

Energy Efficiency in the Midwest

NAESCO Midwest Regional Meeting

June 6, 2013

Status of Energy Efficiency in the Midwest

- What is MEEA
- Why Energy Efficiency
- Midwestern Policies
- Energy Efficiency Investment and Jobs
- Efficiency Programs
- Future Opportunities

MEEA's Role in the Midwest

- Nonprofit serving 13 Midwest states
- 10+ years promoting energy efficiency
- Serving state & local gov'ts, utilities, advocates, manufacturers & retailers, ESCOs & consultants and academic and research organizations
- Staff of 27 in Chicago
- Activities
 - Designing & Administering Energy Efficiency Programs
 - Evaluating & Promoting Emerging Technologies
 - Regional Voice for DOE/EPA & ENERGY STAR
 - Coordinating Utility Program Efforts
 - Delivering Training & Workshops
 - Advancing Energy Efficiency Policy
 - Promoting Best Practices

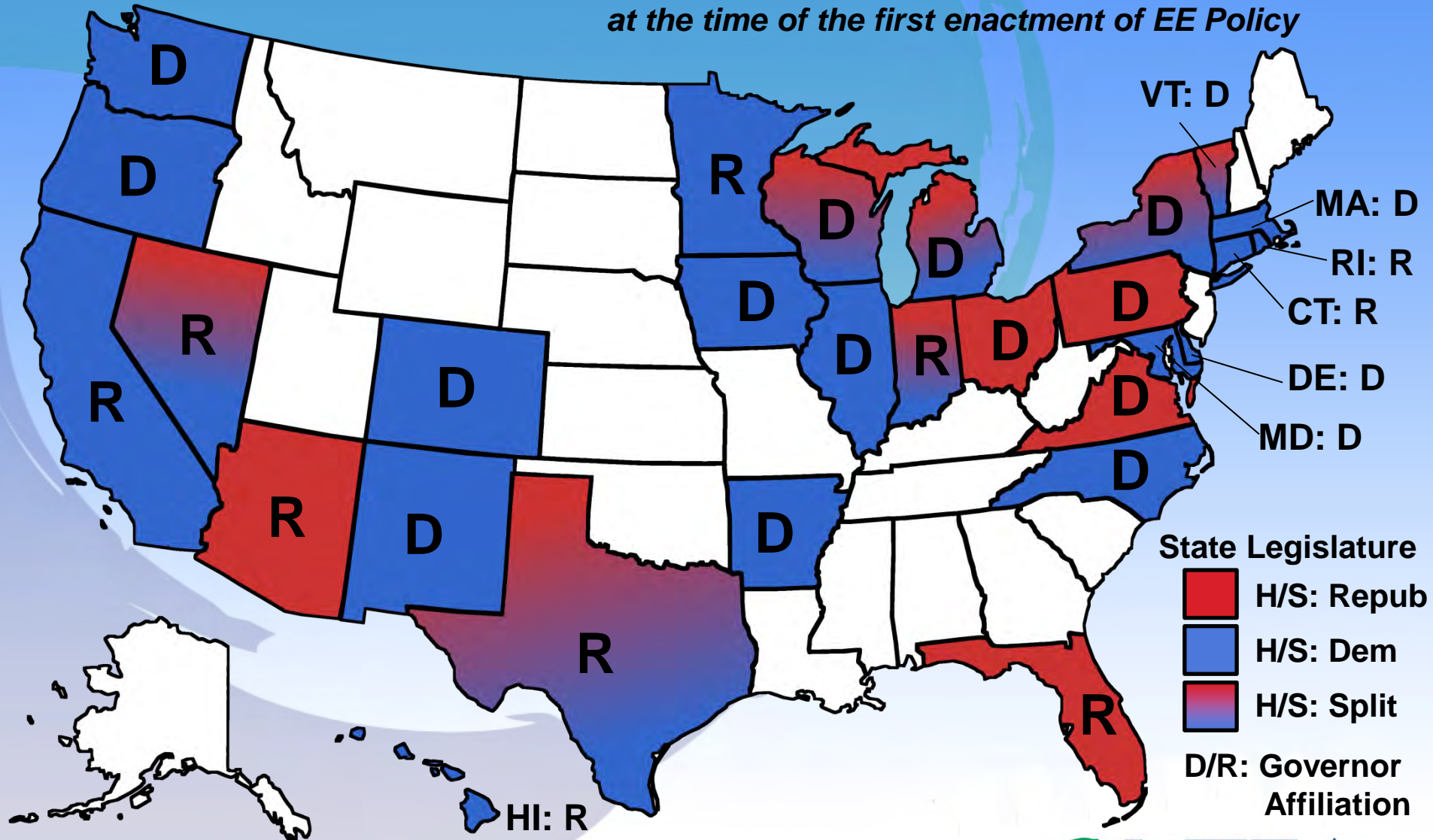


Energy Efficiency Meets Many Needs

- First step in ensuring low-cost, reliable energy
- Least-cost supply-side resource
- Cheaper than renewables
- Create local jobs and keeps money in local economic
- Reduces energy consumption
- Alleviates peak demand periods
- No NIMBY issues (often opposite effect)
- Consumers understand and support energy efficiency

Energy Efficiency is a Bipartisan Issue

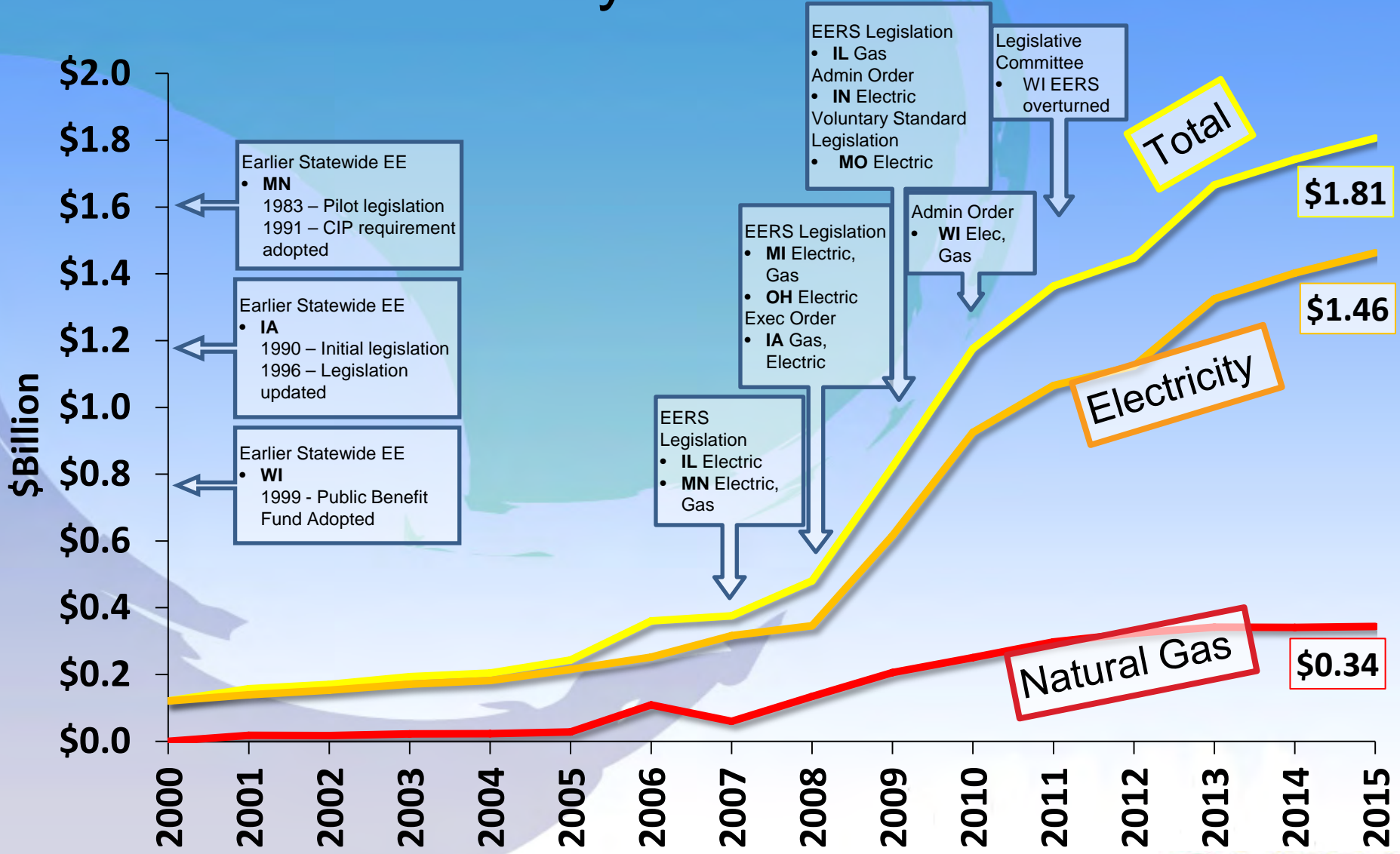
*State House/Senate and Governor party affiliation
at the time of the first enactment of EE Policy*



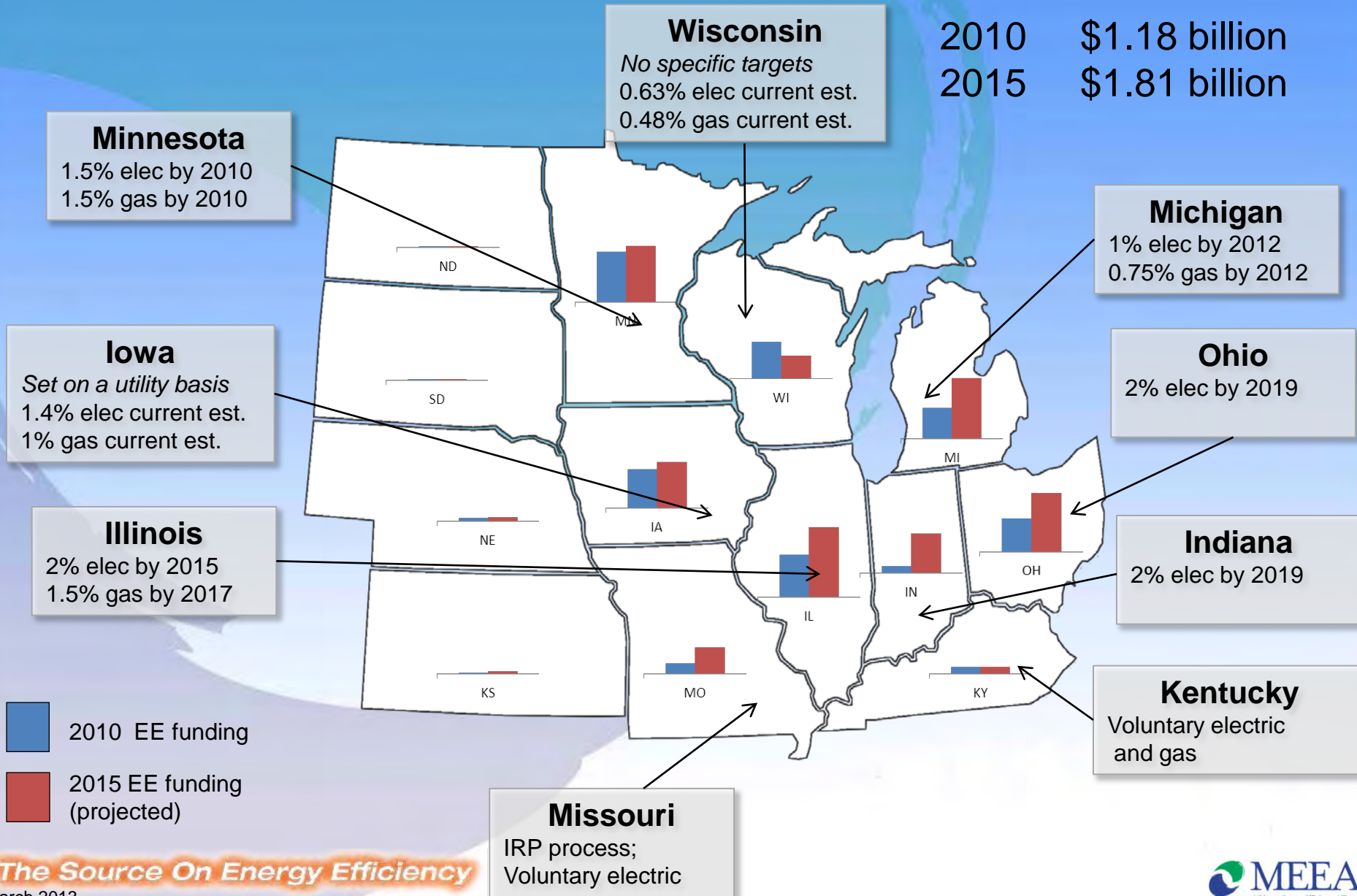
MEEA's Regulatory Framework for EE Funds

- Ensure adequate and long-term funding
- Engage participation by electric and natural gas utilities
- Ensure program offerings for all rate classes
- Require sufficient interim energy savings targets, not just spend targets
- Allow cost-recovery for cost-effective investments
- Provide incentives for early compliance and penalties for non-compliance
- Reward for statewide collaboration
- Provide lost revenue recovery

Estimated Annual Investment in Energy Efficiency in the Midwest

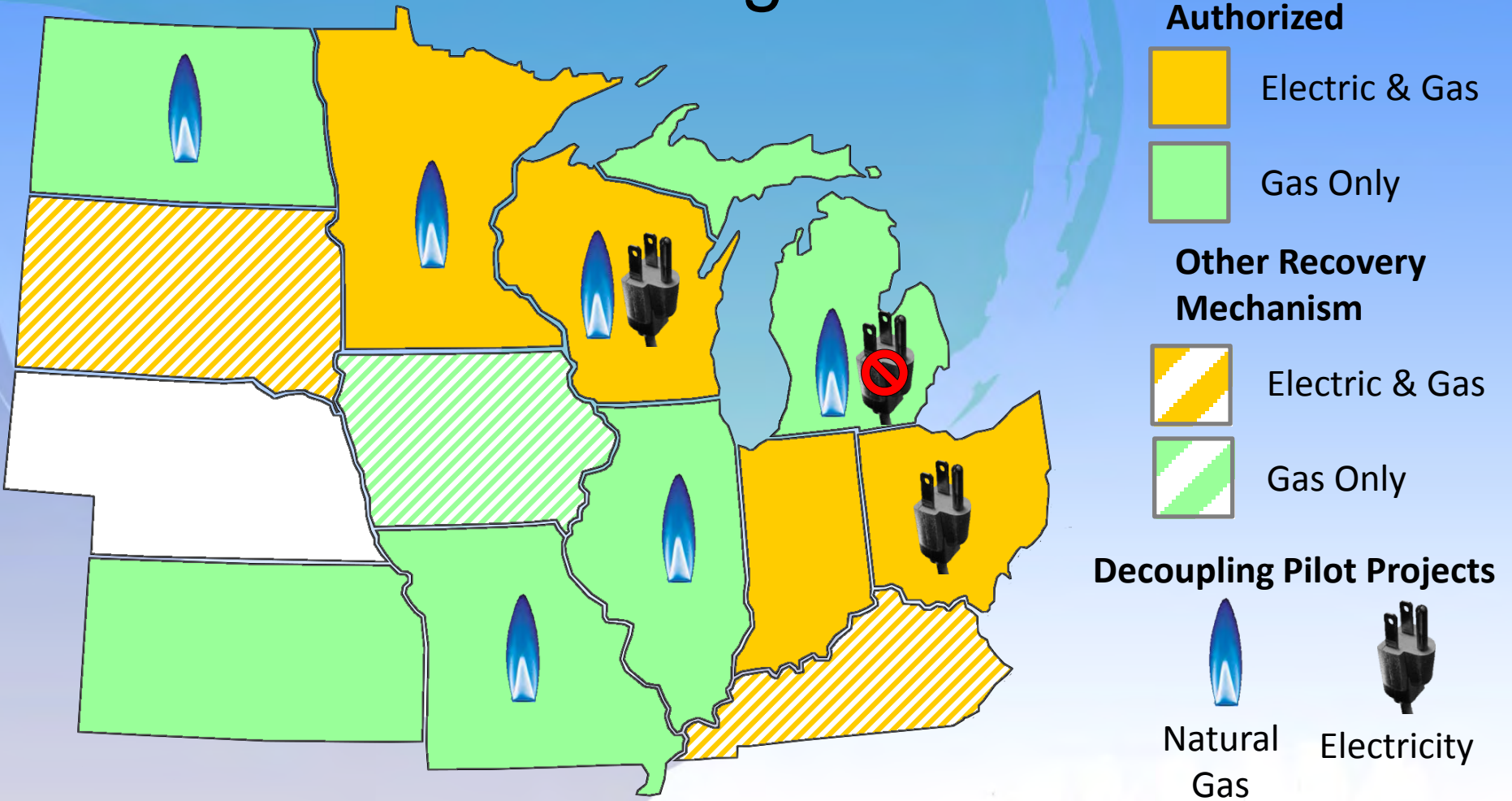


Midwest Efficiency Targets and Funding Levels

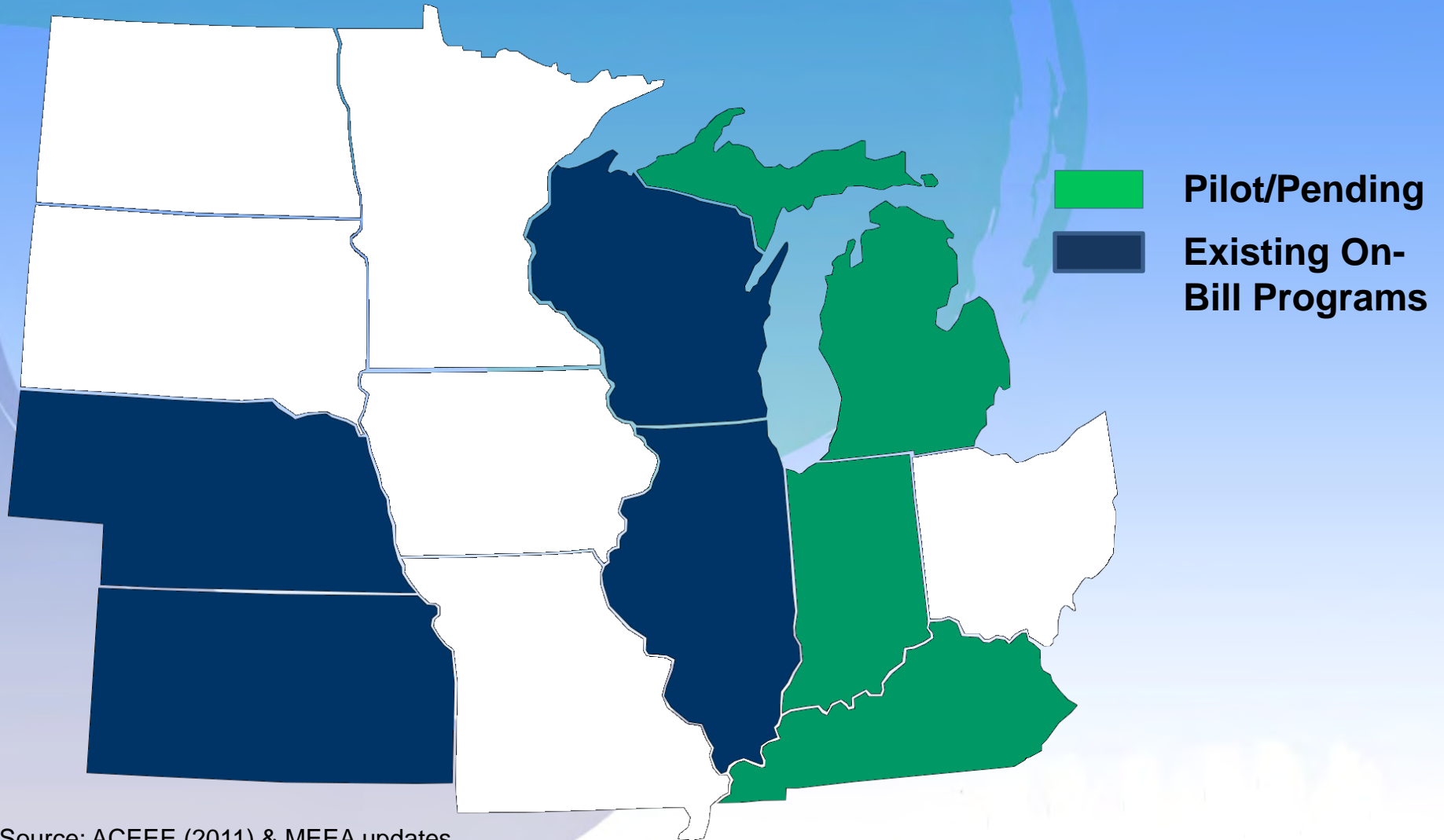


	Missouri	Illinois	Indiana	Iowa	Michigan	Minnesota	Ohio	Wisconsin
Created by	Legislation	Legislation	Regulation	Legislation & Executive Order	Legislation	Legislation	Legislation	Regulation & Legislation
Year passed/most recent update	2009	2007/2009	2009	1990/2008	2008	1991/2007	2008	1999/2011
Participation	Voluntary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
Utilities	Electric	Electric & Gas	Electric	Electric & Gas	Electric & Gas	Electric & Gas	Electric	Electric & Gas
Required energy savings	Guidelines, set by rules	Hard targets, set in legislation	Hard targets, set by order	Hard targets, set on a utility-by-utility basis	Hard targets, set by legislation	Hard targets, set by legislation	Hard targets, set by legislation	No energy savings targets; mandatory spending levels
Cost recovery	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lost revenues	Lost revenue recovery allowed by legislation; Mechanism approved on a case-by-case basis	No revenue recovery in legislation; Decoupling approved on a case-by-case basis	Decoupling rejected by order; Lost revenue recovery on a case-by-case basis	Decoupling; Allowed on a case-by-case basis for gas utilities.	Decoupling; Approved on a case by case basis	Decoupling; Pilots approved on a case-by-case basis	Lost revenue recovery and decoupling; Approved on a case-by-case basis	Decoupling; Approved on a case-by-case basis
Incentives / Shared Benefits	Yes; Mechanism approved on a case-by-case basis	No	Approved on a case-by-case basis	No	Yes	Yes	Approved on a case-by-case basis	Approved on a case-by-case basis

Lost Revenue Recovery in the MEEA Region

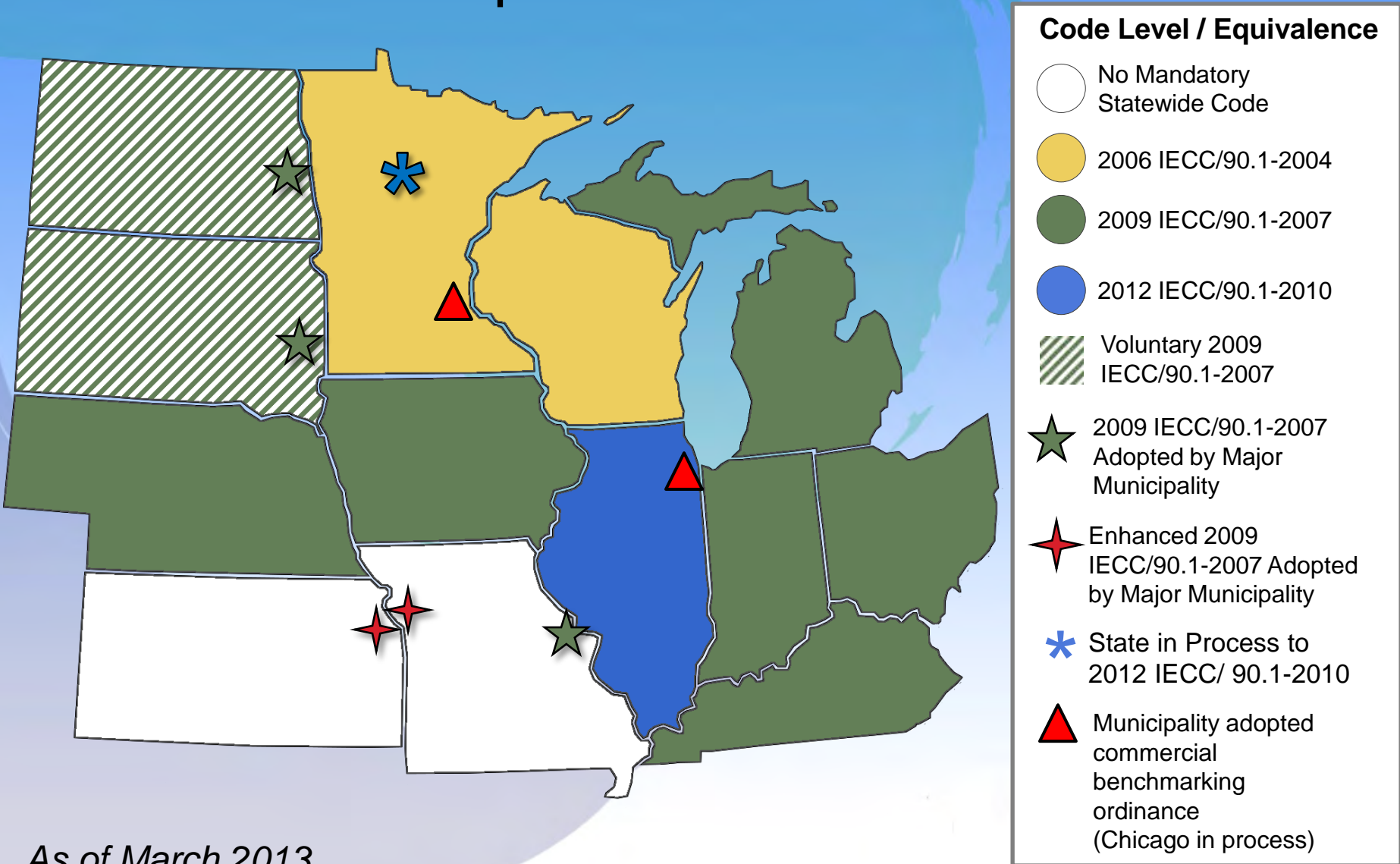


On-Bill Financing in the Midwest

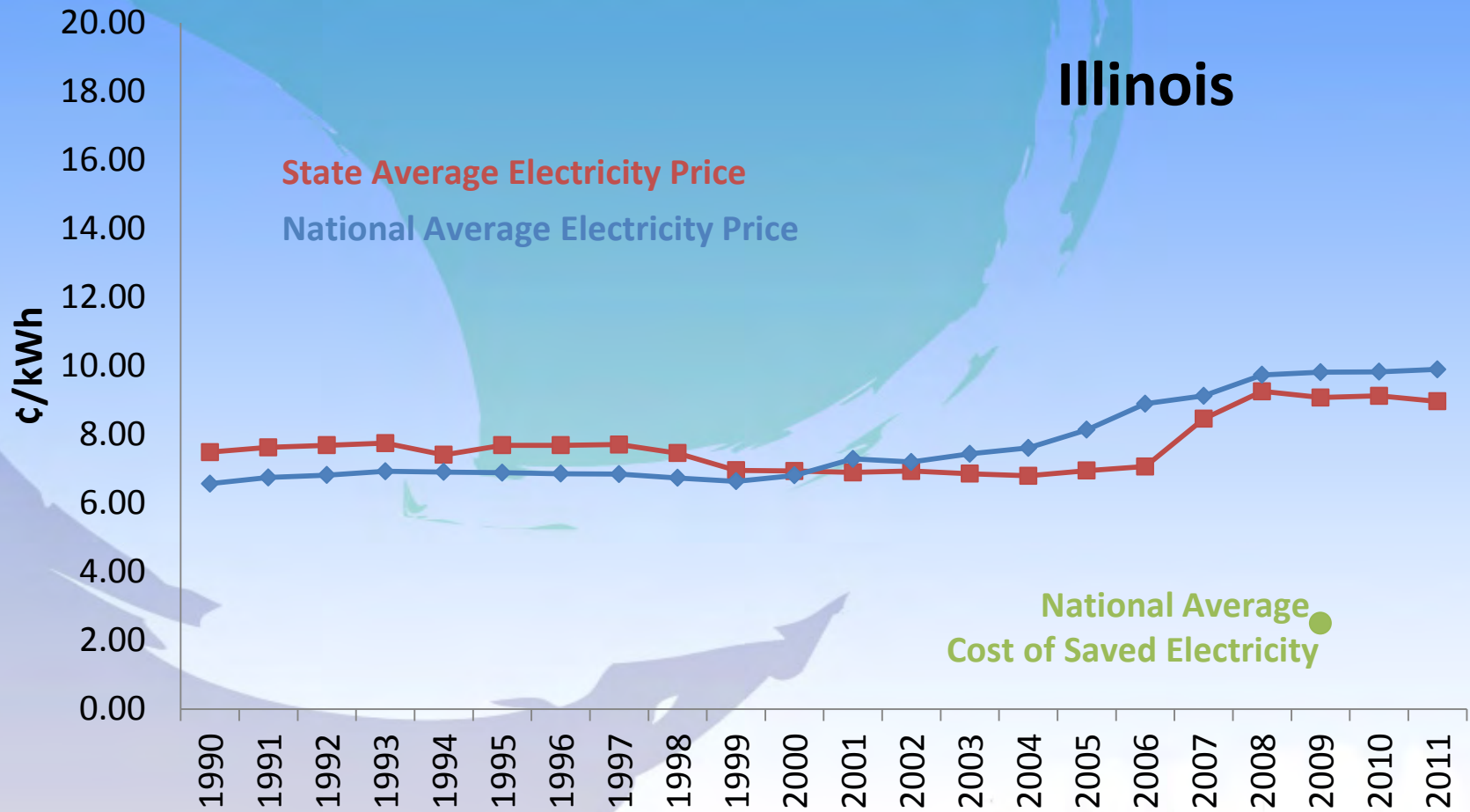


Source: ACEEE (2011) & MEEA updates

Residential and Commercial Building Energy Code Adoption in the Midwest



Cost of Electric Energy Efficiency



Illinois

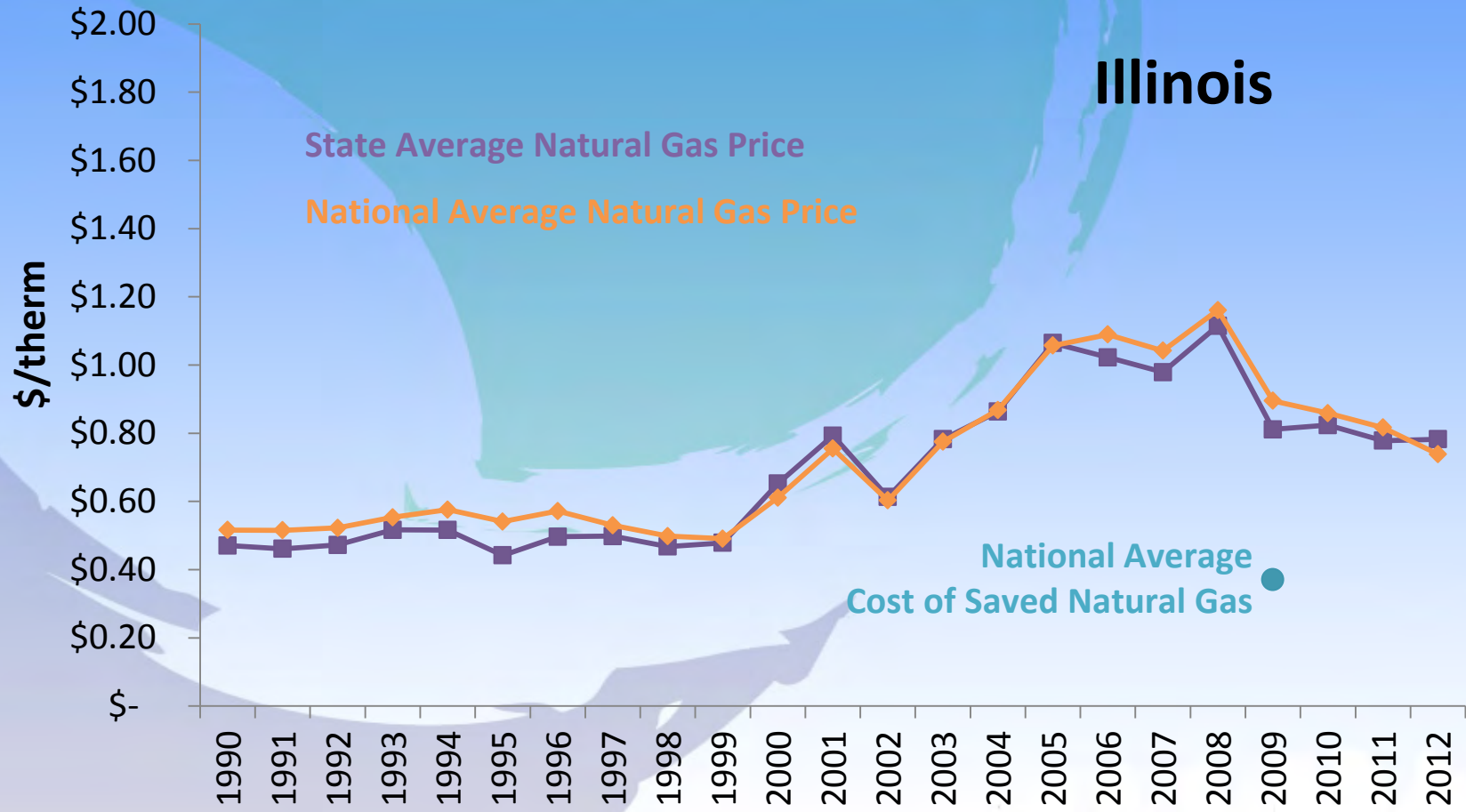
State Average Electricity Price

National Average Electricity Price

National Average
Cost of Saved Electricity

Data Source: EIA, ACEEE

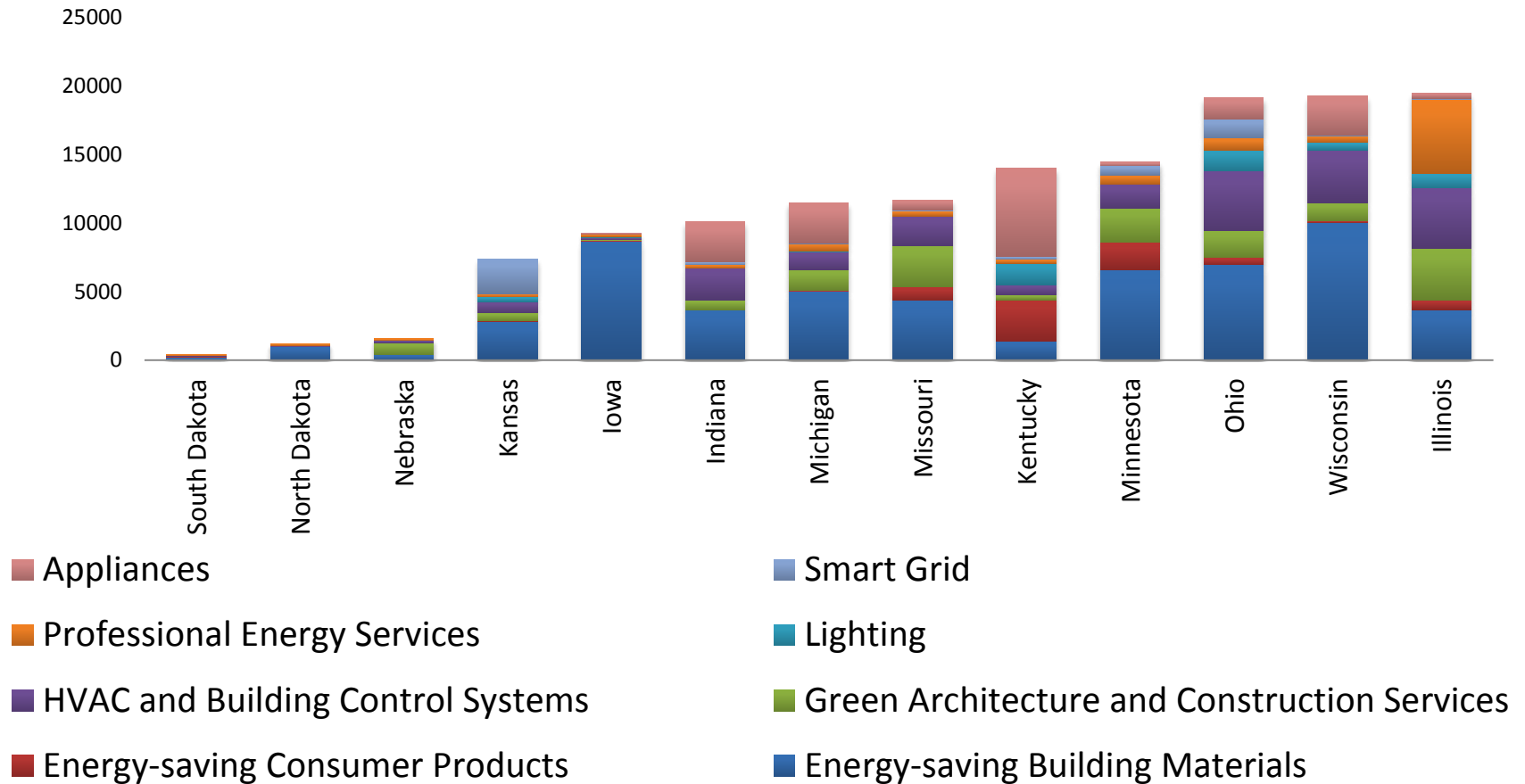
Cost of Natural Gas Energy Efficiency



Data Source: EIA, ACEEE

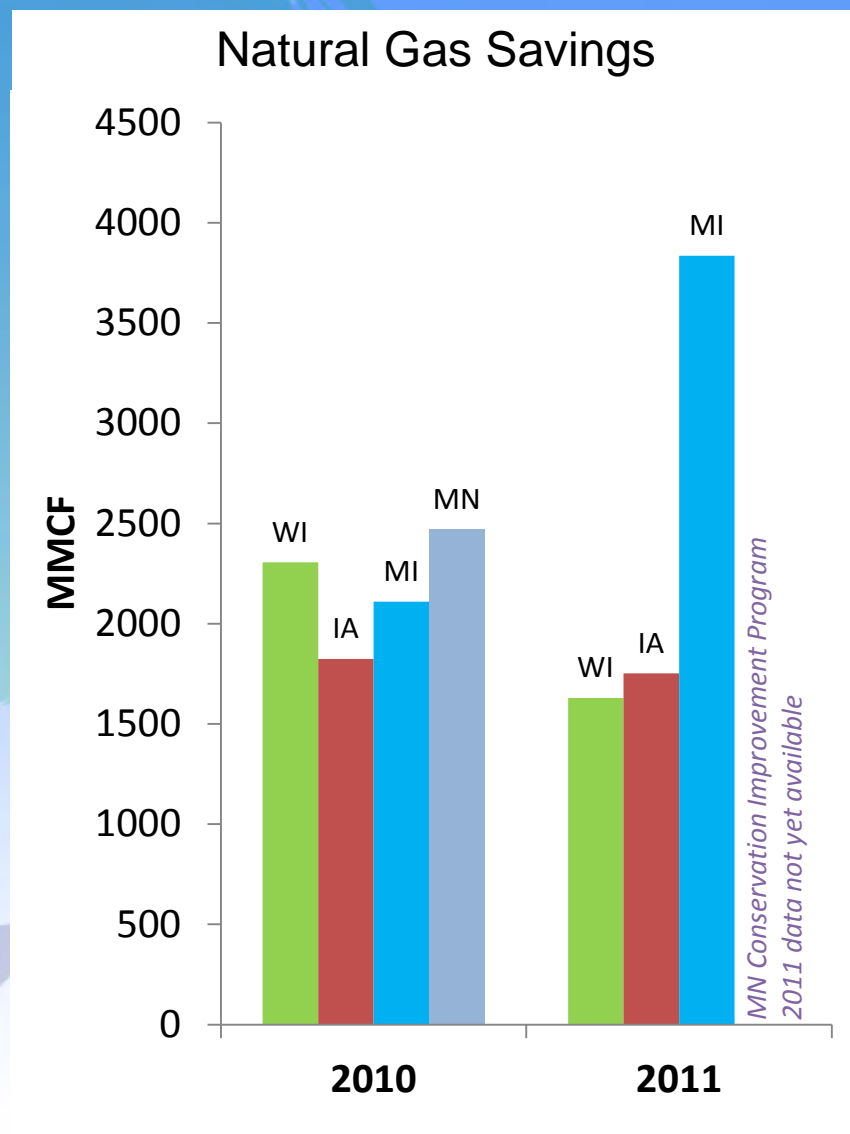
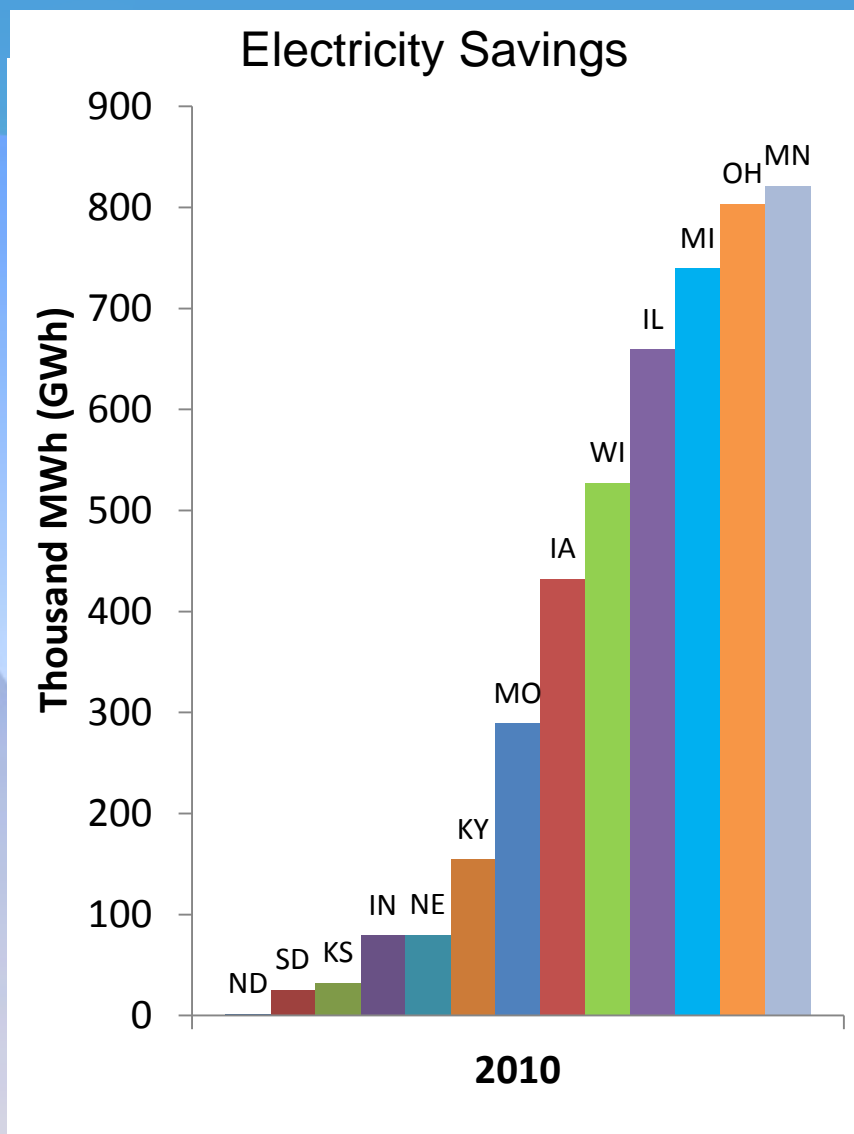
Midwest Jobs in Energy Efficiency Market in 2010

Comparison of states in MEEA region



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

Midwest Energy Savings from Energy Efficiency



The EE Story in 2013

- Now: Low hanging fruit still around
 - ‘Traditional’ suite of incentive programs
 - Residential lighting, refrigerators, C&I
 - CFLs, lighting are around 80%+ electric savings
 - Most gas savings attributed to furnaces, programmable thermostats, direct install of showerheads/aerators
 - Challenging for gas utilities to meet goals
 - Some exploration of behavior change
 - Some piloting of new areas
 - Struggle against standards and codes

Residential Utility EE Programs

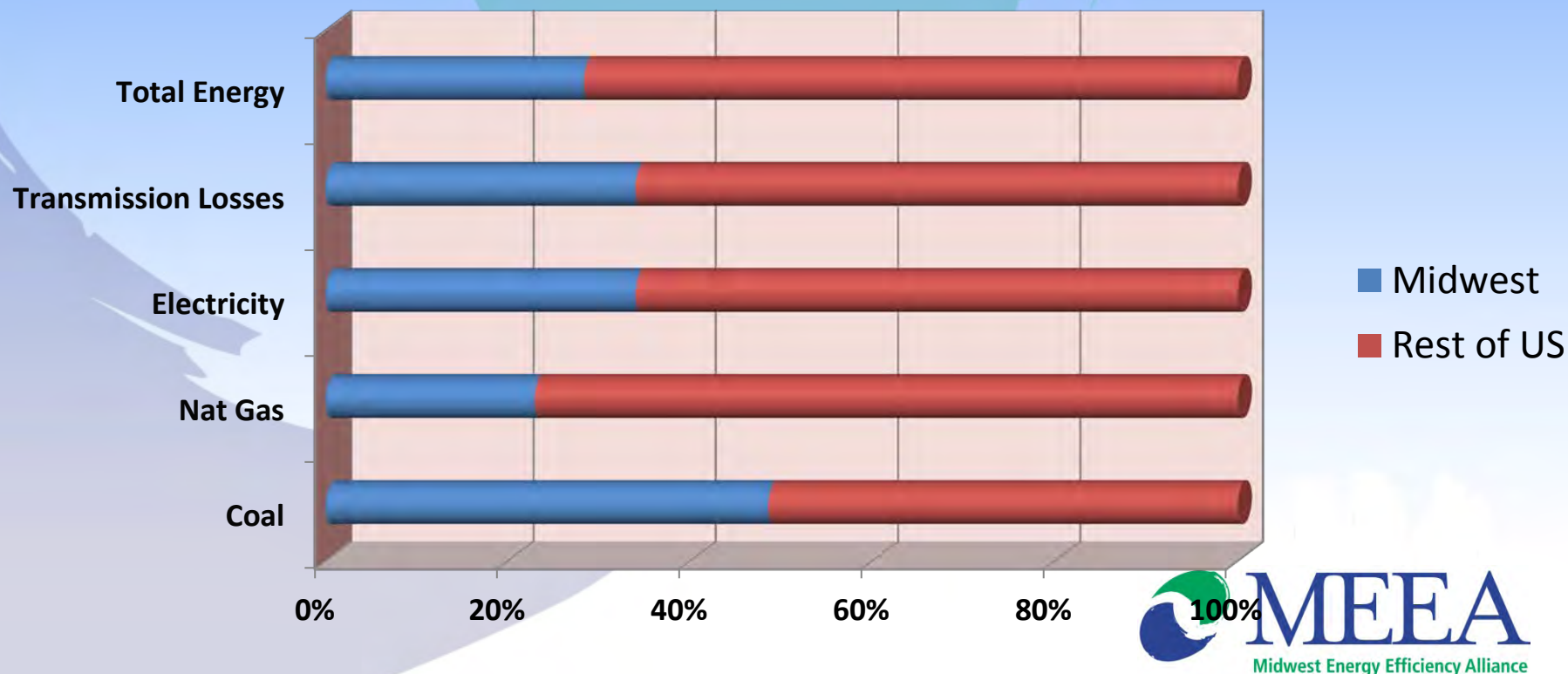
- Home Performance with Energy Star
- Energy Efficient Products
- Residential Lighting
- Residential HVAC/CAC Program
- Energy Star New Homes
- Home Energy Comparison Reports
- Refrigerator Recycling
- Direct Install (single and multi-family dwellings)
- Low Income Weatherization

C&I Utility EE Programs

- Energy Audits
- C&I Rebate Programs
 - Prescriptive Rebate
 - Custom Rebate
- Building Operator Certification
- Interruptible Service Programs
- Retro-commissioning
- Business New Building Programs

Need for Industrial EE in the Midwest

- Midwest accounts for >28.3% of industry energy usage in the US
 - 48.3% of total industrial coal consumption (870.1TBtu)
 - 22.9% of total natural gas electricity (1,853TBtu)



Regional Industrial EE Programs

- Characteristics of Utility Funded Rebate Programs, varied across utilities
 - Common Prescriptive Incentives
 - Electric - Lighting, Refrigeration, HVAC, Variable Speed Drives, Sensors, and Weatherization among others
 - Gas – Steam Traps, Boiler Tune-Ups, Pipe Insulation
 - Program Cost Rebates
 - Utilities fund 25%-75% of project costs, under a certain threshold, often \$50,000, but can be more (i.e. gas custom programs upwards of \$500,000)
 - Energy Audits
 - To guide management in adopting EE technology

Industrial Areas of Opportunity

- Lots of opportunities to promote EE
- Need to prioritize target areas and technologies
- Sample technologies include:
 - Process energy
 - Compressed air
 - Steam
 - Fans
 - Pumps
 - Motors
 - Chilled water systems
 - Waste heat recovery & CHP
 - Building envelope

The EE Story – 2014/5 and beyond

- Future: Finding a new portfolio
 - Lighting savings going down
 - Some program saturation
 - Need ‘new’ programs
 - Whole home (HPwES, air sealing, etc)
 - Systems work (HVAC systems, smart homes, etc)
 - Behavior programs (changing the customer habit)
 - Education
 - Challenges
 - Cost effectiveness (non-energy benefits not counted)
 - More complex (contractors, systems, etc)

What is the Future for EE?

- Lots of savings still out there
 - Codes Claimed Savings
 - Third Party Enforcement
 - Energy Benchmarking
 - Building Energy Ratings
 - Utilities will find the savings, but need help
 - Need stakeholder/PUC/customer support
 - Need more flexibility around cost effectiveness
 - Lots of in-efficient commercial space and homes
 - Need to look at financing/business decision making
 - Need to count non-energy benefits
 - Lots of opportunity in industrial

Questions?

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