



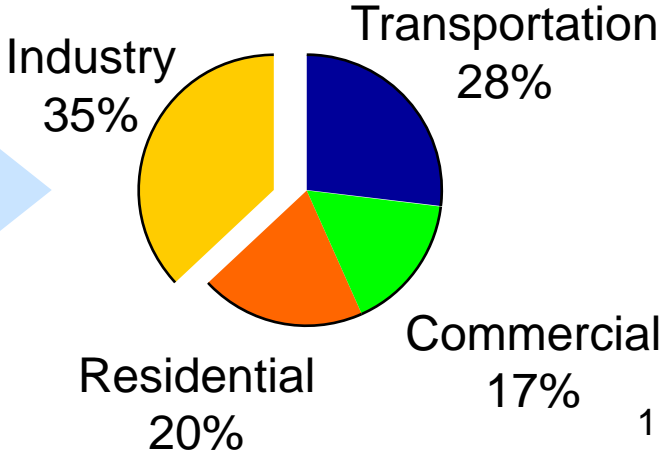
Industrial Technologies Program

GOALS

- **Energy savings**
- Environmental quality
- Yield improvement/
Resource conservation
- Economic viability
- Energy security

Targeting the largest opportunity to save energy in the United States

2001 Energy Use





Industrial Technologies Program

MISSION

Improve the energy intensity of U.S. industry through coordinated research and development, validation, and dissemination of energy efficiency technologies & practices.

Partner with industry and other stakeholders to:

- Increase energy savings
- Reduce environmental impacts
- Improve process yield/conserves resources
- Reduce reliance on foreign oil
- Increase use of renewable energy
- Improve competitiveness and quality of life



Technology Delivery

- **Software Tools & Training**

Training in practices and software to improve the energy performance of plant systems

- **Industrial Assessment Centers**

No-cost assessments provided to eligible **small & mid-size plants** by university-based teams

- **Plant-wide Assessments**

Up to \$100K in EERE funds competitively awarded to **large plants** through an open solicitation process. Cost-shared funding pays for third-party analysis.

- **Technology**

 - **Demonstrations**

ITP solicits proposals to install and field-test emerging technologies.

- **Replication**

ITP works with plants and industry associations to replicate energy savings.





Tools Available on Our Web Site or via Links

- **Steam System Scoping Tool**
Profiles and grades large steam system operations/management.
- **Steam System Assessment Tool**
Assesses potential benefits of specific steam-system improvements.
- **3EPlus Insulation Assessment Tool**
Calculates most economical thickness of insulation for a variety of operating conditions.
- **Process Heating Assessment and Survey Tool**
Assesses energy use in furnaces/
performance improvements
- **NOx and Energy Assessment Tool (NxEAT)**
analyzes NOx emissions and energy efficiency improvements
- **Plant Energy Profiler** (under development)



Training Opportunities for Software Tools

- Awareness Workshops (usually 1-2 hours)
- Webcasts (1-2 hours)
- End-user training (1-2 days)
- Qualified specialist training (2-3 days)
 - Potential resource for plant personnel



See
www.eere.energy.gov/industry
for details



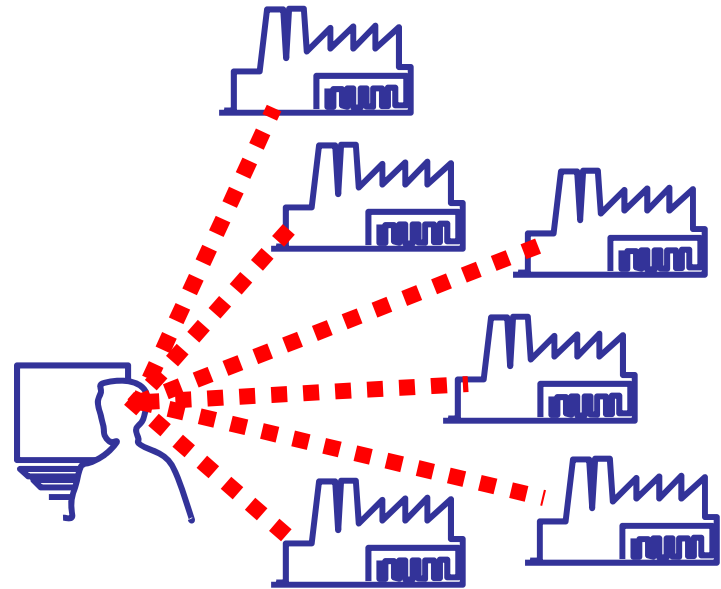
Qualified Specialists

DOE and its Allied Partners certify Qualified Specialists to apply energy management decision tools at industrial facilities to analyze:

- Compressed Air Systems
- Pump Systems
- Steam Systems
- Process Heating Systems
- Fan Systems

Contact information provided on our web site:

www.oit.doe.gov/bestpractices/training



Each new qualified specialist contributes to increased energy and cost savings₁₉



Information

A Best Practices Steam Technical Brief

How To Calculate The True Cost of Steam

Energy Tips
By David C. Berg, P.E.

MOTORS
Cost Reduction Strategies

Did you know...

Motor System Cost per Year	Estimated Potential Savings per Year	Savings as % of Operating Costs
\$6,000,000	\$1,000,000	17%

More Operational Savings Are in a Typical Plant

Office of Industrial Technologies
Energy Efficiency and Renewable Energy • U.S. Department of Energy

- Tip sheets, case studies, brochures, technical briefs etc.
- *Energy Matters* newsletter
- Industrial Technologies Monthly e-bulletin
- Software tools and training
- Web sites

www.eere.energy.gov/industry/saveenergynow



Energy Efficiency and Renewable Energy Information Center

On-call team of professional engineers, scientists, research librarians, energy specialists, and communications information staff

Voice: 877-337-3463

Fax: 360-236-2023

**Websites: www.eere.energy.gov/industry/
www.eere.energy.gov/industry/saveenergynow**





U.S. Department of Energy
Energy Efficiency and Renewable Energy

DOE Industrial Technologies Program (ITP) FUNDING OPPORTUNITIES

INDUSTRIAL ASSESSMENT CENTERS
(Up to 6 Mill.-1/24/06)

INNOVATIVE ENERGY SYSTEMS CHALLENGE-CHEMICAL IND.
(up to 4 million-phaze 1-----1/25/06)

CHEMICAL INDUSTRIES OF THE FUTURE
(500k 1st yr-up to 10 million remaining years—1/11/06)



**U.S. Department of Energy
Industrial Technologies Program (ITP)**



U.S. Department of Energy
Energy Efficiency and Renewable Energy

DOE's Industrial Technologies Program (ITP) "Save Energy Now" Initiative



October 2005

**U.S. Department of Energy
Industrial Technologies Program (ITP)**



“Easy Ways to Save Energy” Campaign

- A response to hurricanes Katrina and Rita and disruption in energy supplies
- DOE/Energy Efficiency & Renewable Energy (EERE) has created four initiatives
 1. Energy Hog campaign – Public Service Announcements
 2. Energy Savers tips to help homeowners save energy
 3. Federal Energy Management Program (FEMP) energy saving teams
 4. Industrial Energy Technologies (ITP) **“Save Energy Now”**





Natural Gas Spot Henry Hub





Save Energy Now: A New DOE Initiative

In response to this year's hurricanes, shortages in energy supplies, and higher prices, DOE and its Industrial Technologies Program has launched the **Save Energy Now** initiative to help plants find low-cost improvements to lower costs and save energy

The campaign will:

- Conduct 200 energy savings assessments of the most energy-intensive U.S. plants
- Work with partners to create awareness and find energy savings solutions
- Disseminate energy savings information & tools to 50,000 plants to help reduce natural gas and electricity use.

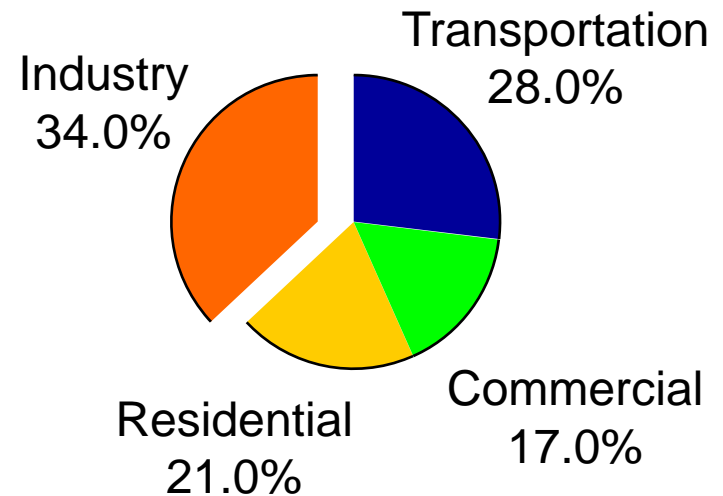




Industry: Critical to National Energy Policy

- 1/3 of U.S. **energy consumption**
- Accounts for more than 40% of U.S. **natural gas** demand
- 28% of U.S. electricity demand
- Approximately 30% of U.S **greenhouse gas** emissions
- Energy is key to **economic growth** in domestic manufacturing

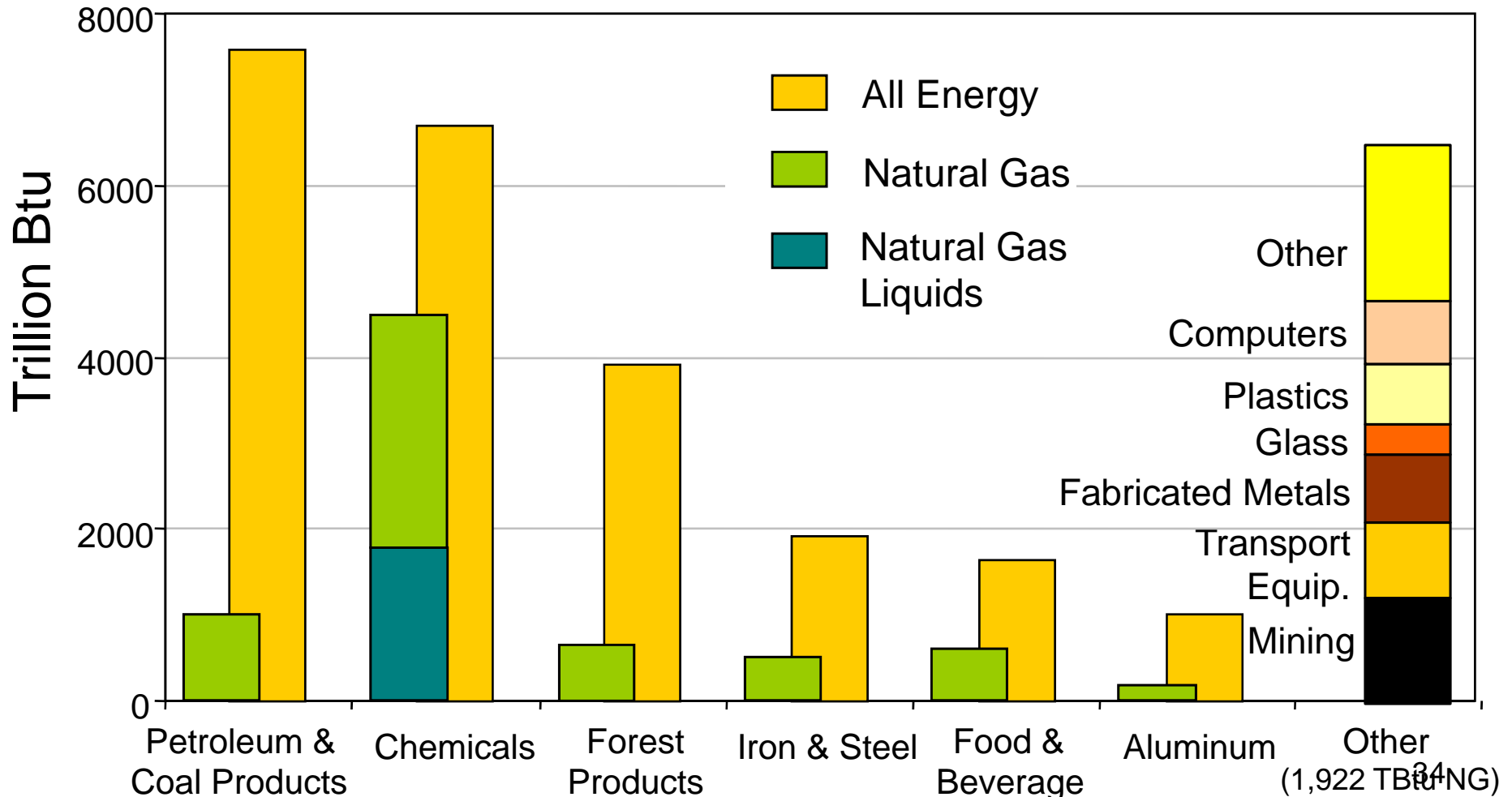
2004 Energy Use*



*Includes electricity losses



Segments with Highest Energy Use



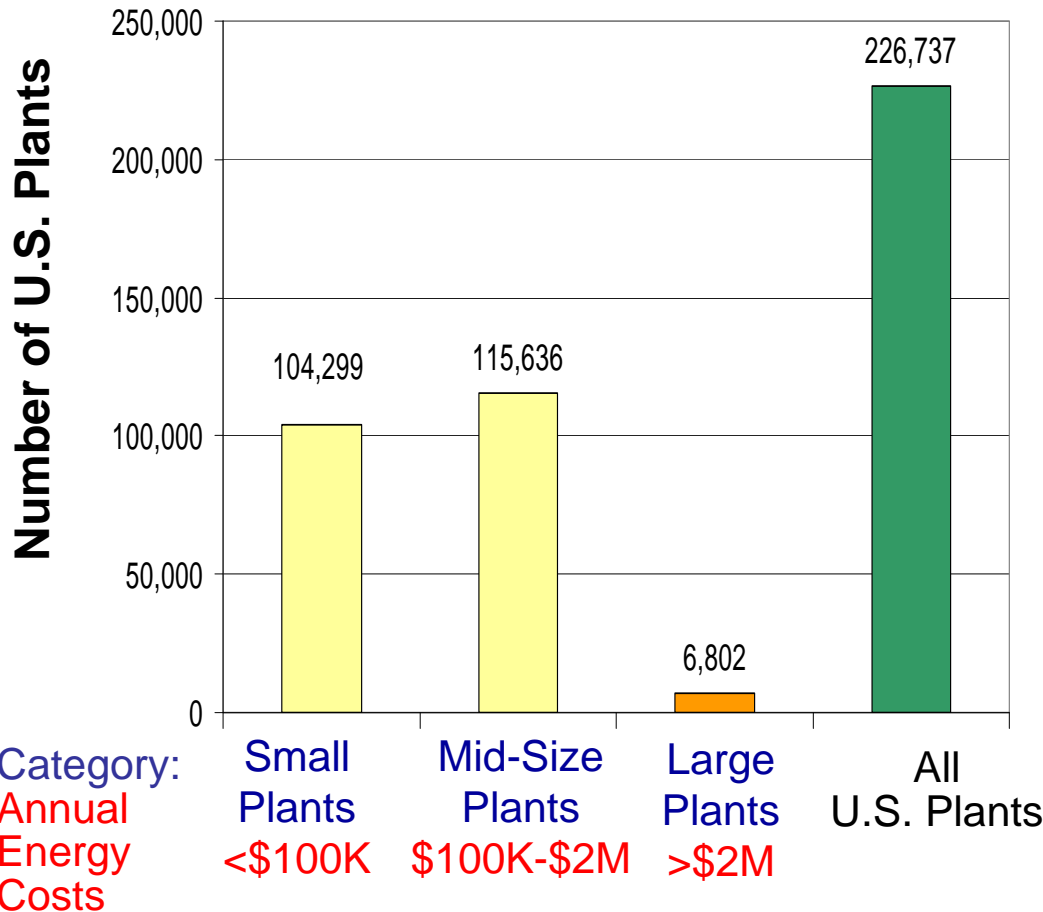
Source: 1998 Manufacturing Energy Consumption Survey (MECS)

* Includes electricity losses

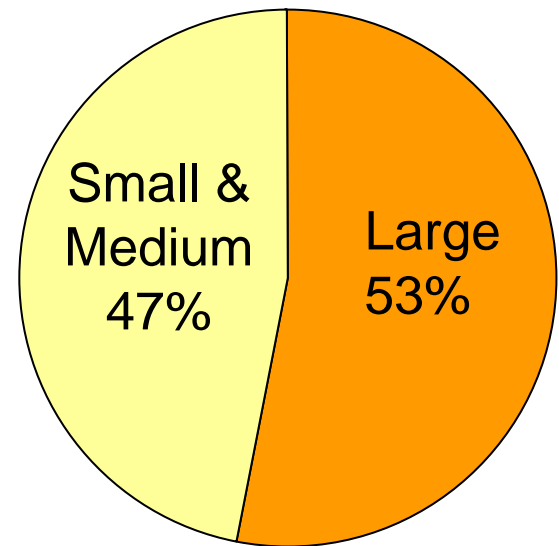


Relatively Few Plants Use the Most Energy

U.S. Manufacturing Plants: By Size



Percent of Total Industrial Energy





“Save Energy Now”

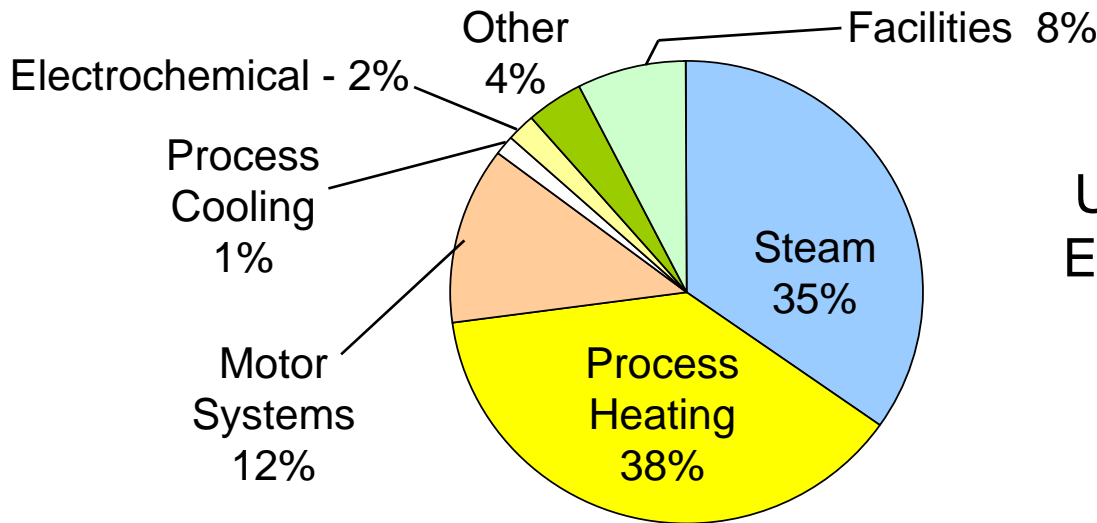
Goals:

- Encourage industry to voluntarily reduce its energy usage in a period of tight supplies by working with America’s largest energy-intensive plants
- Create momentum to significantly improve energy efficiency practices throughout the manufacturing sector



Energy Savings Assessments

- Conduct 200 assessments of large facilities focusing on either steam generation or process heating
- Assessments done by teams composed of DOE Qualified Energy Experts and plant personnel
- Plant personnel and affiliates will be trained on DOE efficient tools
- Energy Savings Assessment Report identifies potential energy and cost savings and possible next steps



U.S. Manufacturing Energy Use by Type of System (%)

Note: Does not include off-site losses



Work with Partners to Reach Plants

- States & Regional Organizations
- Trade Associations
- Utilities
- Equipment Suppliers & Service Companies
- Replication within Industrial Companies



Weyerhaeuser





Some potential activities of partners

- Create awareness among companies in the area on the **Save Energy Now** campaign
 - Applications for one of the 200 assessments open in early November
- Co-sponsor events, webcasts & trainings
- Distribute materials & link websites
- Promote energy management best practices & energy saving technologies
- Explore some innovative ways to get the word out on how to significantly improve energy efficiency in industry



“Save Energy Now” Outreach Goal: 50,000 Plants

- Utilize a wide variety of information materials, web tools and technical assistance
- Work with our existing partners and develop new partnerships to significantly increase our “reach”





Save Energy Now Website

**For the latest information and events visit the:
Save Energy Now Website
www.eere.energy.gov/industry/saveenergynow**



Key Contacts

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Save Energy Now Website

www.eere.energy.gov/industry/saveenergynow