



State Ranking of Potential Electric Bill Savings through Industrial Energy Efficiency

ACEEE 2017 Summer Study on Energy Efficiency in Industry

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Alliance for Industrial Efficiency



The Alliance for Industrial Efficiency promotes state and federal policies to support U.S. manufacturing competitiveness through enhanced industrial efficiency. Our diverse coalition of businesses, labor groups, and non-profits work to improve energy efficiency in America's industrial sector.

Agenda

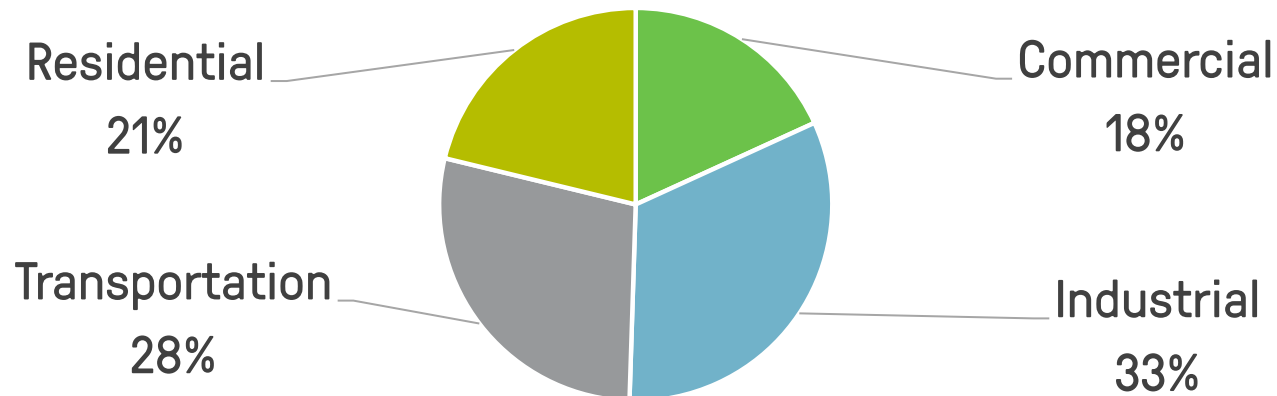
- ◆ The Industrial Energy Efficiency (IEE) Opportunity
- ◆ Methodology
- ◆ Findings
- ◆ How States Can Seize the IEE Opportunity



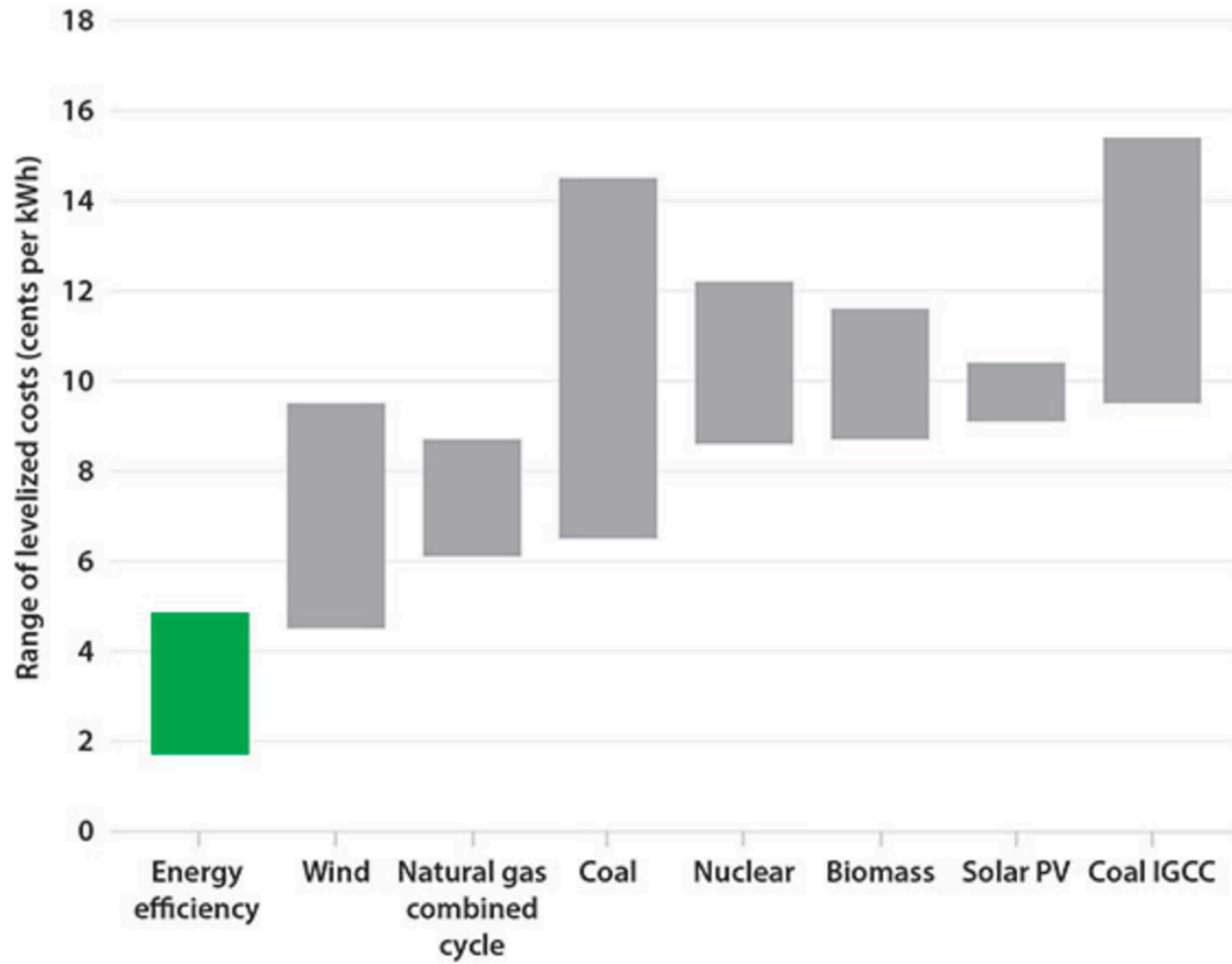
The cost savings and emission-reduction opportunity in the industrial sector

- Largest energy user in U.S. economy, comprising ~1/3 of U.S. energy demand.
- Industry spends \$230 billion on energy each year.
- Industry accounts for 21% of U.S. GHG emissions.

Figure 1. Share of total U.S. energy consumed by end-use sector, 2015

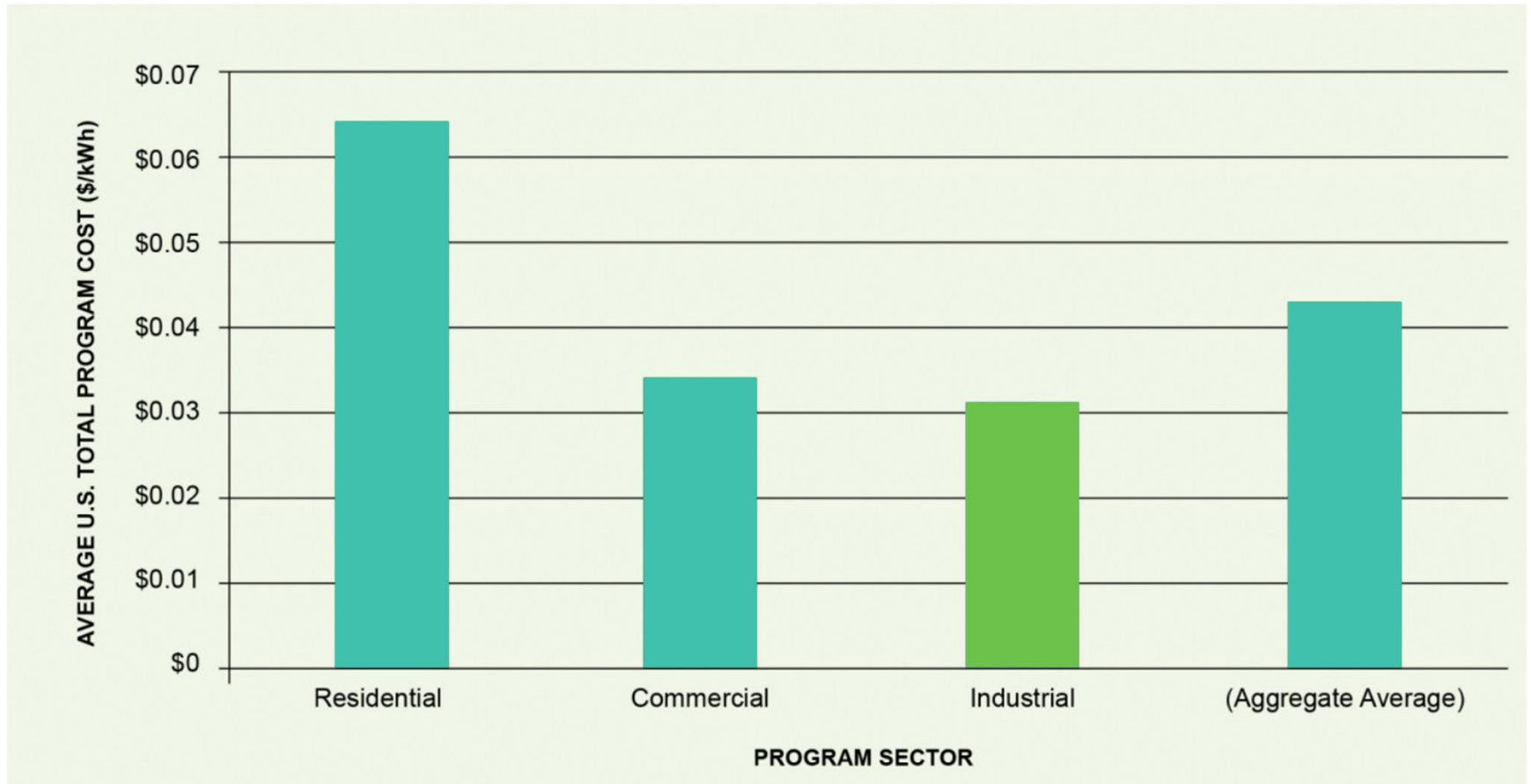


Energy efficiency is the cheapest energy resource



Source: ACEEE, 2014

Industry has lowest cost of saved energy on national level



Source: DOE, 2013

Methodology

Scenario where each state:

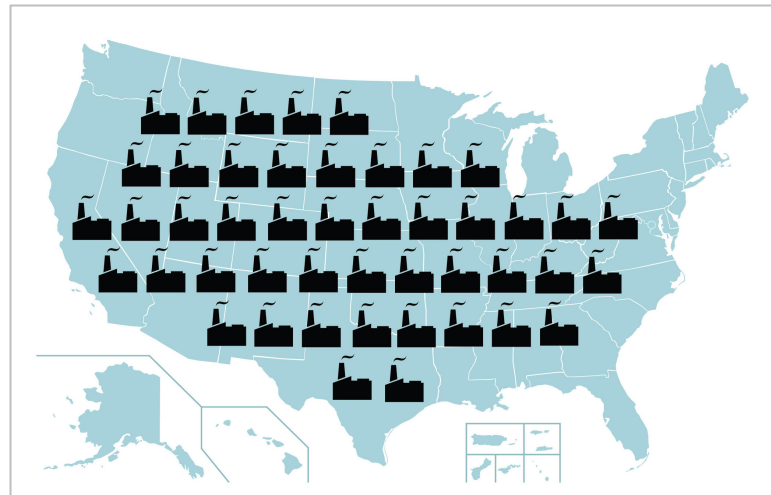
1. Achieves 1.5% electricity savings per year by 2030
2. Installs a portion of its technical potential for new CHP and WHP, with <10-year payback



National findings

	Annual CO ₂ Savings (short tons)	Annual electricity savings (MWh)	Cumulative utility bill savings through 2030 (million 2011\$)
IEE	141,866,557	212,480,929	\$157,750
CHP/WHP	32,625,000	183,855,000	\$140,590
Total	174,491,557	396,335,929	\$298,340

*174.5 million tons CO₂ = 46
coal-fired power plants*



Top ten states with largest potential electric bill savings

Ranking	State	2030 Cumulative Utility Bill Savings (million 2011\$)
1	CA	\$35,310
2	TX	\$23,175
3	NY	\$20,030
4	MA	\$15,997
5	FL	\$12,851
6	OH	\$12,525
7	NJ	\$11,782
8	PA	\$11,208
9	IL	\$10,834
10	IN	\$8,775
TOTAL		\$162,486

States that rank in top ten for *both* bill savings and CO₂ reductions:



How states can seize the IEE opportunity

- Industrial energy efficiency
 - Implement best practices in utility program design
 - Set at least 1.5% targets for energy savings
 - Ensure large customer participation
- CHP and WHP
 - Establish goals for CHP and WHP deployment
 - Promote CHP in critical infrastructure
 - Provide incentives for deployment
 - Remove regulatory barriers (e.g., unfair standby rates, interconnection standards)

Nissin Brake

- ◆ **Type of project:** Lighting, compressed air, chiller, and manufacturing equipment upgrades
- ◆ **Investment:** More than \$1.67 million since 2008
- ◆ **Utility incentives:** More than \$289,000 since 2008
- ◆ **Savings:** \$3.4 million in avoided energy costs since 2008



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