

# Industrial Energy Efficiency

Industrial customers account for over **30%** of the nation's energy use. Because the industrial sector employs many energy-intensive processes, there is considerable potential for energy savings through policies and programs focusing on industrial energy efficiency. Industrial customers account for **34%** of the Midwest's energy use as the region is home to a significant percentage of the nation's manufacturing and industrial capacity. According to the EIA, as seen in the bottom right chart, four Midwest states are within the top 10 consumers of total energy in the industrial sector, and five more rank in the top 25. Energy efficiency enables industrial businesses to reduce energy bills while increasing competitiveness.

- Nationwide, **40%** of the economy's energy efficiency potential exists in the industrial sector.
- Industrial sector natural gas savings account for **45.9%** of all natural gas saved in the Midwest region.
- For three Midwestern utilities— Interstate Power and Light (IN), MidAmerican Energy (IA) and Tennessee Valley Authority (KY)— industrial efficiency made up more than **33%** of their total energy efficiency savings.

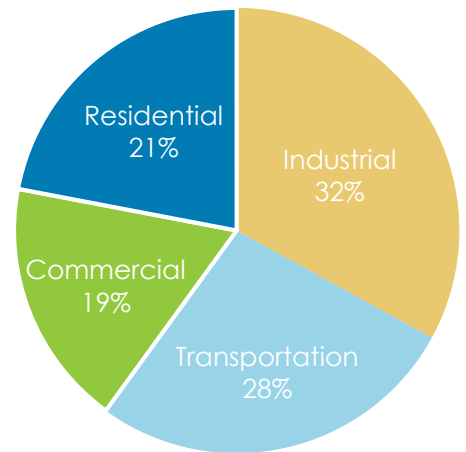
## Industrial Energy Efficiency Works for Businesses of All Sizes

**Prescriptive Programs** offer businesses fixed financial incentives or rebates for implementing improvements or technologies that reduce energy consumption. For example, there may be a set incentive for upgrades to lighting, compressed air systems, motors, refrigeration and insulation.

**Custom Programs** provide businesses with incentives for installing high efficiency equipment or technologies that are not among the prescriptive technologies or for implementing process improvements that reduce overall energy consumption and peak demand.

**Strategic Energy Management (SEM)** is a holistic approach to reducing energy consumption through the implementation of business best practices. SEM facilitates a collaborative engagement between the customer and utility to leverage their entire portfolio in a three-year plan which typically includes a systematic way to apply new technology, measure progress and address behavior changes.

**U.S. Department of Energy's 50001 Program** is a self-guided approach for facilities to establish an energy management system and self-attest to the structure of ISO 5000, a voluntary global standard for energy management systems in industrial, commercial, and institutional facilities.



**Total U.S. Energy Consumption by Sector**  
Energy Information Administration, 2016



**Industrial Energy Consumption in the Midwest, 2016 U.S. State Rank**

Energy Information Administration, 2017

## Don't Opt-Out of a Good Thing

Utility program offerings in the commercial and industrial sectors tend to be the most cost-effective portion of a utility's energy efficiency portfolio, garnering significant benefits per \$1 of cost (see table).

Despite this, several Midwestern states have adopted industrial opt-out policies that allow large energy users—with diverse criteria that vary state-to-state—to “opt-out” of paying into utility efficiency programs with the understanding that they are pursuing energy efficiency improvements on their own. However, this rarely occurs and the potential for capturing energy savings from the industrial sector is lost.

**Self-direct** is an alternative policy approach that allows large energy users the ability to design their own energy efficiency programs as long as they provide evidence of actual energy efficiency savings or spending on energy improvements equivalent to what they would be paying to the utility.

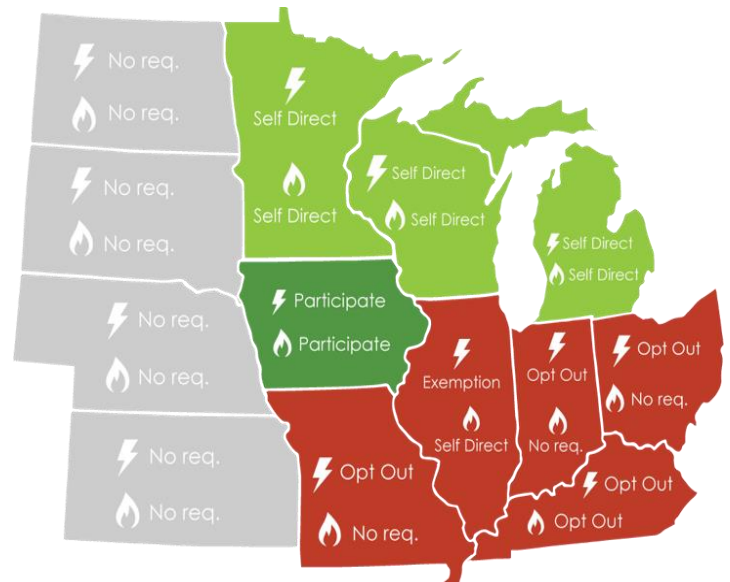
## Negative Impacts of Industrial Opt-Out

- All energy efficiency costs are shifted onto commercial and residential customers. When more energy users participate in energy efficiency, more energy is saved at a lower cost.
- Industrial customers benefit from the societal benefits of energy efficiency, but do not pay their share.
- The most cost-effective energy efficiency programs are eliminated, diminishing the cost-effectiveness of the complete portfolio.

## Return on Investment of Commercial & Industrial Energy Efficiency

State	Program Administrator	Energy Type	\$ in benefits per \$1 cost*
WI	Focus on Energy	Electric & Gas	\$3.14
IA	Interstate Power & Light	Electric	\$1.73
		Gas	\$1.14
MN	Xcel Energy	Electric	\$2.17
		Gas	\$3.32
MI	DTE Energy	Electric	\$2.61
		Gas	\$1.65
MI	Consumers Energy	Electric	\$2.02
		Gas	\$2.37
OH	Dayton Power & Light	Electric	\$1.61
SD	Otter Tail Power	Electric	\$4.42

\*Benefits and costs calculated via the Total Resource Cost Test (TRC), except MN which is calculated via the Societal Cost Test (SCT). Source: C&I Portfolios of Selected Midwest Program Administrators. 2016.



**Industrial Self-Direct and Opt-Out Policies**  
Midwest Energy Efficiency Alliance, 2017