshop, in partnership w/ MI Energy Office and MI SSL Assn, to demonstrate the benefits of advanced lighting and design to building community; highlight fundamentals of EE lighting; and, review EE programs and best practices

What is Energy Efficiency?

- ❖ EE is a technology-driven process that doesn't mean doing less – rather, it allows **consumers to do as much, or more, while using less energy to get it done**
- ❖ Examples of EE include installing a better light bulb, or insulating a building so it wastes less energy.
- ❖ EE plays an essential role in the supply and demand dynamics that control cost and availability of the electricity and natural gas that our homes, businesses, and industries
- ❖ **Why is Energy Efficiency important? *It helps to control energy costs.***
 - ❖ EE is the *first step* in ensuring low-cost, reliable energy in Michigan.
 - ❖ EE is a *least-cost supply-side resource* – The national average cost of saving 1 kWh of electricity was 2.5 cents in 2010, vs. the national average retail price of electricity and the average electricity prices in MI of ~9.9 cents per kWh
 - ❖ **EE = at least 3x cost savings, compared with generation**

Average customer cost of electricity compared to cost of saved energy



Source: EIA, ACEEE

MI's Energy Efficiency Policy, PA 295 (2008) & Governor Snyder's Energy Message

- ❖ PA 295 created mandatory EERS (Energy Optimization, or "EO" Standard) for MI's electric and natural gas utilities (including IOUs, municipals, and co-ops)
- ❖ **PA 295 set hard savings targets:**
 - Initial incremental energy savings requirements for 2009, ramping up to annual savings of 1% of total annual retail electricity sales and 0.75% of natural gas by 2012
 - 1% annual requirement is constant from 2012 through 2015
- ❖ **Energy Efficiency is a key means to meet MI's future energy needs**
 - In Governor Snyder's November 2012 address on MI's energy plan, he stated that EE is the ***"best example of a no-regrets policy Michigan can have."***
 - Gov Snyder remarked that EE ***"makes [MI] more reliable, more affordable and protects our environment"***
 - 1) Reliability of energy supply – EE can improve reliability by reducing peak load
 - 2) Affordable energy costs for businesses, industry, and homes – EE is the least-cost method to meet future demand
 - 3) Environmental protection and public health - Reduces impacts by avoiding new generation

Midwest Efficiency Targets and Funding Levels

Michigan Estimate

2010 \$137 million
2015 \$270 million

Regional Estimate

2010 \$1.18 billion
2015 \$1.67 billion

Minnesota

1.5% elec by 2010
1.5% gas by 2010 (statute)
*lowered to 1.0% gas under
Commission authority*

Wisconsin

No specific targets
0.63% elec current est.
0.48% gas current est.

Michigan

1% elec by 2012
0.75% gas by 2012

Iowa

Set on a utility basis
1.4% elec current est.
1% gas current est.

Ohio

2% elec by 2019

Illinois

2% elec by 2015
1.5% gas by 2017

Indiana

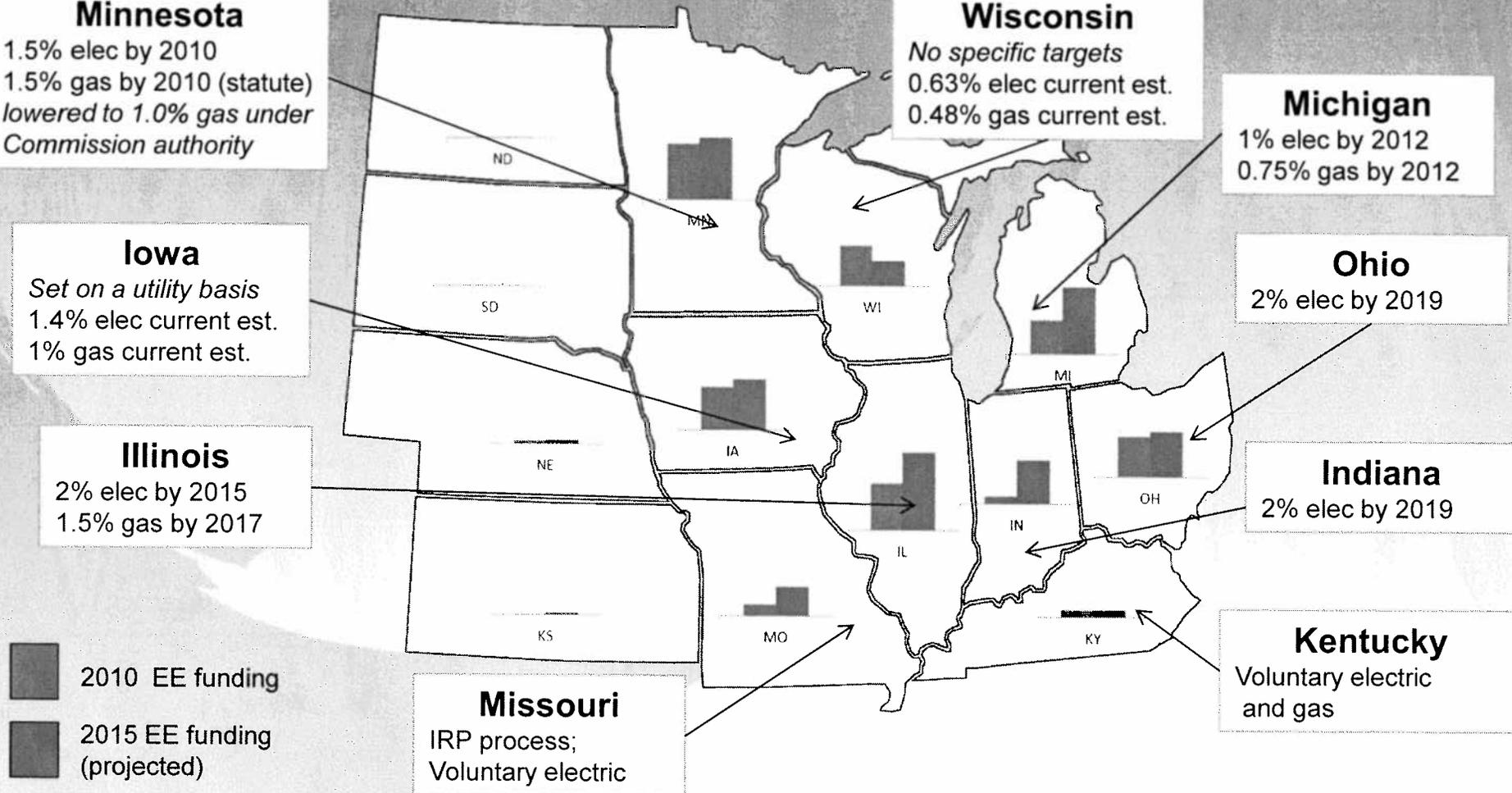
2% elec by 2019

Kentucky

Voluntary electric
and gas

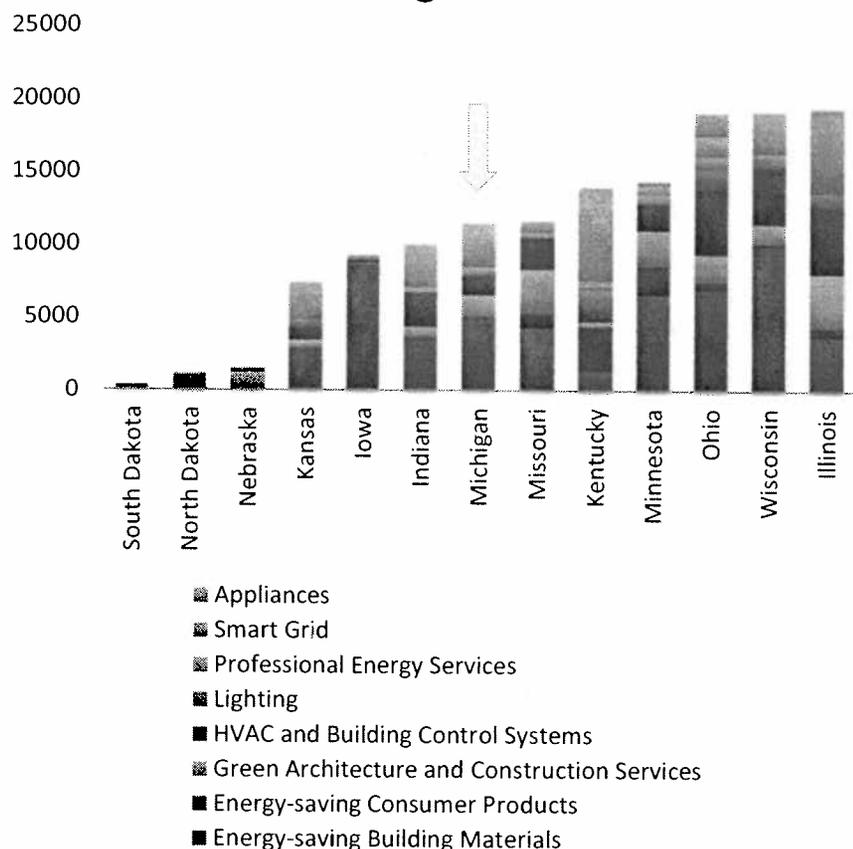
Missouri

IRP process;
Voluntary electric

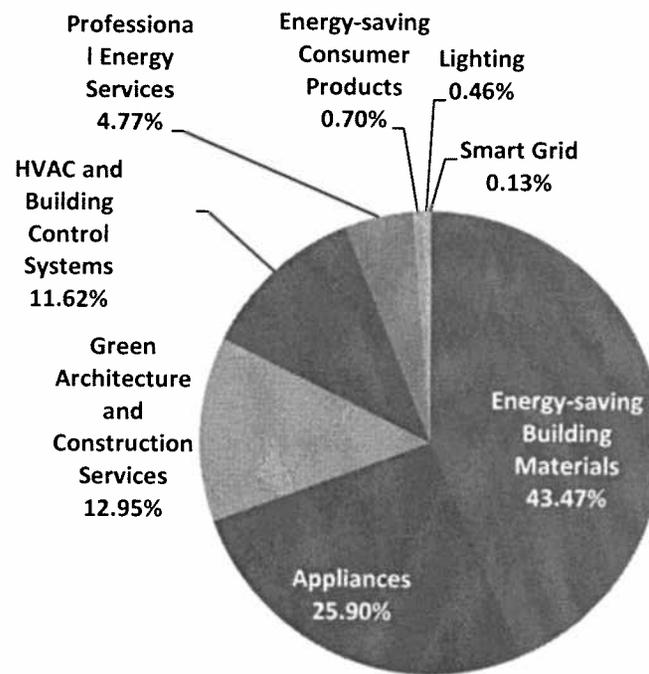


Michigan Jobs in Energy Efficiency Market in 2010

Comparison of states in MEEA region



Categories as percent of EE-related jobs in Michigan

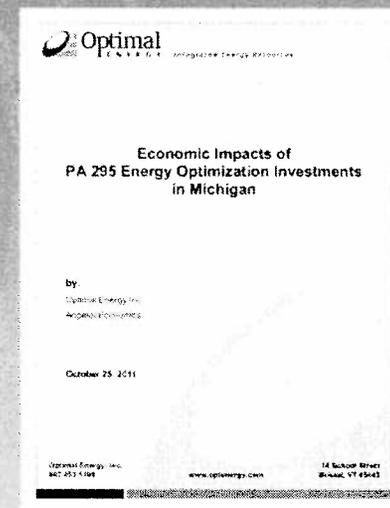


Total MI Jobs, 2010: 11,501

Source: Brookings, 2011, using data from NBLs and Dun & Bradstreet

Statewide, Energy Efficiency Investment in Michigan = Jobs

- ❖ **Michigan PSC-commissioned report by Optimal Energy** estimates jobs impact in 2010 and jobs generated over a 20-year lifetime, and GSP and business sales impacts
- ❖ **Resulting impacts attributed to:**
 - **Direct effects** - from utility and participant spending on program implementation;
 - **Multiplier effects** – indirect spending on goods and services used in programs, and induced impacts from the spending of wages and re-spending of savings.



Leverage of EO Program Spending over 20 years

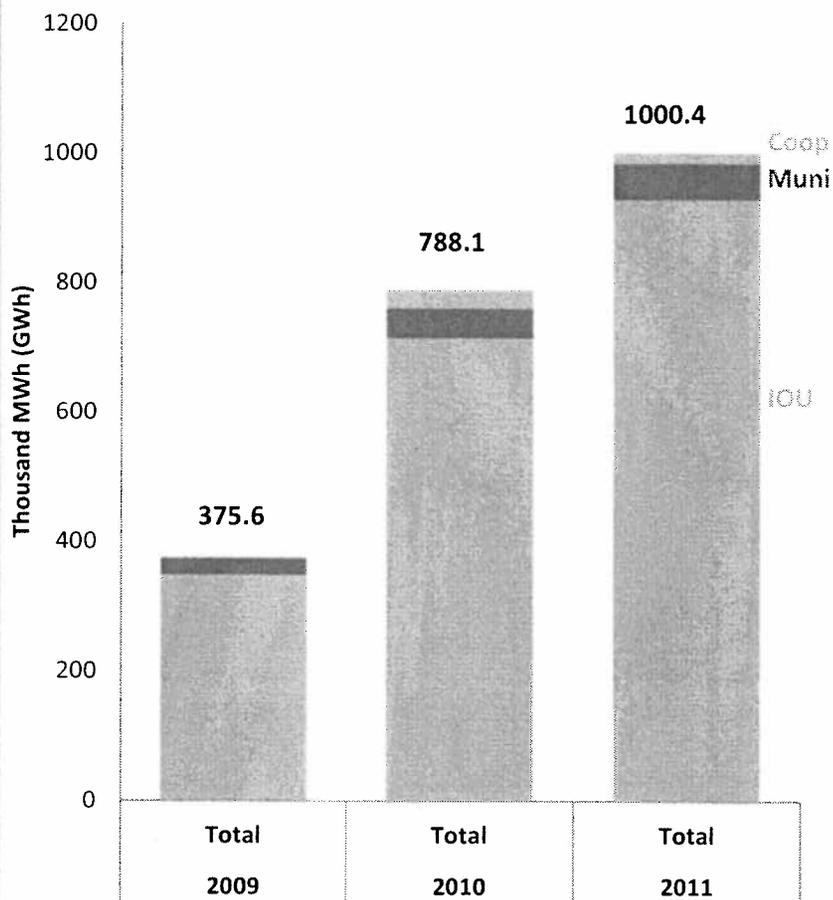
Impact Type	2010	Lifetime (20 year horizon)
Jobs (<i>job-years</i>)	1,547	13,131
GSP Increase (<i>million</i>)	\$119	\$983
Personal Income Increase (<i>million</i>)	\$89	\$601

Net Economic Impacts of EO Program Spending

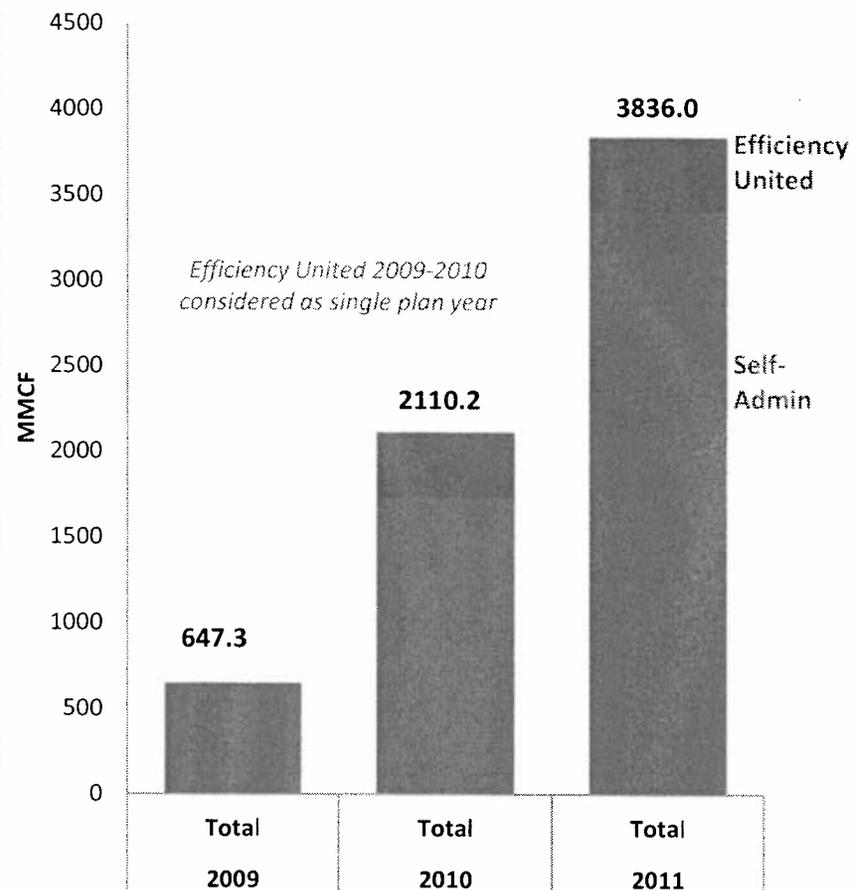
From spending in 2010	Ratios
Job-years per \$million	101
GSP Increase per \$1	\$7.50
Personal Income per \$1	\$4.60

MI Energy Optimization Savings, 2009-2011

Electric Savings, 2009-2011



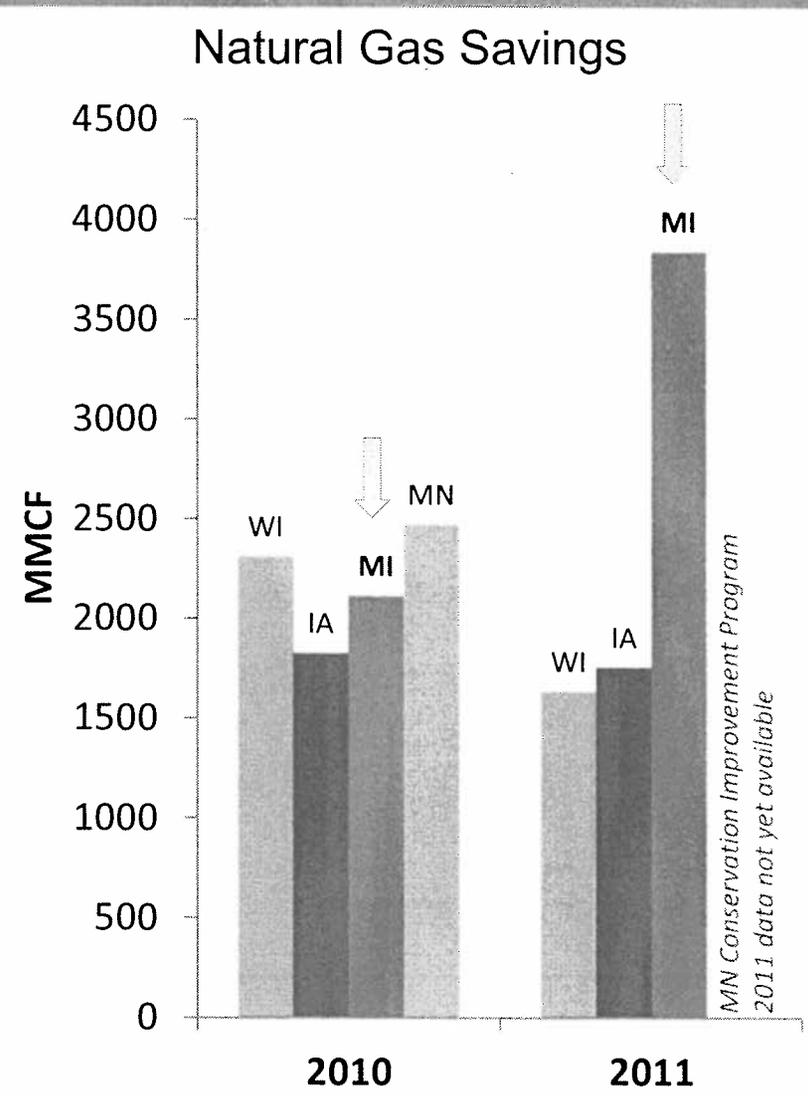
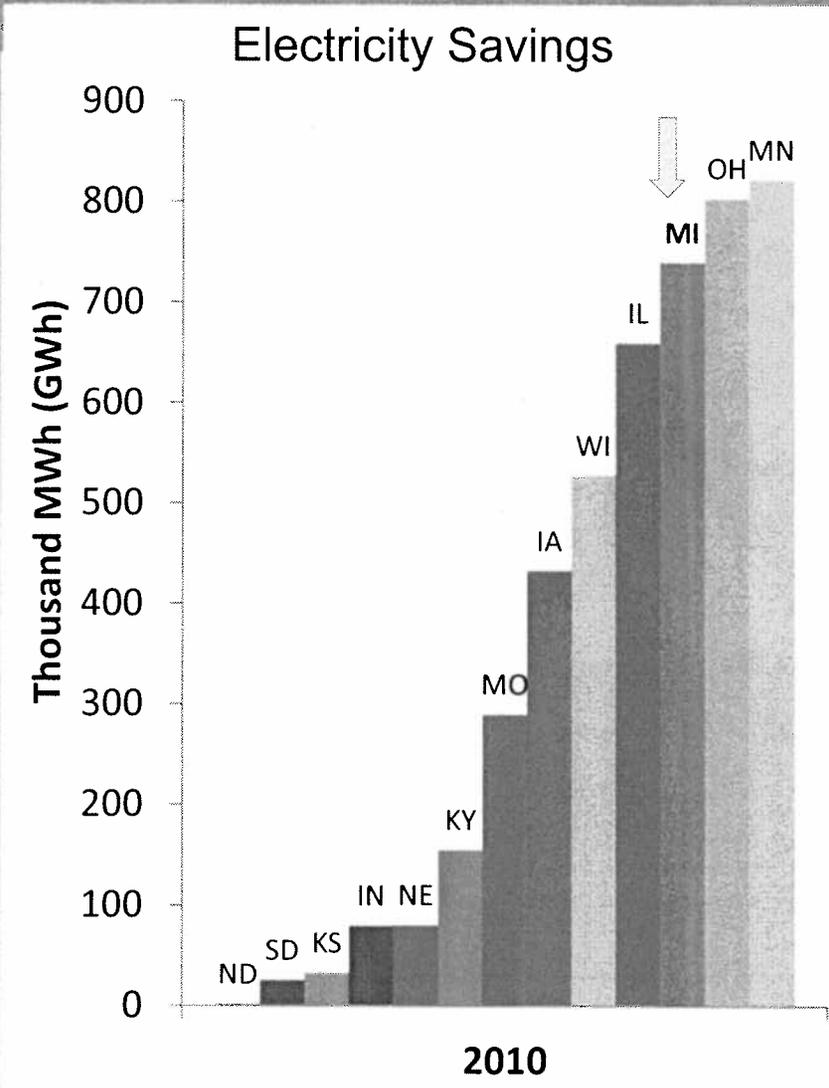
Natural Gas Savings, 2009-2011



Michigan's Energy Optimization Program Impact

- For every **\$1 invested** in energy efficiency programs, **\$3.55 returned** in energy benefits
 - Direct savings for consumers and businesses
 - Money that they can invest in their families, homes and communities
 - Making local businesses more competitive

Comparison with Other Midwest States



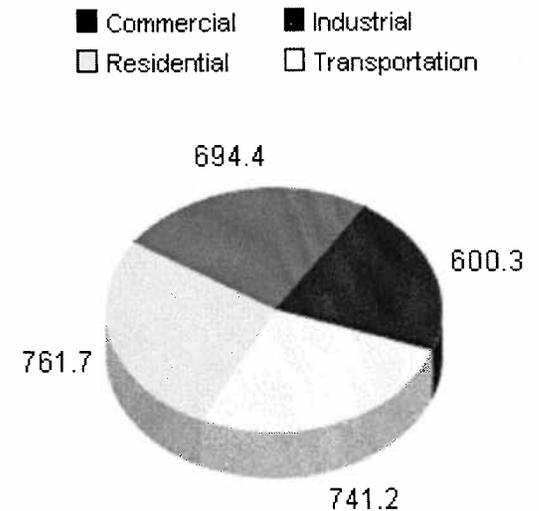
MI's Manufacturers and Businesses Depend on Low-Cost Energy

- ❖ Manufacturing accounts for 26% of MI's total energy use, MI ranks 11th in industrial energy use nationwide
- ❖ This sector faces mounting pressures with increasing energy rates and environmental compliance costs
- ❖ Availability of effective EE programs and financing is key to:
 - 1) maintain competitiveness;
 - 2) retain skilled workforce;
 - 3) increase productivity; and
 - 4) assure manufacturers remain in the State and continue to contribute to the GSP

MI's key manufacturers are investing in EE:

- ❖ Auto Industry – GM (*Lansing Assembly Plant Energy Star certification*); Ford (*Energy Star Award for Sustained Excellence for reducing energy used to manufacture vehicles*)
- ❖ Auto Industry Supply Chain - Guardian Industries (*participated in MI Energy Expos; manufactures energy efficient glass products*)
- ❖ Building/Housing Products and Components: Dow Building Solutions (*manufactures insulation to make homes/buildings more energy efficient*)
- ❖ Appliances: Whirlpool (*global leader in energy efficiency appliance manufacturing*)

MI Energy Use by Sector, 2010 (million Btu)



Dow Building Solutions

Energy Efficiency: Forward Momentum for Michigan's Economy

- ❖ From 2009-2012, Michigan's investment in the EE market (including training, equipment and systems) **has supported 2,500+ trade allies, and represents over \$663M in cumulative investment statewide**
- ❖ These positive impacts of the EO programs are **just beginning to mature**
- ❖ It is essential that Michigan **maintain this forward momentum**, to continue to grow the EE industry, increase jobs, and save Michiganders \$\$ on their energy bills

Some of MI's Key Energy Efficiency Successes

- ❖ **MEMD deemed savings database** - One of few in the Midwest
 - Collects calculations and potential savings for MI's EO programs, streamlines EM&V process, allows consistency across utilities for EE planning and goal measurement
- ❖ **Cost-recovery for utilities (PA 295)** - Has provided certainty in planning process and reliability in future EO savings
- ❖ **Performance incentives (PA 295)** - Provide a strong business incentive for utilities that exceed mandated savings targets
- ❖ **Low Income Programs/Policies** – Key resource for low income population, who typically have disproportionate energy costs
 - Weatherization Assistance Program offered through Community Action Agencies to install refrigerators, CFLs, insulation, furnaces, etc.
- ❖ **Michigan Saves** – (*Gov's November remarks*) – Public/private partnership is successfully reinventing EE in Michigan
 - Uses initial public funds and works with private lenders throughout MI to provide affordable financing to help homes and businesses save energy and money.
 - More than 1,700 Michiganders have used these funds to improve their homes and saved ~\$350 per year in energy costs – uses local contractors, local economy
 - Gov called on State to expand Michigan Saves to small businesses

Final Thoughts....

Efficiency is MUCH MORE than an EERS

- ❖ **Building Energy Codes (2009 IECC adopted in Michigan)**
 - Utilities claimed savings approach for codes starting to ramp up in Midwest (primarily Illinois)
- ❖ **Service to customers**
 - Beyond energy savings, EE provides valuable service to utility customers (improved comfort in home, lower bills, positive relationship w/utility)
- ❖ **Lead by example in public buildings (Govt. offices, schools, hospitals)**
 - Represent unique opportunities for Michigan to implement and ramp up EE practices while also saving taxpayer dollars.
 - Focusing on EE in public buildings = powerful marketing tool to encourage consumers, local gov'ts and private sector to follow the State's example.
- ❖ **Energy Benchmarking – Minneapolis (1st of its kind in Midwest)**
 - Large commercial buildings to report their annual energy and water use
 - Will provide transparency, incent businesses to reduce their energy costs
- ❖ **Reliability, affordability, environmental protection**

Thank you

Stacey Paradis
Deputy Director

Midwest Energy Efficiency Alliance

sparadis@mwalliance.org

www.mwalliance.org