Living Up to its Potential: Industrial Energy Efficiency in the Midwest

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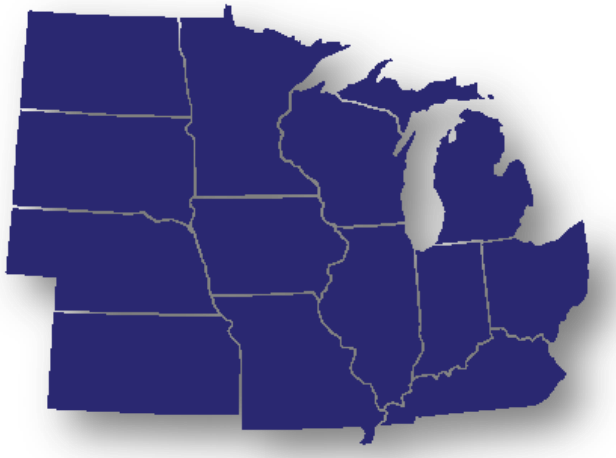
Midwest Energy Efficiency Alliance

ACEEE 2015 Summer Study on Energy Efficiency in Industry

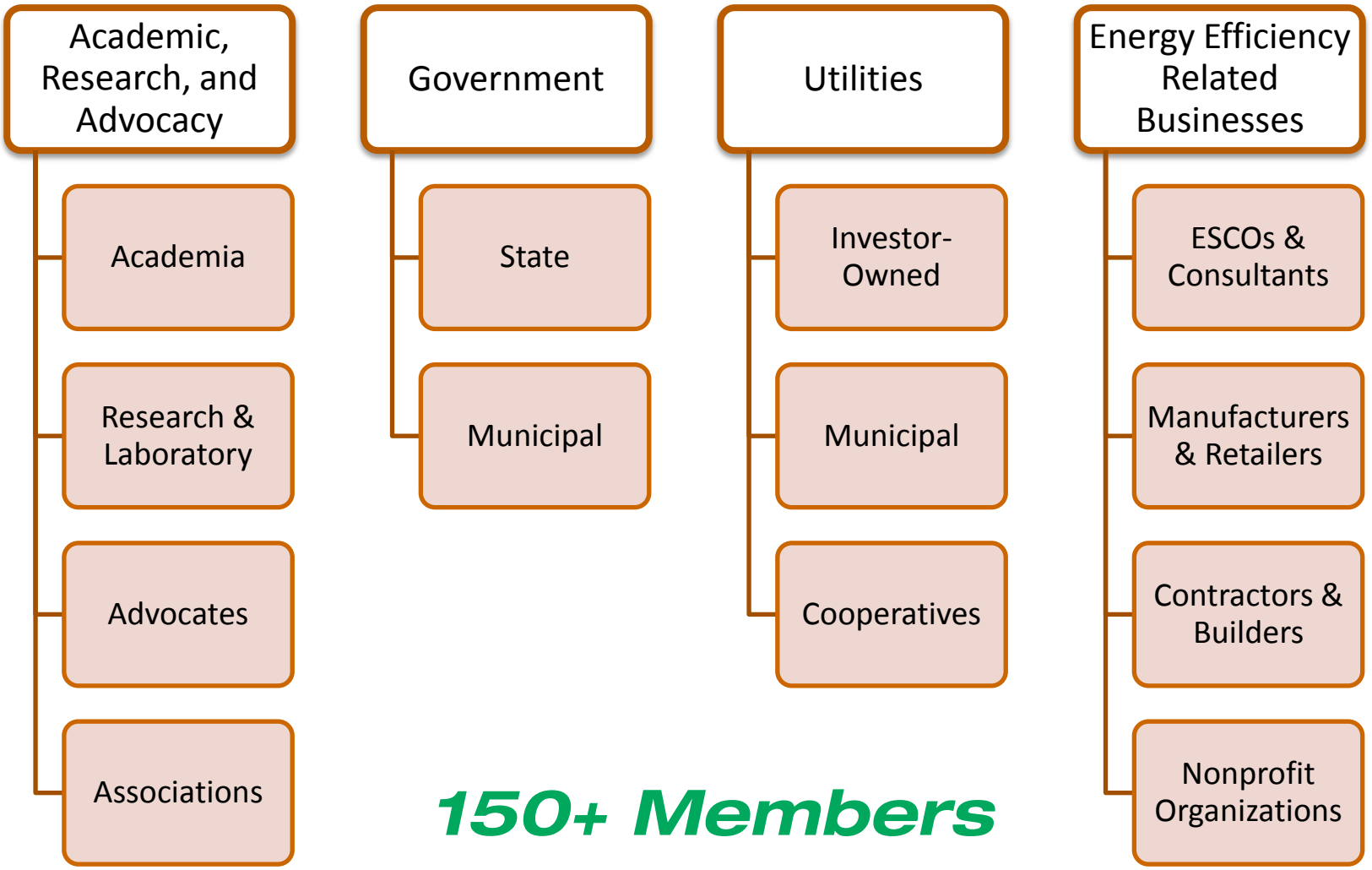
Midwest Energy Efficiency Alliance (MEEA)

- MEEA is a collaborative network whose purpose is to advance energy efficiency to support sustainable economic development and environmental preservation.



- Founded in 2000 to bring strategic partners together to improve market conditions for energy efficiency.

MEEA Membership



150+ Members

Objectives

Explore Industrial EE in the Midwest – which states/utilities are the biggest players?

Examine impact of Industrial/C&I efficiency programs on the cost-effectiveness of utility EE portfolios

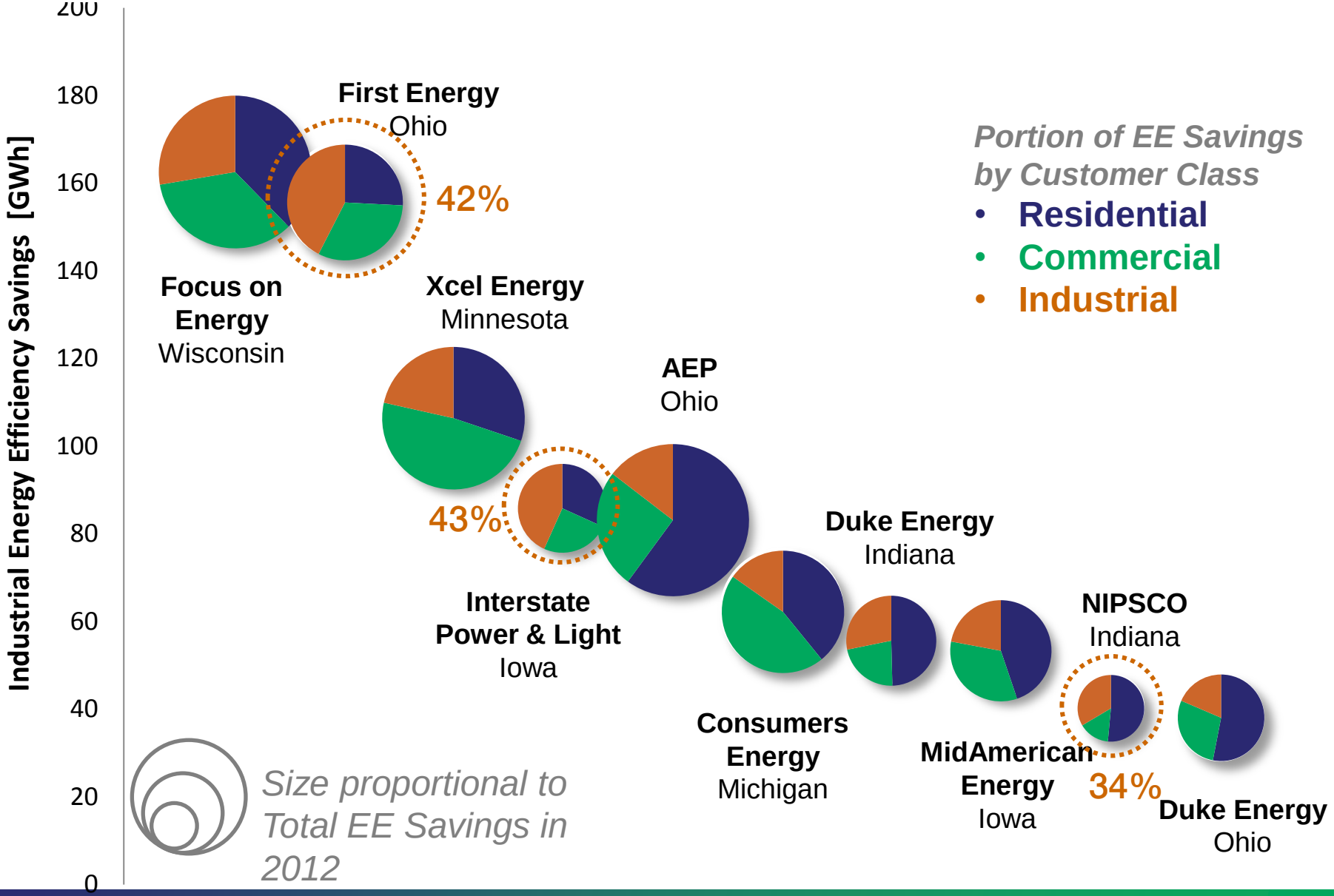
Consider the effects of new Industrial Opt-Out policies on EE portfolios

Discuss what could enhance understanding of Industrial EE in the Midwest

Industrial EE is Important in the Midwest

38%	of electricity in the Midwest states is consumed by the Industrial sector *(EIA 2014)*
40%	of Industrial EE potential is found in Midwest *(McKinsey 2009)*
5	Midwest states are in Top 10 consumers of total energy in the industrial sector, and 4 more are in the Top 25 *(EIA 2014)*

Top Industrial EE Program Administrators in the Midwest



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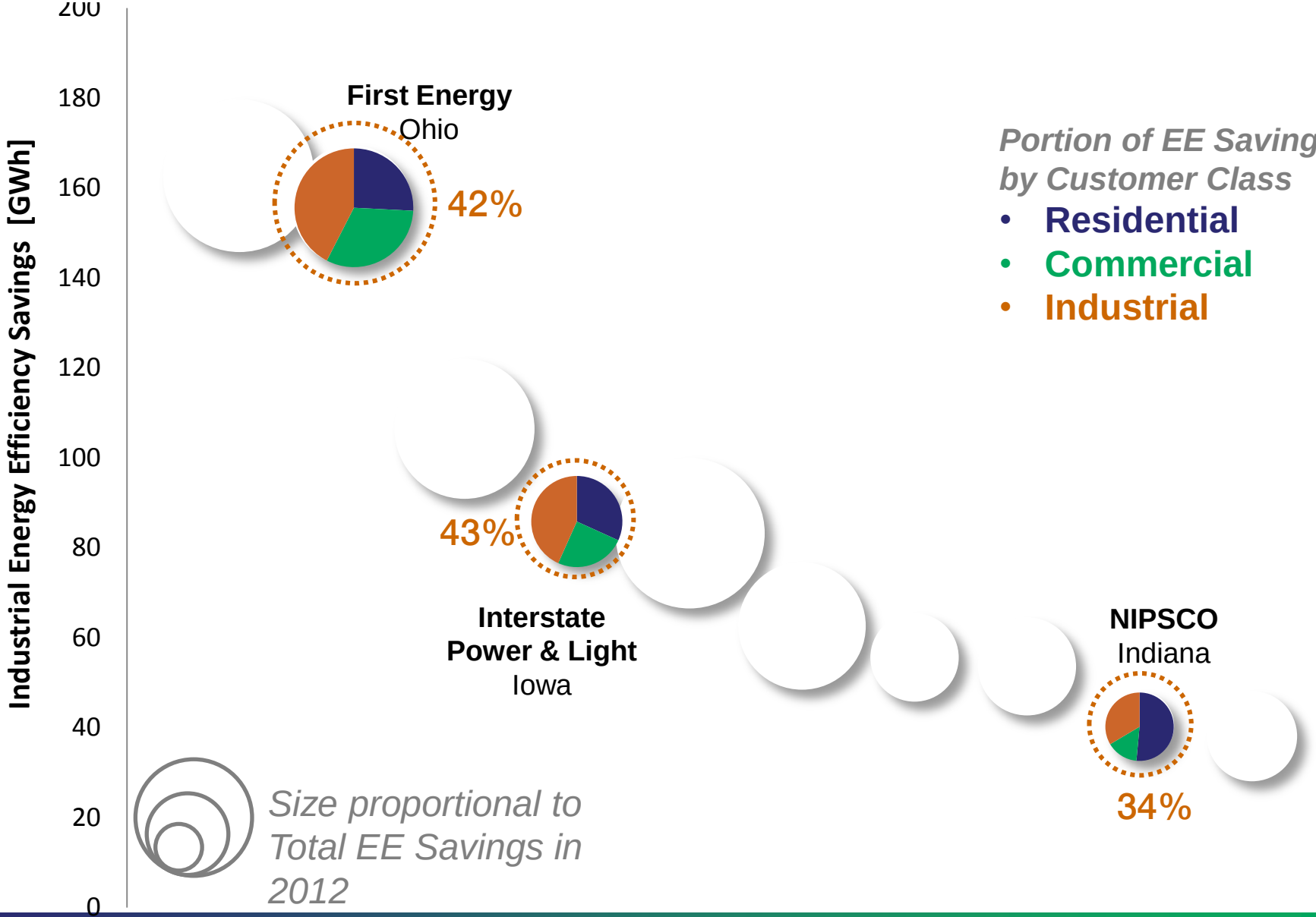


These **10 program administrators** account for

82.4% of **industrial** electricity savings *

50.5% of **total** electricity savings **

*out of 79 Midwestern program administrators that reported non-zero Industrial Incremental EE savings on 2012 EIA-861

**out of 192 Midwestern program administrators that reported non-zero Total Incremental EE savings on 2012 EIA-861

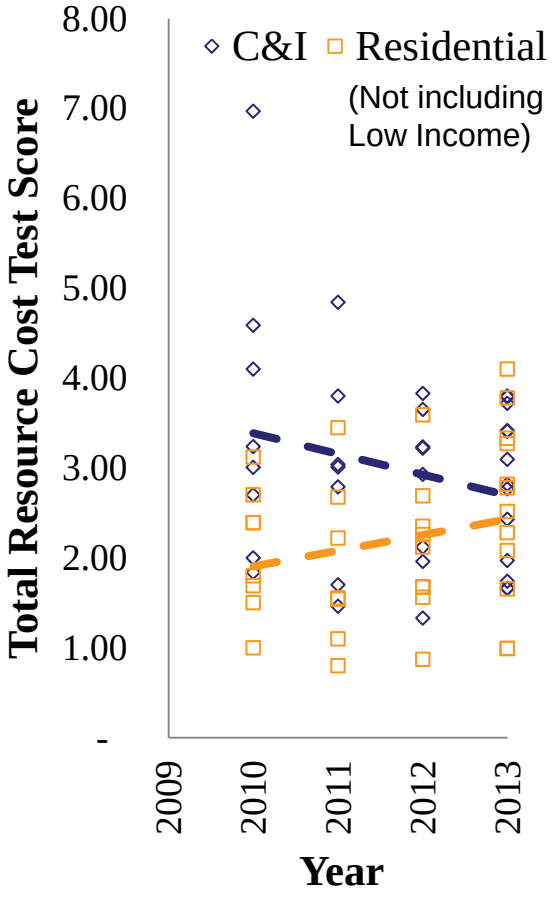
Some Factors that Influence C&I Cost-Effectiveness

High C&I Cost-Effectiveness

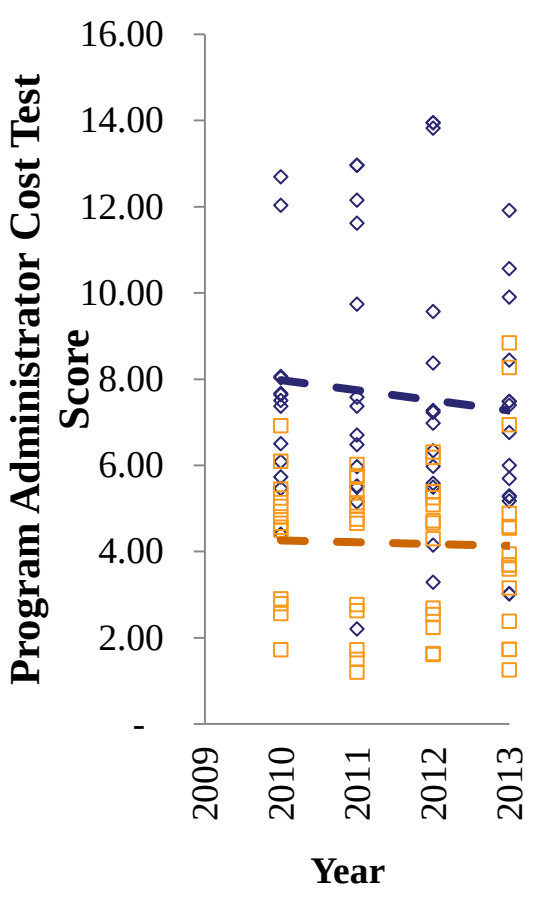
- **Scale of projects**
  - High energy intensity operations
  - High impact measures
- **Hours of operation**
- **Reduced marketing costs**
- **Higher level of Participant investment**

C&I is More Cost-Effective

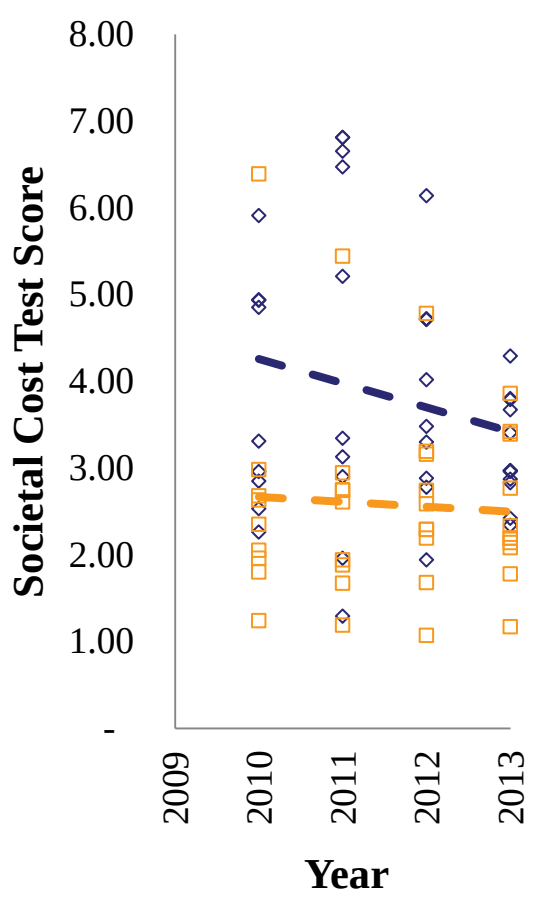
TRC



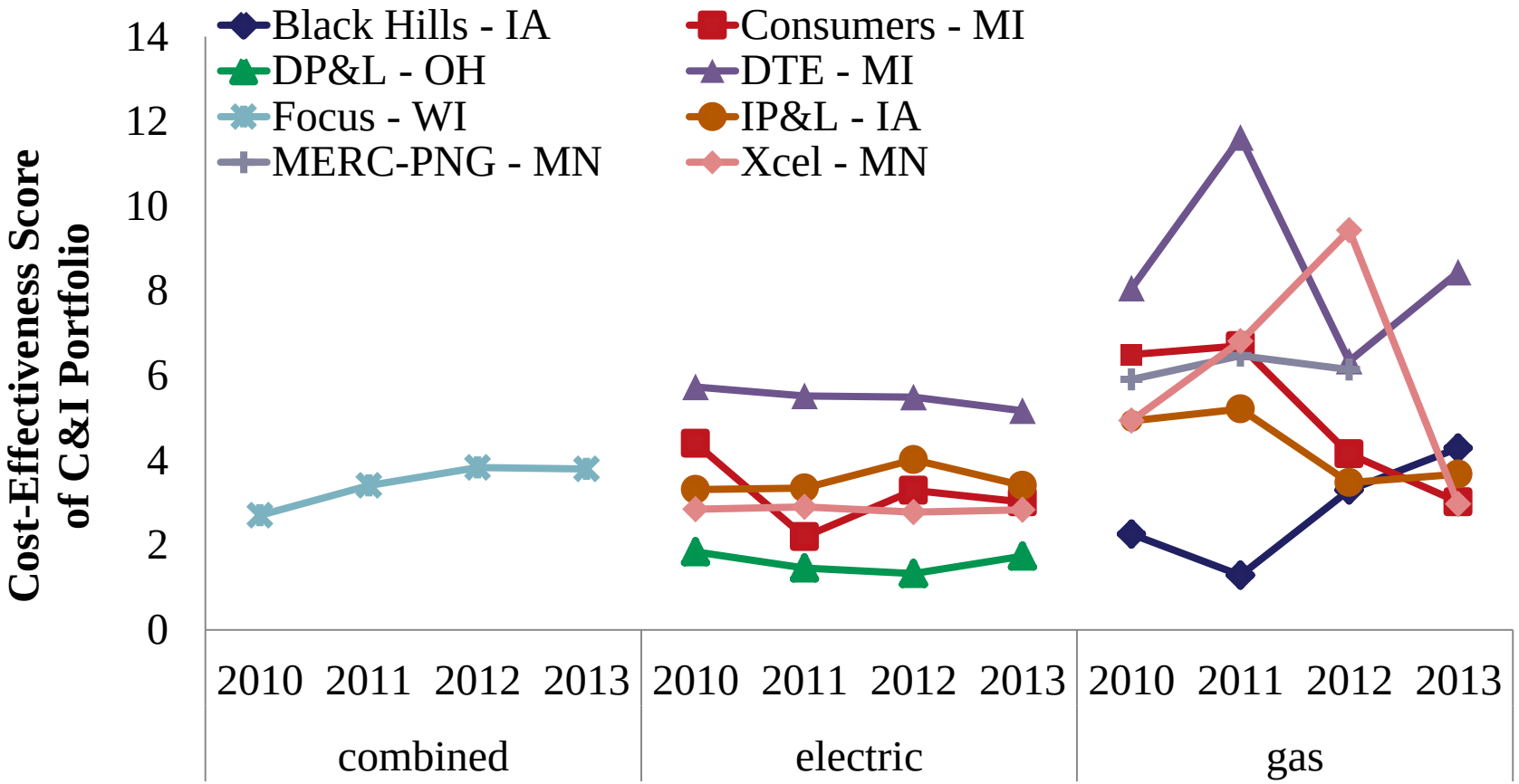
PACT



SCT



No "Low Hanging Fruit" Problem for C&I Portfolios



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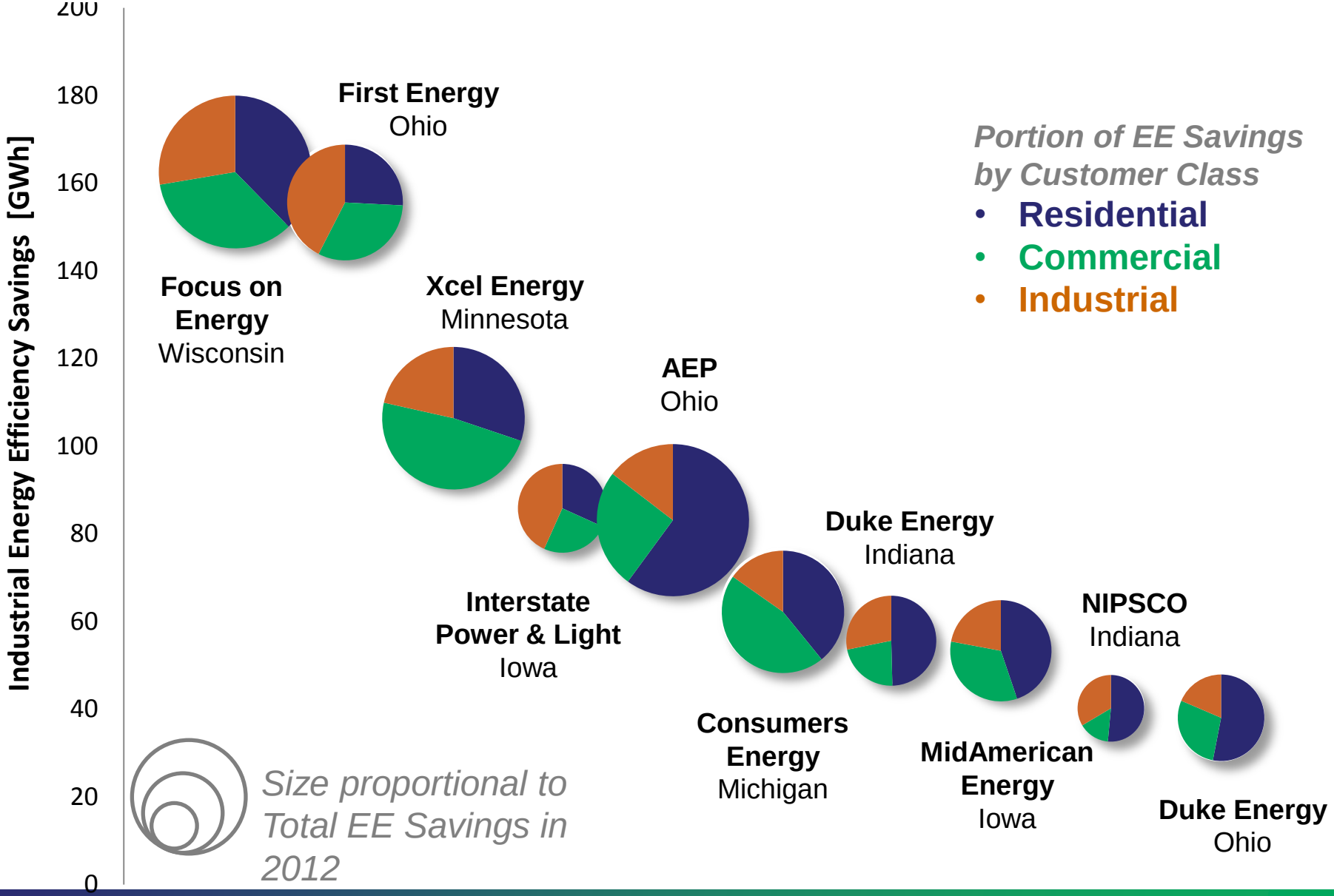
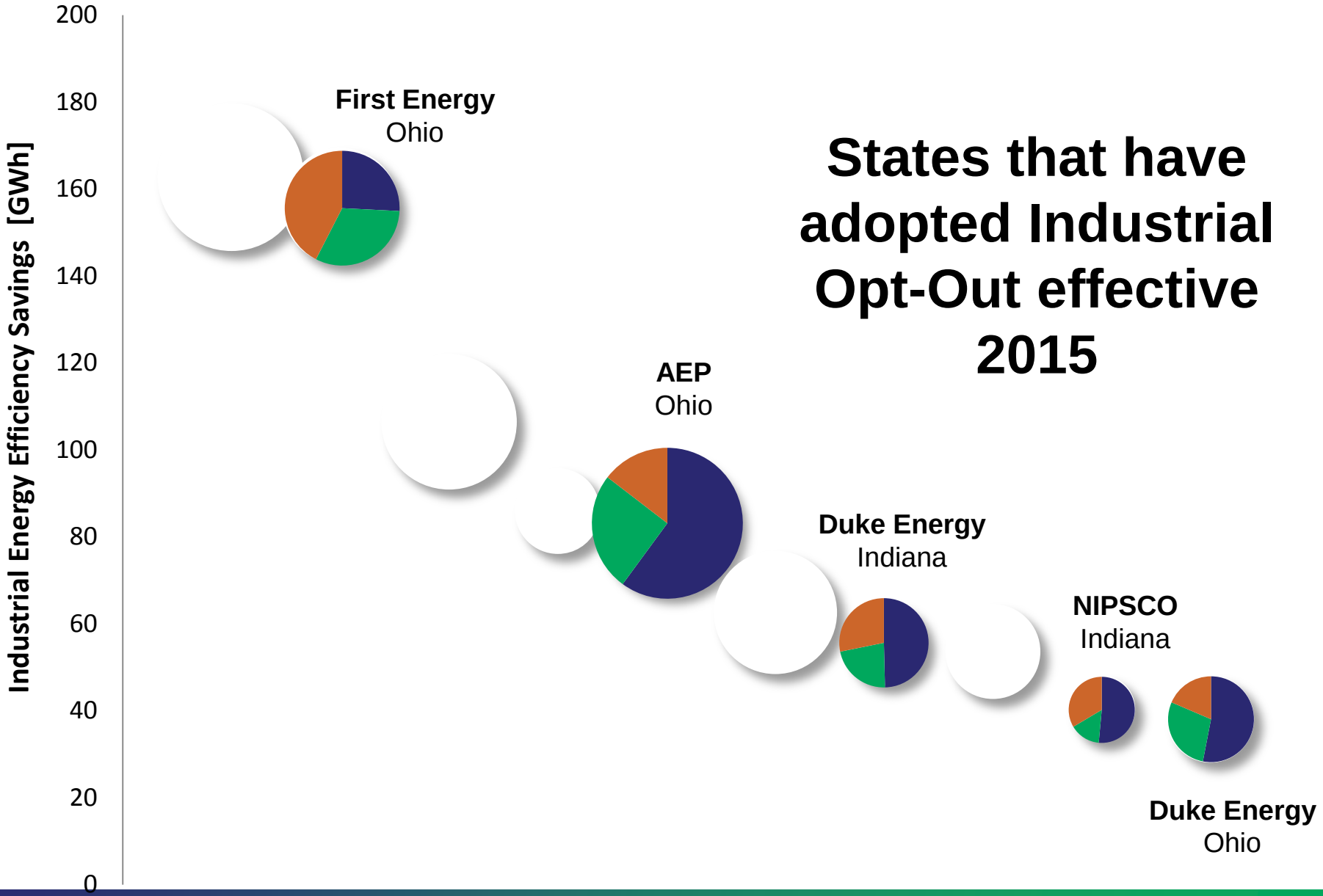


States that have adopted Industrial Opt-Out effective 2015



Magnitude of Lost Savings

In Ohio and Indiana, we have seen the following general trends in opt outs in current utility DSM Plan filings:

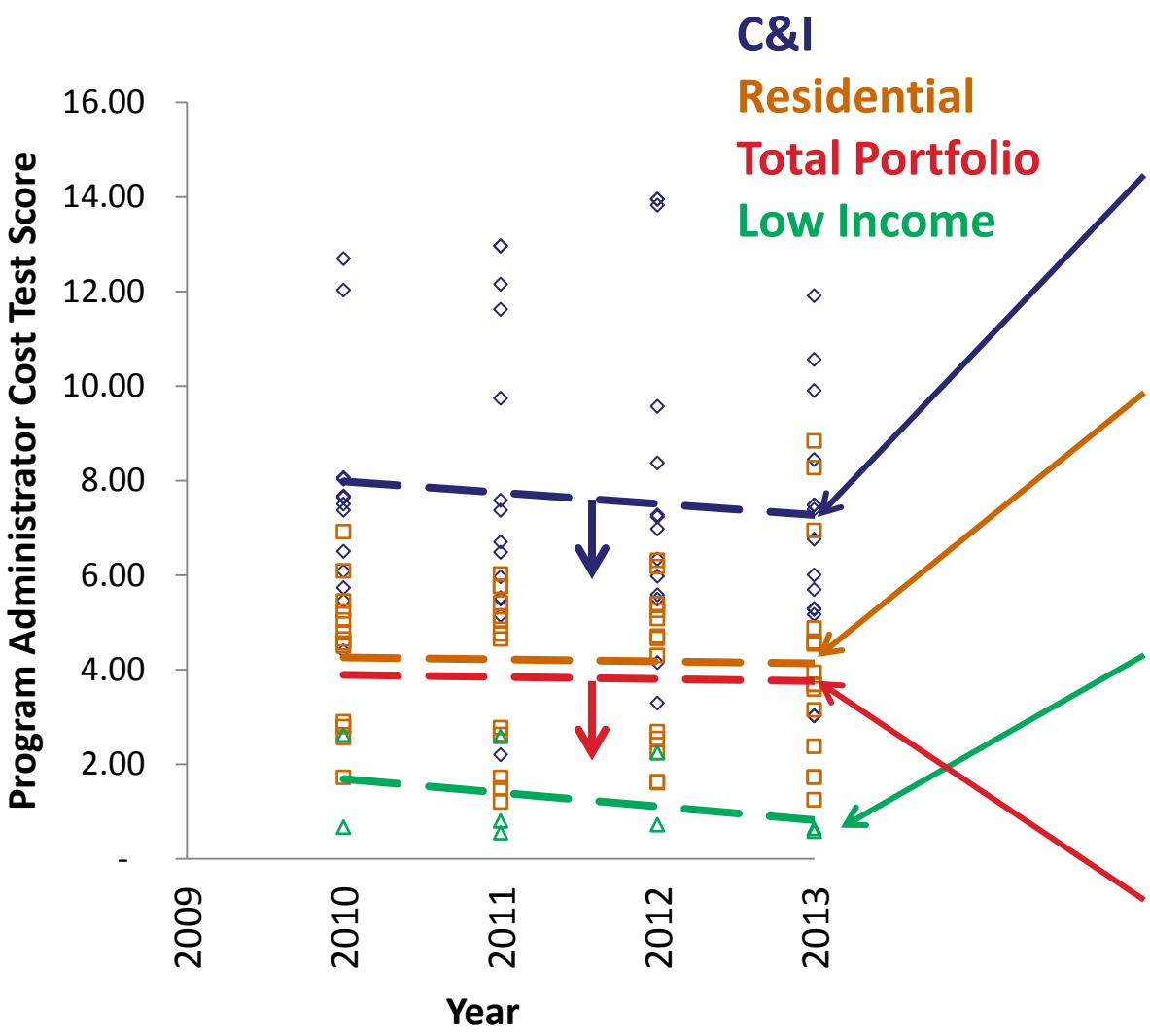
- 50-80% of eligible customers opted-out
  - Up to 65% of C&I sales
  - Up to 45% of total customer sales

Planned C&I energy efficiency savings reduced about 50% over previous impacts

Negative Impacts of Opt-Out

- Reduces overall amount of energy saved
- Loss of knowledge and data – utilities report EE spend & savings; opted-out companies don't report anything
- Portfolio costs all borne by residential & small business customers
- Reduces potential of efficiency as a path for Clean Power Plan compliance
- Less cost-effective programs are a higher percent of overall portfolio
- Reduced cost-effectiveness of portfolio

How Opt-Out Impacts the Overall Portfolio



Less large customer C&I participants. Lower total C&I portfolio B-C score.

Residential is greater portion of portfolio, more influence on total portfolio cost-effectiveness

LI is greater portion of portfolio, more influence on portfolio cost-effectiveness

Total portfolio B-C score decreases due to loss of most cost-effective segment

Better Alternatives

Michigan

- 2009 – 77 self-direct customers
- 2011 – threshold lowered
- 2013 – only 29 self-direct customers
- "*flexibility and comprehensive program options*" (MPSC 2012)

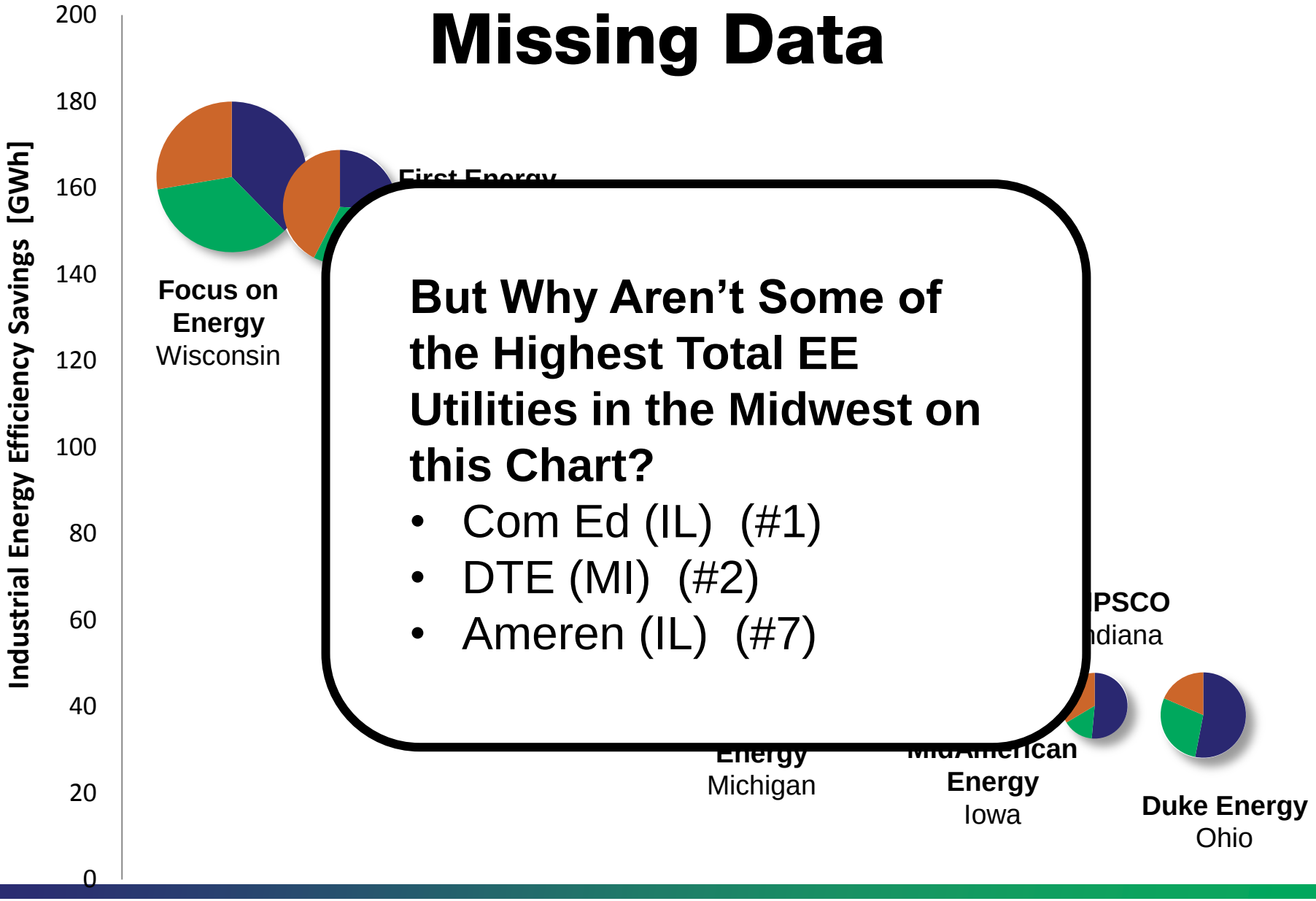
Minnesota

- Xcel's self-direct program for 2013 expected ten participants for electric and natural gas. In fact both had zero participants.
- "*customers gravitate to holistic, full-service programs*" (Xcel 2014)

Iowa

- *"…the Board is not persuaded that allowing an opt-out is good public policy… All utility customers, even those who do not directly participate …benefit from the avoided cost savings that are the primary goal of energy efficiency programs… Iowa has a strong public policy of supporting and developing energy efficiency and the Board will not undermine Iowa's policy by allowing certain customers to opt-out of the energy efficiency paradigm"* (IUB 2013)

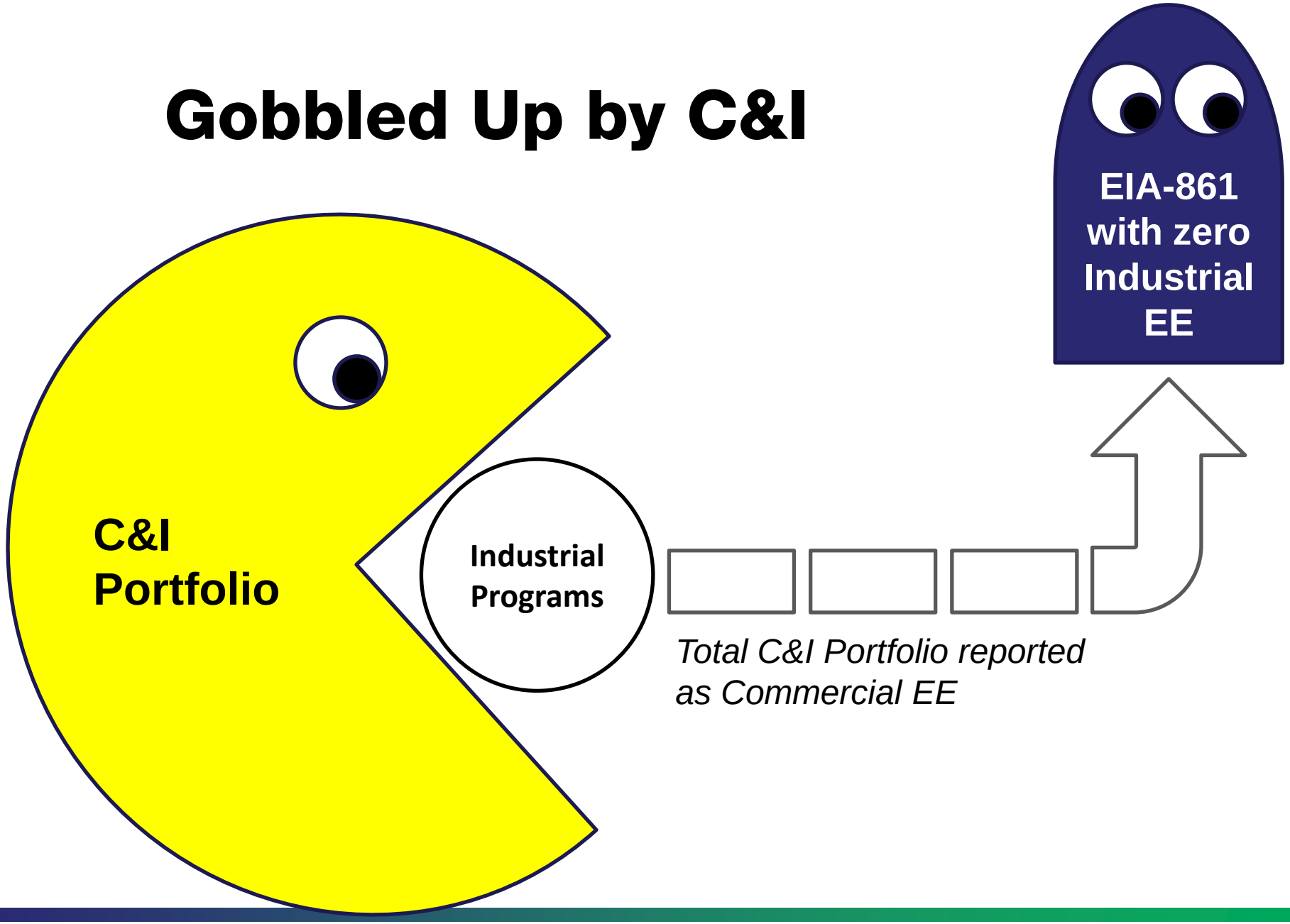
Missing Data



But Why Aren't Some of the Highest Total EE Utilities in the Midwest on this Chart?

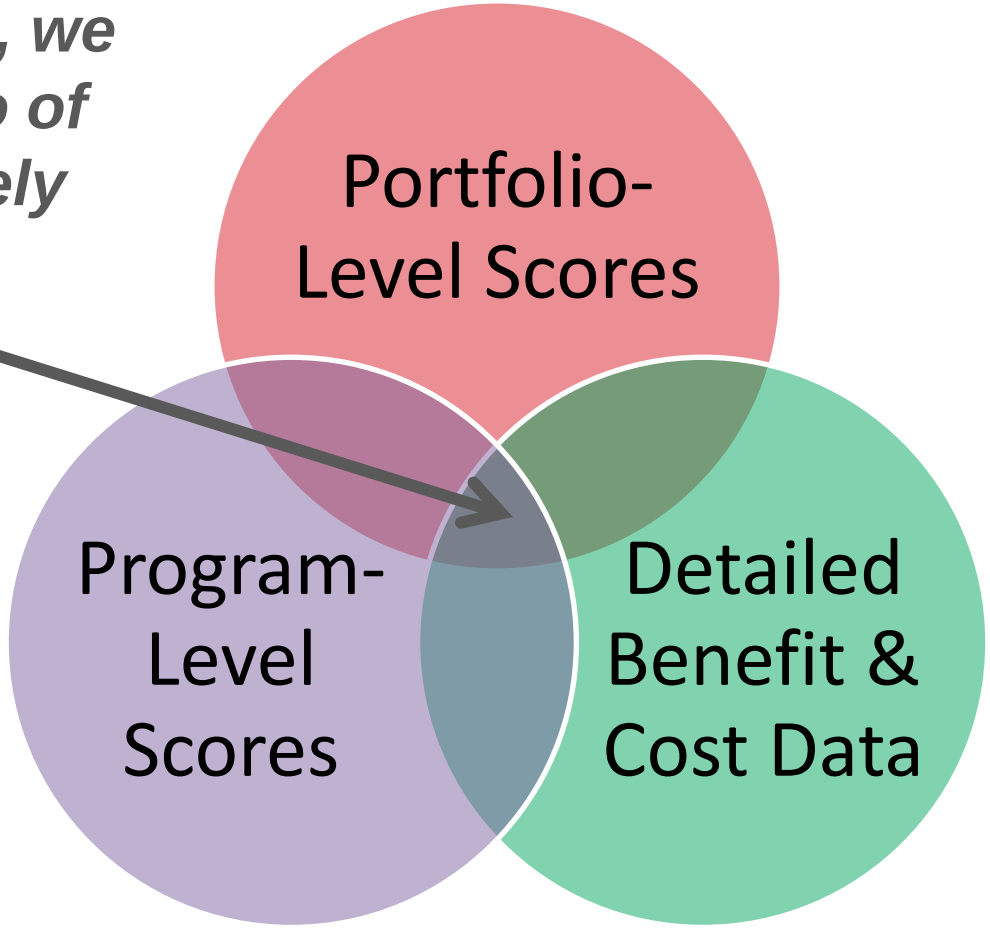
- Com Ed (IL) (#1)
- DTE (MI) (#2)
- Ameren (IL) (#7)

Gobbled Up by C&I

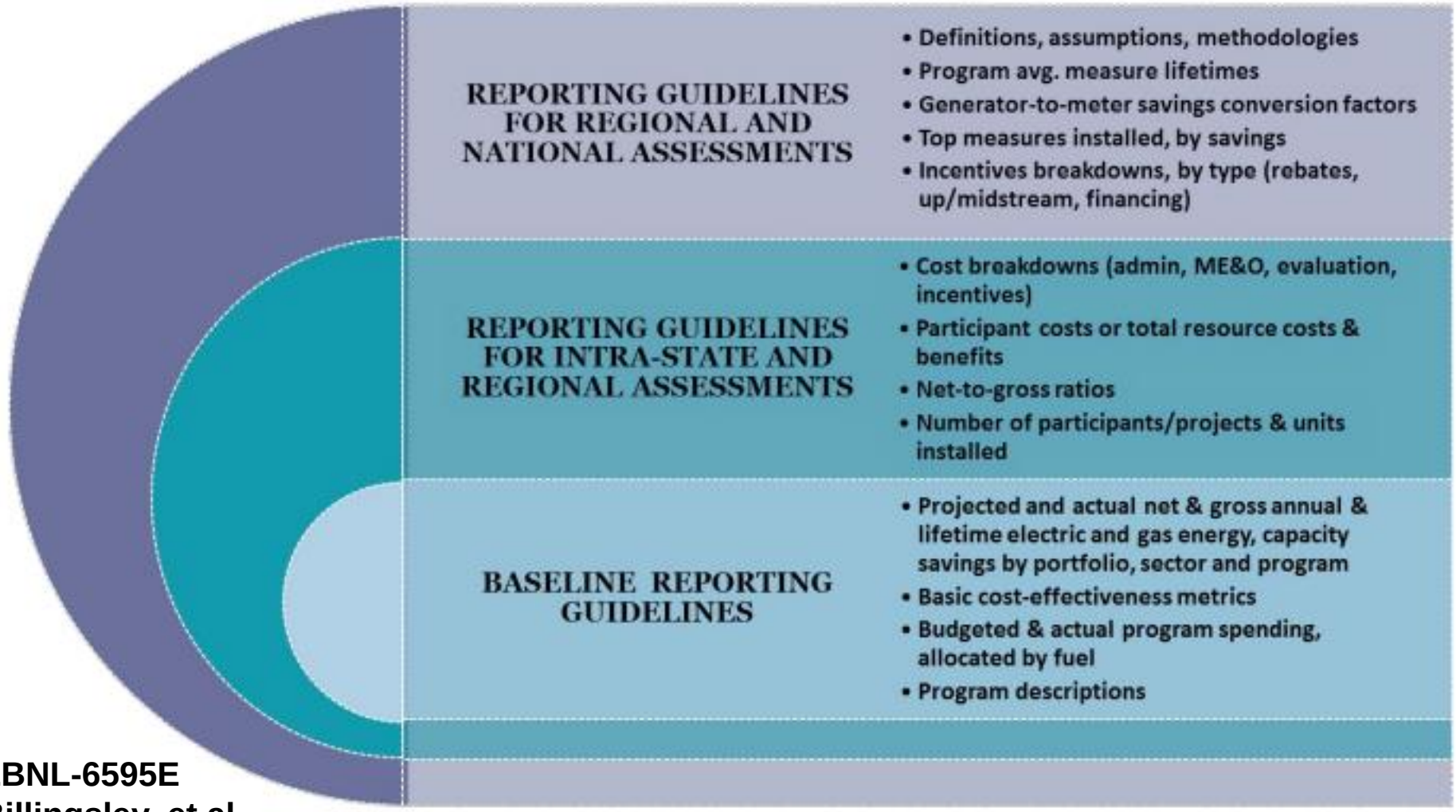


Some of the Data, Some of the Time

In most cases, we get one or two of these, but rarely all three.



How Do We Get Better Data?



LBNL-6595E
Billingsley, et al. 2014

Figure 5-1. Components of annual energy efficiency program reporting

Takeaways

Industrial EE is A Big Deal for the Midwest

C&I EE is the Most Cost-Effective Part of the Portfolio

5 of Top 10 Industrial PAs are losing about ½ of their Industrial EE

Opt-Outs Lose Energy Savings and Hurt Cost-Effectiveness

Better Data Would Help Us Better Understand True Scale and Impacts

Upcoming Events

2016 Midwest Industrial EE Summit

Annual event held in partnership with Midwest Governors Association, DOE, and others

Details TBA

February 24, 2016
(preceding MES Conference)

www.meeaconference.org

MEEA
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THANKS!

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