



*The Source on Energy Efficiency*



# ***Energy Efficiency: The Impact on Michigan's Economy***

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**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.

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# Michigan is one of MEEA's core states

## MEEAs 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.



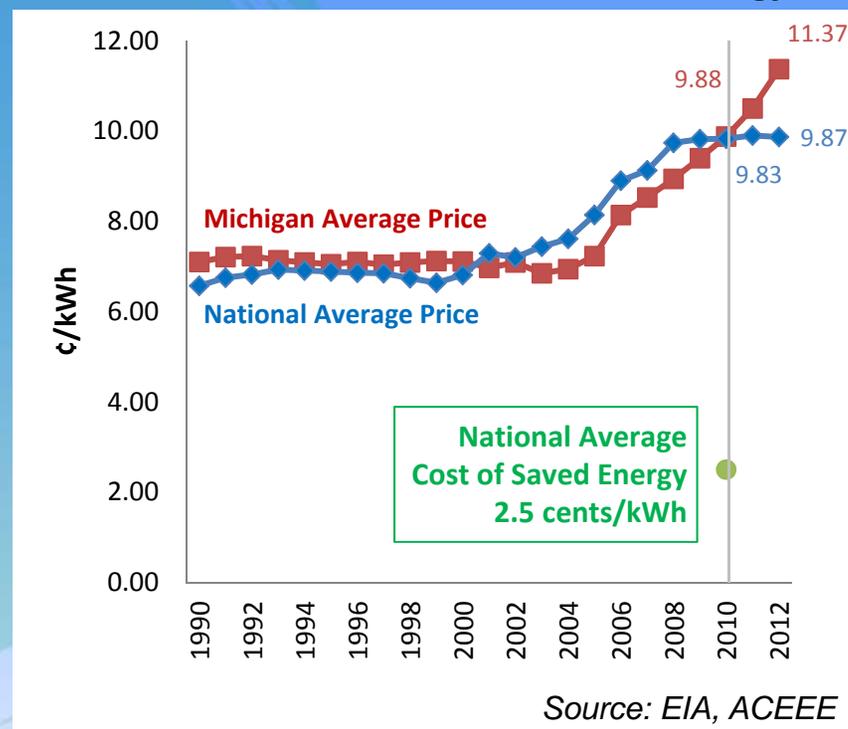
## MEEA's extensive EE activities in MI include:

- ❖ 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



# 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

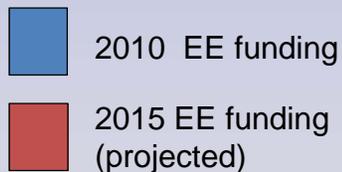
1.5% elec by 2010  
1.5% gas by 2010 (statute)  
*lowered to 1.0% gas under  
Commission authority*

### Iowa

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

### Illinois

2% elec by 2015  
1.5% gas by 2017



### Missouri

IRP process;  
Voluntary electric

### Wisconsin

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

### Michigan

1% elec by 2012  
0.75% gas by 2012

### Ohio

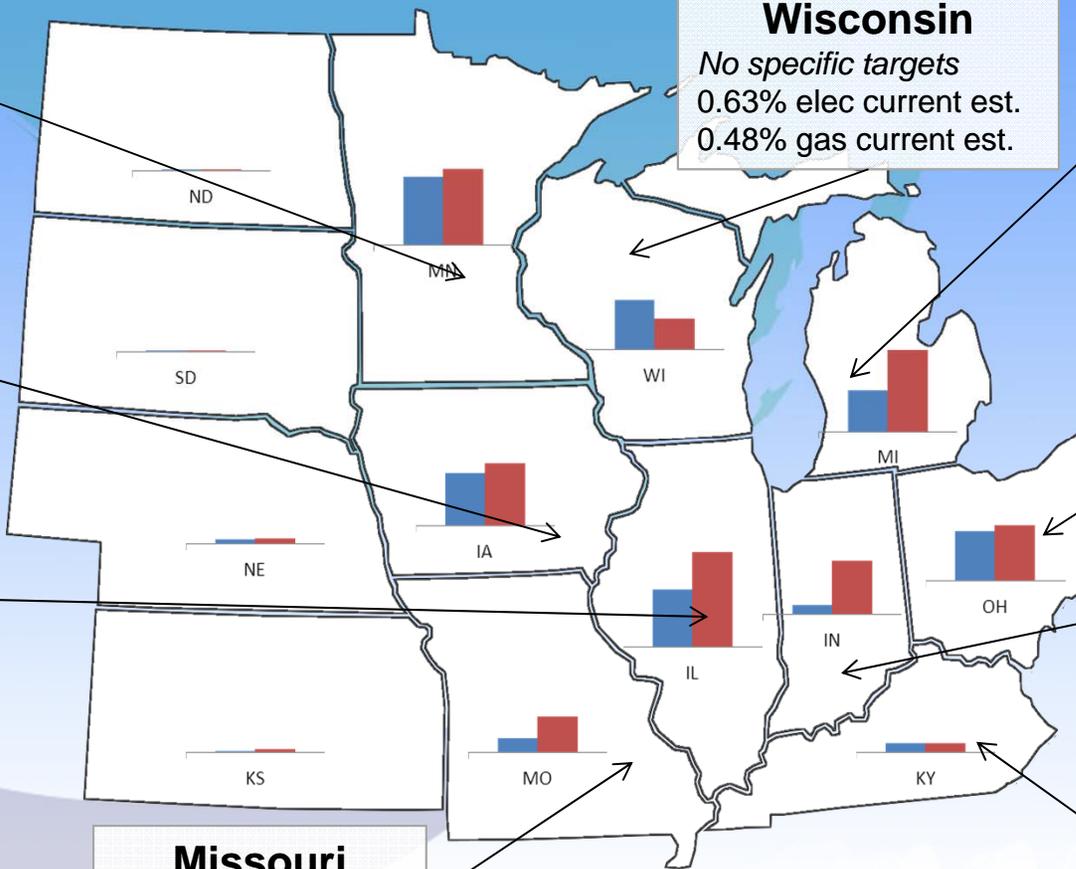
2% elec by 2019

### Indiana

2% elec by 2019

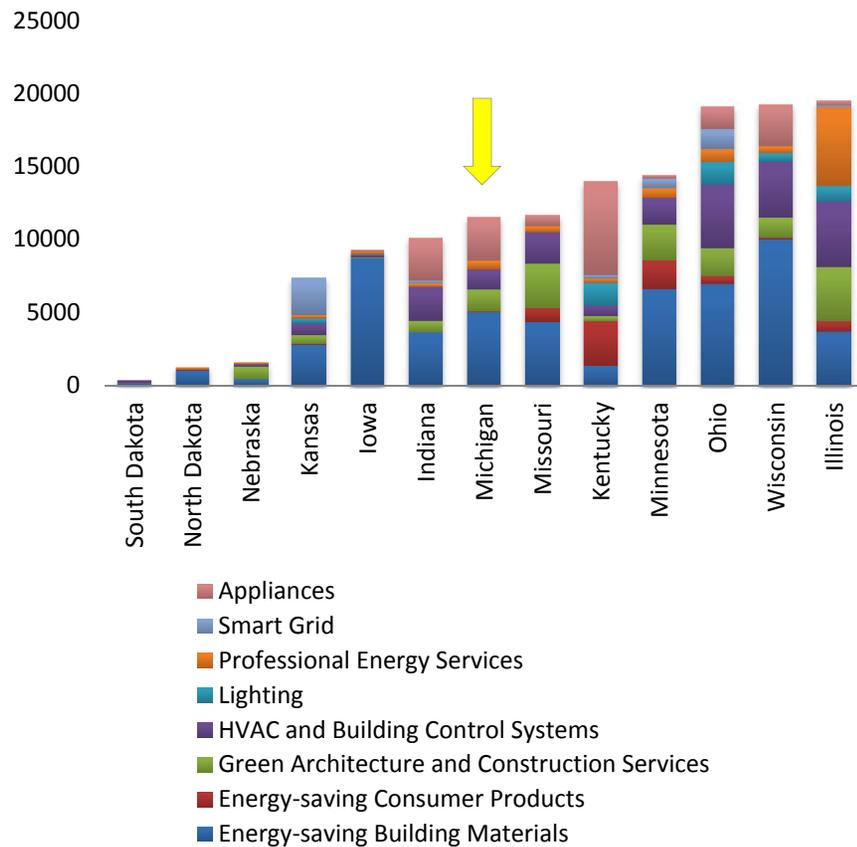
### Kentucky

Voluntary electric  
and gas

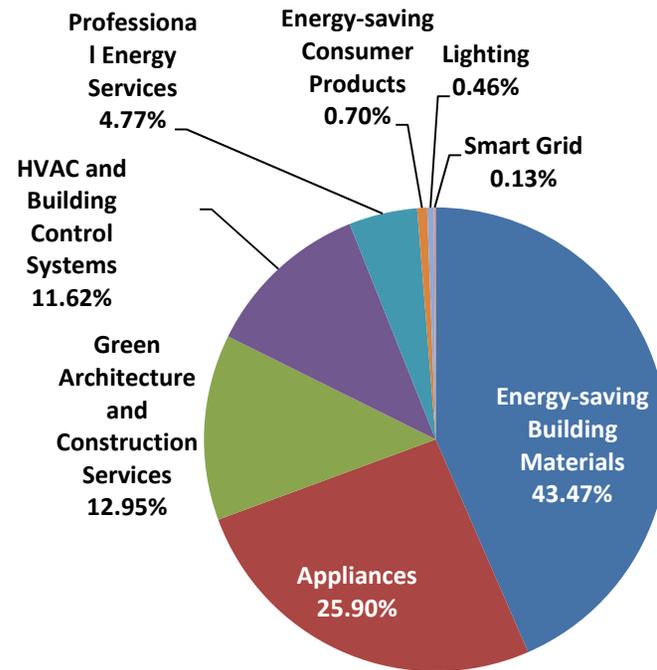


# Michigan Jobs in Energy Efficiency Market in 2010

## Comparison of states in MEEA region



## Categories as percent of EE-related jobs in Michigan

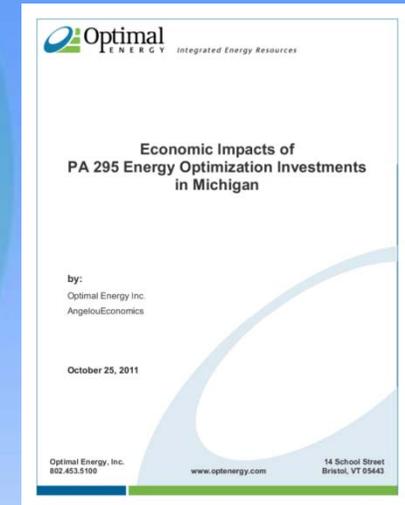


**Total MI Jobs, 2010: 11,501**

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

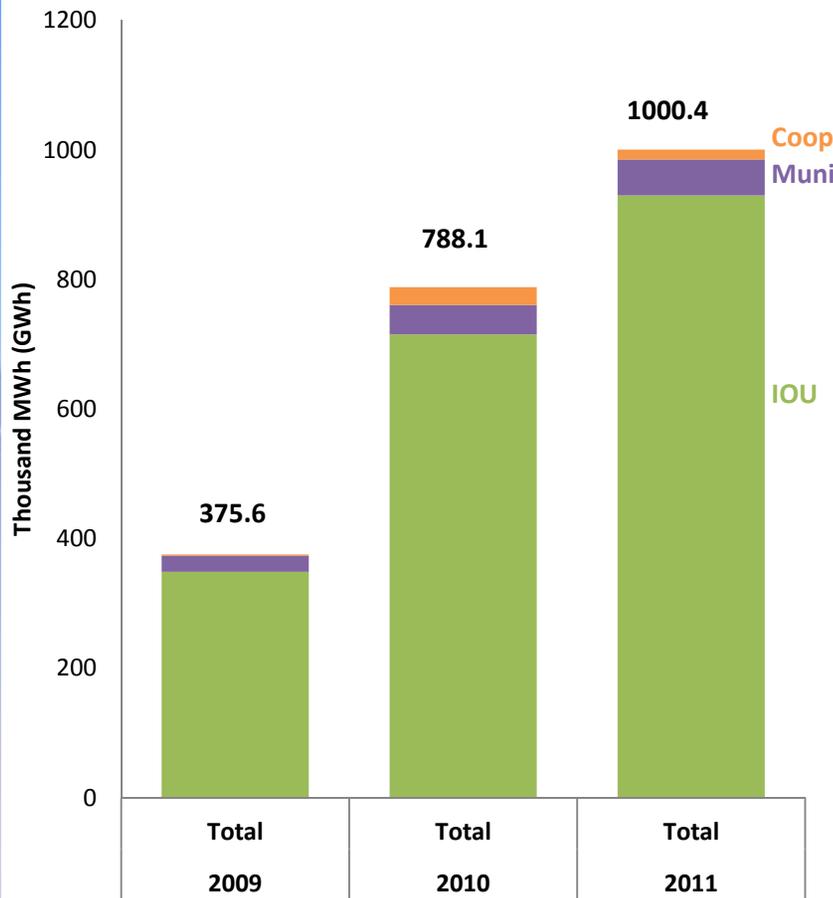
Impact Type	2010	Lifetime (20 year horizon)
Jobs ( <i>job-years</i> )	1,547	13,131
GSP Increase ( <i>million</i> )	\$119	\$983
Personal Income Increase ( <i>million</i> )	\$89	\$601

## Net Economic Impacts of EO Program Spending

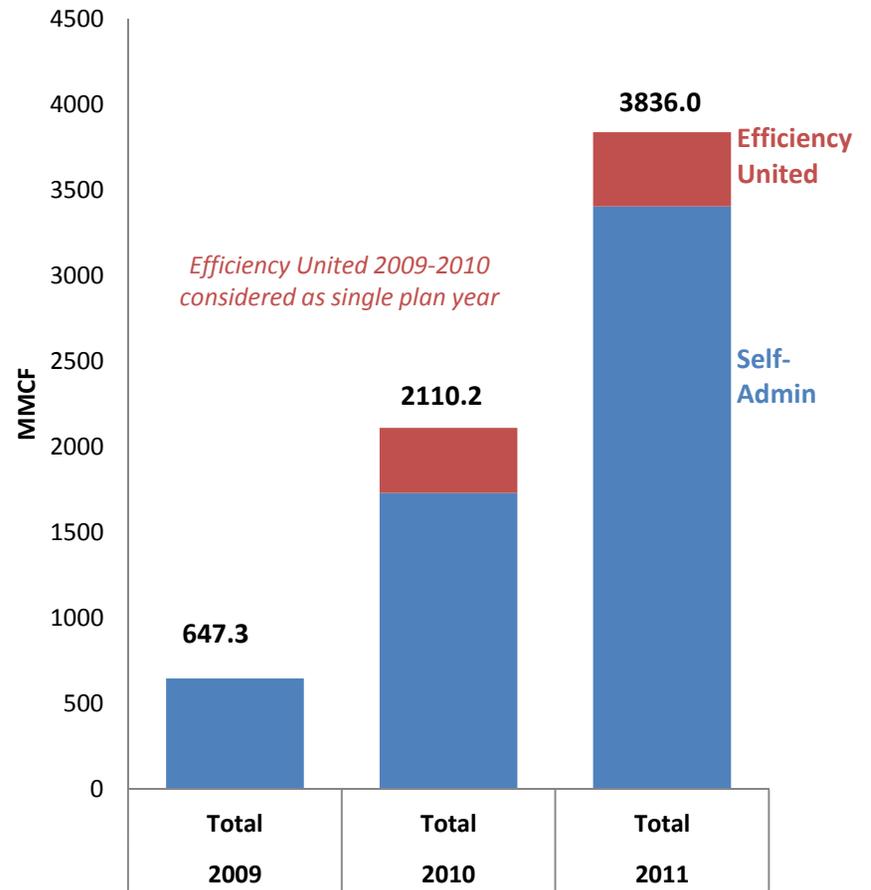
From spending in 2010	Ratios
Job-years per \$million	101
GSP Increase per \$1	\$7.50
Personal Income per \$1	\$4.60

# MI Energy Optimization Savings, 2009-2011

## Electric Savings, 2009-2011



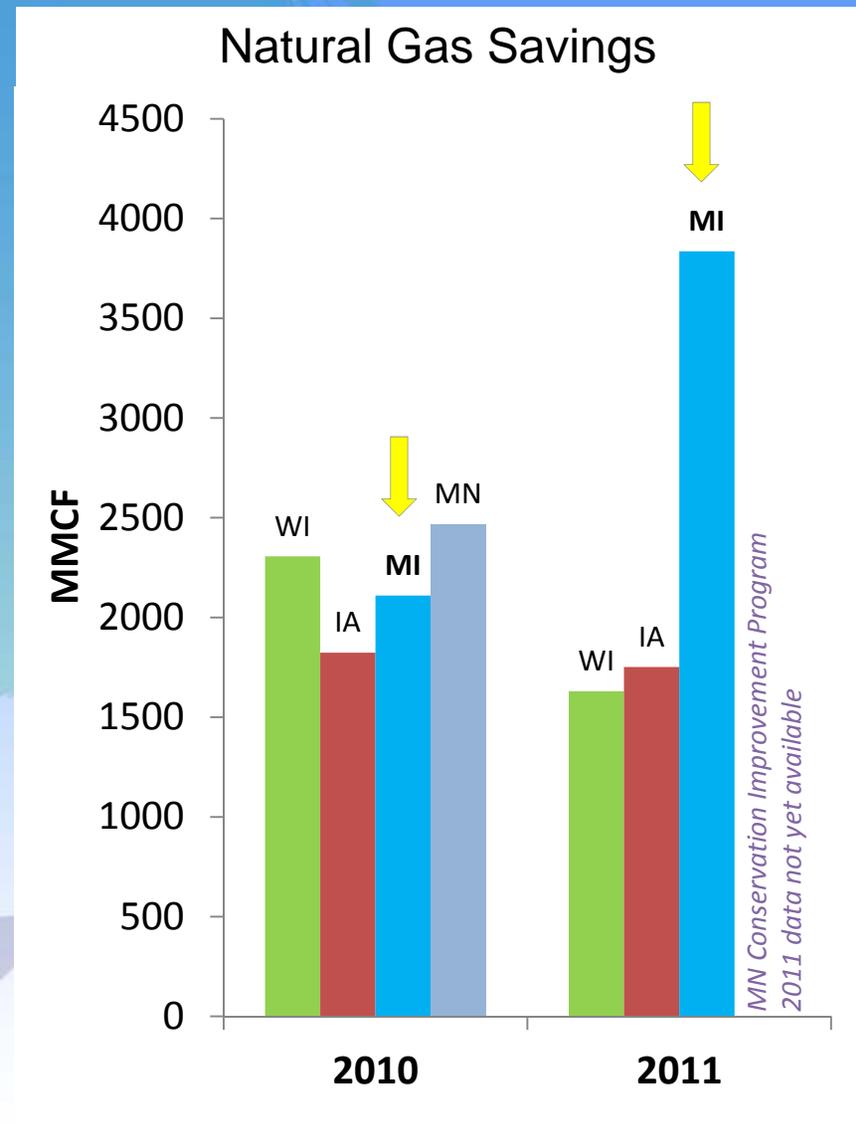
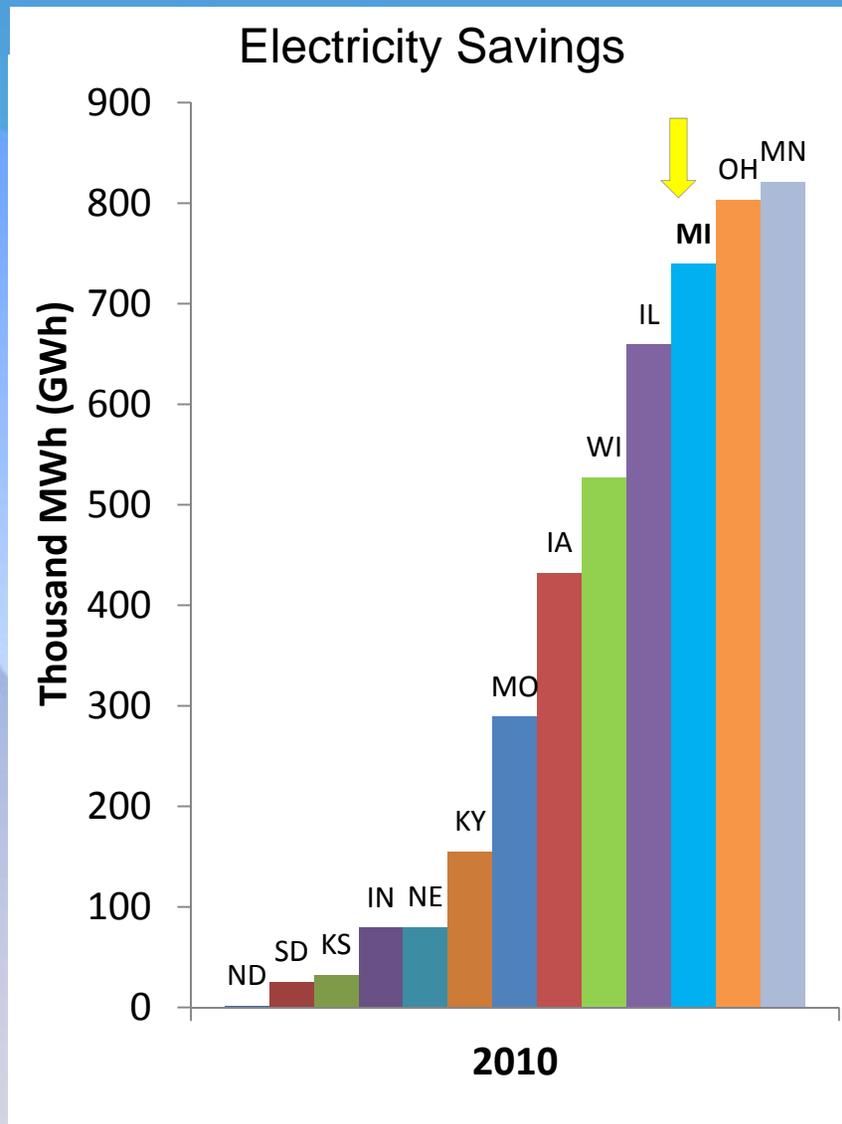
## Natural Gas Savings, 2009-2011



# 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

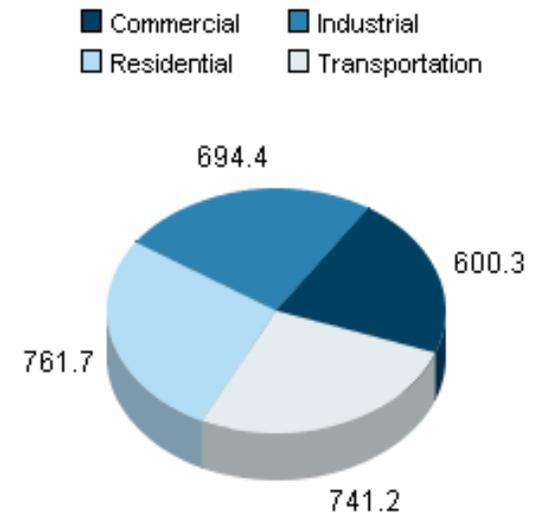
# Comparison with Other Midwest States



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

- ❖ Manufacturing accounts for 26% of MI's total energy use, MI ranks 11<sup>th</sup> 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 Energy Use by Sector, 2010 (million Btu)



## 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*)



# 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 (1<sup>st</sup> 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](mailto:sparadis@mwalliance.org)

[www.mwalliance.org](http://www.mwalliance.org)