



American Council for an Energy-Efficient Economy

Great Examples of Industrial Energy Efficiency Programs

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The American Council for an Energy-Efficient Economy (ACEEE)

- ACEEE is a nonprofit 501(c)(3) that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments & behaviors.
- Nearly 50 staff based in Washington, D.C.
- Focus on end-use efficiency in industry, buildings, utilities & transportation
- Other research in economic analysis; behavior; national, state & local policy.
- Funding:
 - Foundation Grants (52%)
 - Contract Work & Gov. Grants (20%)
 - Conferences and Publications (20%)
 - Contributions and Other (8%)



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What Constitutes a Great Industrial Energy Efficiency Program?

Possible Metrics

- Energy Savings (MW, MWh, % load)
- Benefit-Cost Ratio (forecast, observed)
- Cost of Saved Energy
- Participation rate
- Environmental Benefits

Typology of IEEPs

Program Type	Strengths	Weakness
Prescriptive Incentive	Technology-specific	Limited ambition; not universally applicable
Custom / Process Efficiency	Facility-specific, flexible	Inconsistent assessment of data
Strategic Energy Management	Systemic	Long time frame. Can be difficult to mesh with program funding
Market Transformation	Scattered, small, amorphous	Supply-chain and vendor orientation
Self-direct Options	Flexible, conceptually popular with customers	Some questionable M&V. May overlook opportunities

A Few Good Programs

Utility or Organization (State)	Program Titles
Focus on Energy (WI)	Business Incentives, Large Energy Users
Xcel Energy (CO)	Recommissioning, Self-Direct, Large Commercial and Industrial Standard Offer
Xcel Energy (MN)	Recommissioning, Industrial Process Efficiency and Custom Efficiency
American Electric Power (OH)	Custom Incentive Program, Prescriptive Program, Self-Direct
Rocky Mountain Power (UT)	New Facilities, Energy FinAnswer, Self-Direct, Energy Project Manager Co-Funding

Benefit-Cost Ratios

Wisconsin Focus on Energy

	Non-Residential (mostly industrial)	Residential
Total Costs	\$81 million	\$42 million
Benefit-cost ratio	2.7	1.5

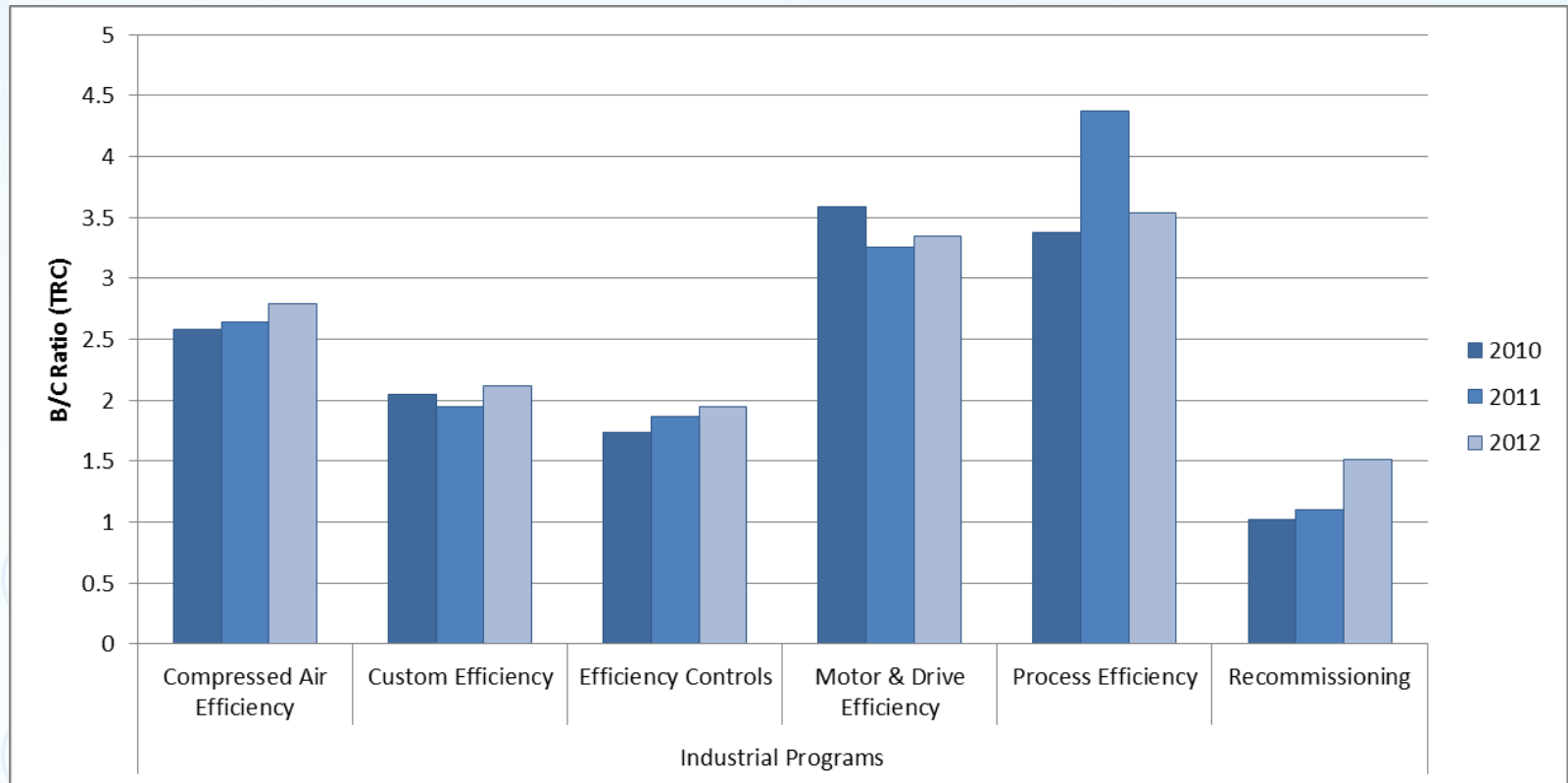
2001-2012: Reached 4000 customers (1/3 of market)

Industry Program responsible for 42% and 62% FOE's respective electricity and natural gas savings

Source: Focus on Energy 2011

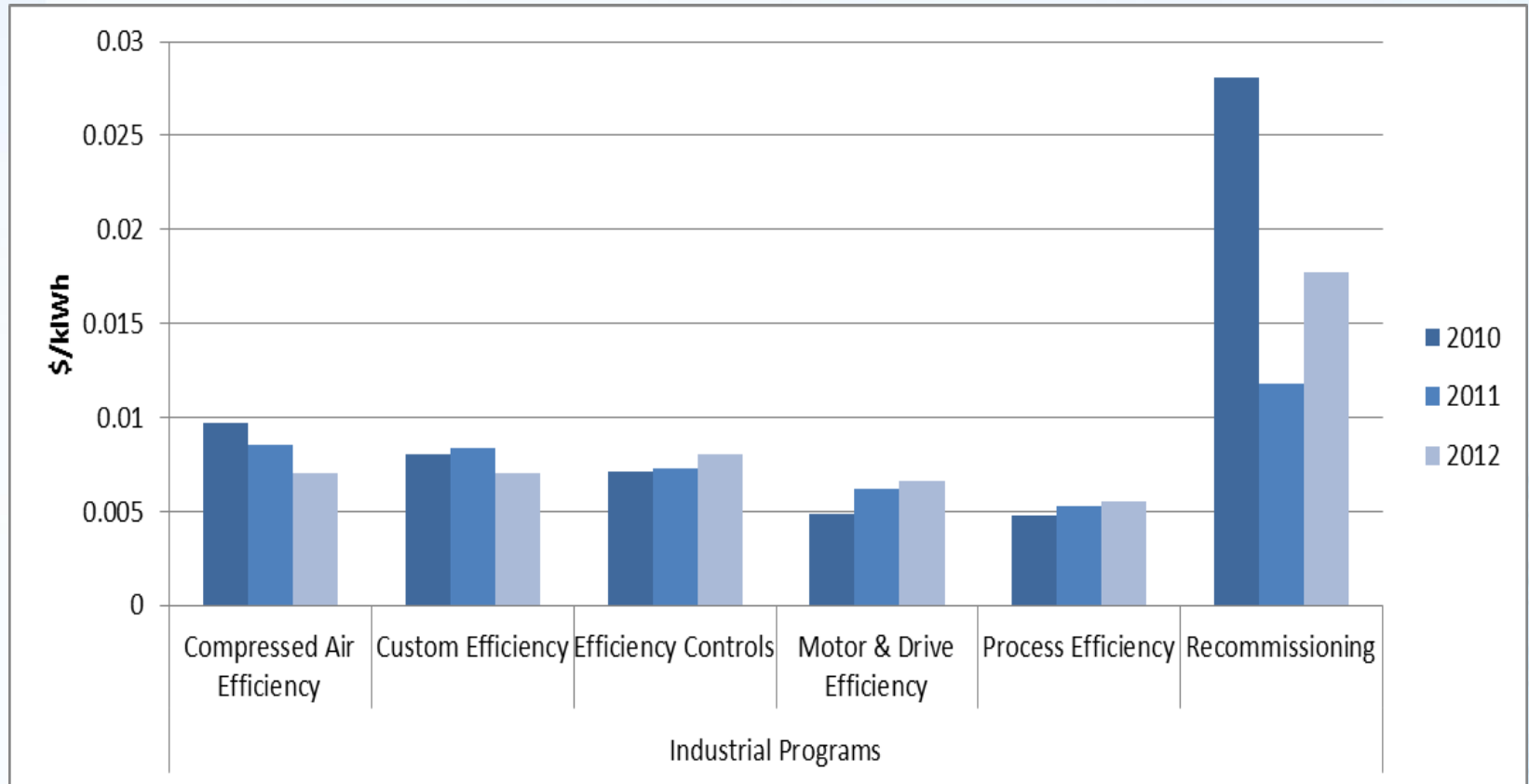
Benefit-Cost Ratio

Xcel-MN, electric

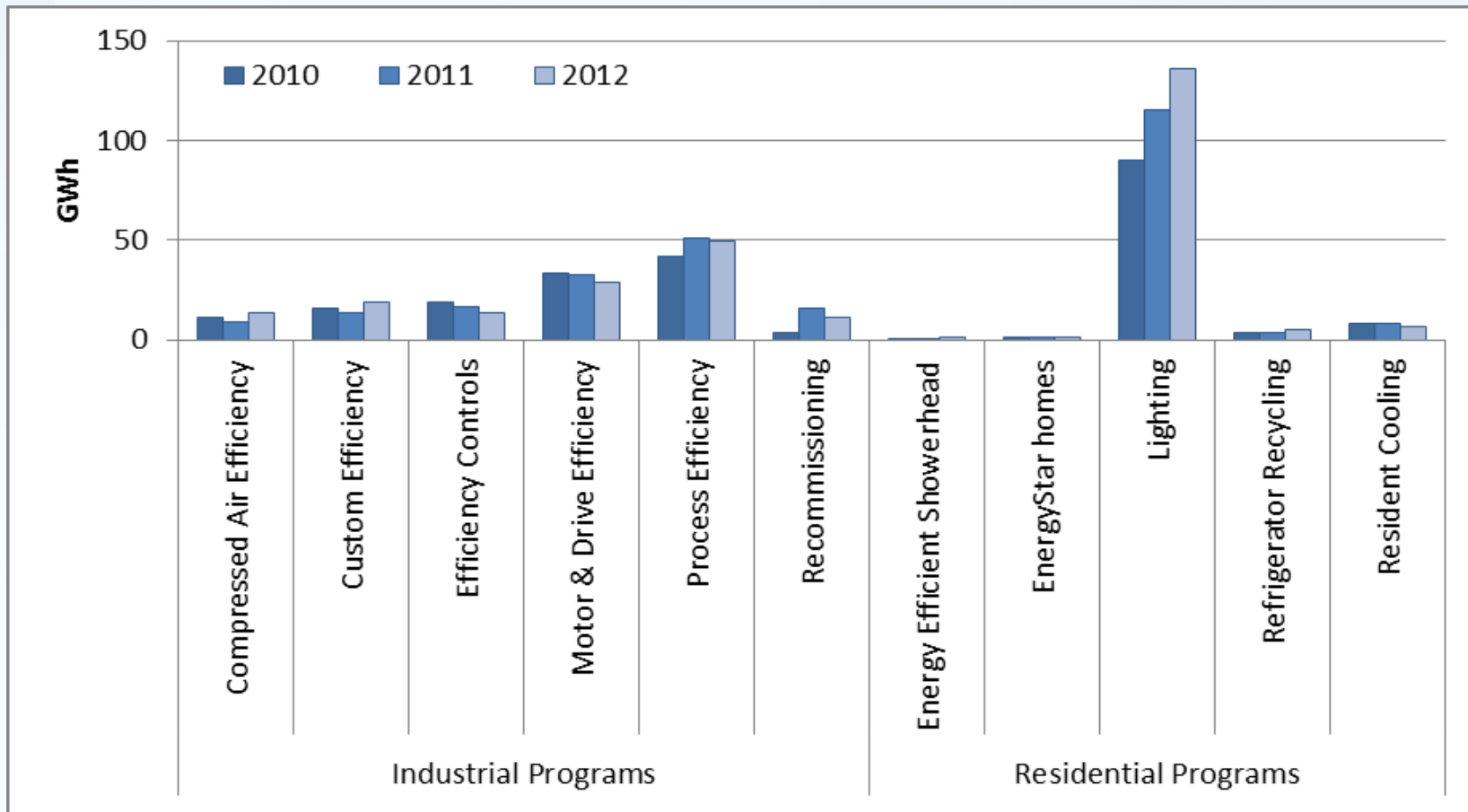


Sources: Xcel MN (2010, 2011, 2012)

Cost of Saved Energy Xcel-MN, electric



Industrial programs can generate larger savings Xcel-MN, electric



Cost of Saved Energy is declining for all programs except self-direct Rocky Mountain Power - electric



Source: Rocky Mountain Power

Conclusions

Industrial Energy Efficiency Programs:

- Are as cost-effective as programs in other sectors
- Yield low costs of saved energy and high total energy savings
- A good opportunity for energy efficiency resource acquisition programs

Features of Good Programs

- Technical expertise
- Flexibility
- User Friendly
- Portfolio approach
- Stability
- One-stop shopping
- Develop long-term relationships
- Evolve over time
- Reach out to new customers

Thank you!

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Research Reports Featured in this Presentation

- Bradbury, Aden, Shrestha and Chittum, *One Goal, Many Paths: Comparative Assessment of Industrial Energy Efficiency Programs*. 2013 ACEEE Summer Study
- Nowak, Kushler, Witte and York, 2013. *Leaders of the Pack: ACEEE's Third National Review of Exemplary Energy Efficiency Programs*. U132.
- Chittum, Elliott and Kaufman, 2009. *Trends in Industrial Energy Efficiency Programs; Today's Leaders and Directions for the Future*. IE091 ACEEE
- Chittum, 2013. *Follow the Leaders: Improving Large Customer Self-Direct Programs*. IE112 ACEEE