

Working with ENERGY STAR® to Improve Energy Performance

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ENERGY STAR Industrial Partnerships

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Learn more at energystar.gov

Overview



- Energy efficiency is valuable to your business
- How to improve your company's energy performance
- Expanding the ENERGY STAR Focus on Energy Efficiency in Cement Production to Related Industries

Energy management - critical to your future



- Energy markets are undergoing structural changes
 - Energy prices will continue to rise
- GHG regulation will affect industry
- Many companies are not prepared for future challenges

ENERGY STAR helps you to



- plan for your “energy future”
- establish formal energy program
- motivate continuous improvement
- make energy management an integral part of business strategy
- identify best management practices and existing improvement opportunities
- understand the new impacts, risks and opportunities

ENERGY STAR



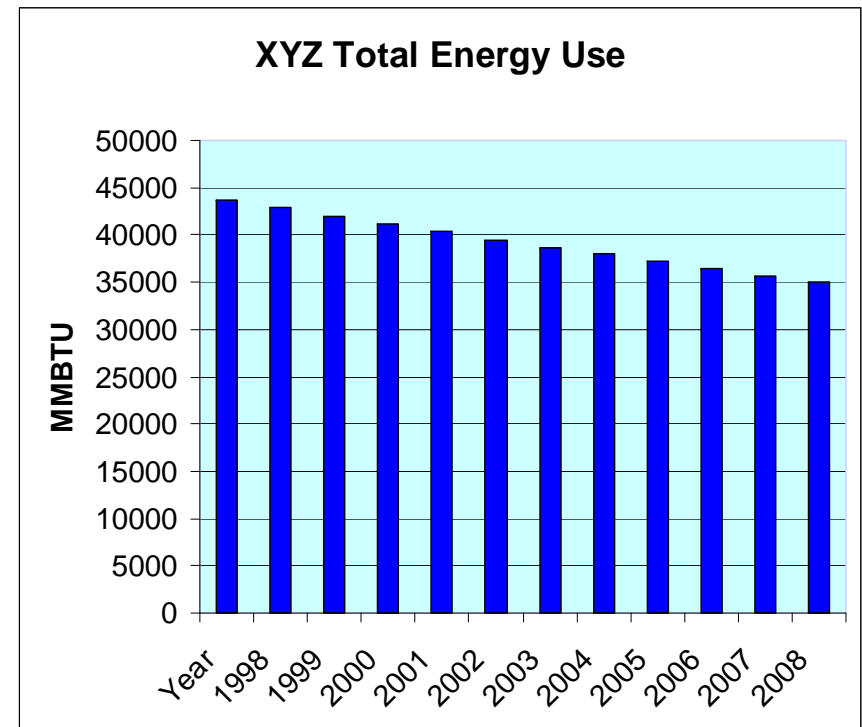
- Voluntary government partnership
 - Established by EPA in 1992
 - Enables companies to achieve their best in energy efficiency
- The national symbol of energy efficiency and environmental protection
 - Awareness exceeds 70% of U.S. households
 - A brand owned and managed solely by the government
- Helps you improve strategic energy management in your organization



Corporate energy management



- Drives continuous improvement across the company
- Manages and quantifies ALL energy use
- Maximizes savings so all facilities learn together



Leaders in energy management



Partner of Year – Energy Management:

- ArcelorMittal USA
- CB Richard Ellis, Inc.
- **CEMEX Inc.**
- Council Rock School District
- Kennedy Associates Real Estate Investment Advisors
- Kimberly-Clark Corporation
- Nash-Rocky Mount Public Schools
- Saint-Gobain
- Schering-Plough Corporation
- Servidyne
- Whitefish Bay School District
- TIAA-CREF

Sustained Excellence – Energy Management:

- 3M
- Advantage IQ
- **CalPortland Company**
- Food Lion
- Ford Motor Company
- Giant Eagle
- Gresham Barlow School District
- JC Penney Company Inc.
- Marriott International Inc.
- Merck & Co. Inc.
- PepsiCo
- Providence Health & Services
- Raytheon Company
- Toyota MMNA
- TRANSWESTERN
- USAA Real Estate Company



www.energystar.gov/awards



What makes a leader?



- Energy management is a priority!
 - Senior leadership support it
 - Energy policies and goals
- Responsibility for energy is assigned
 - Corporate energy manager
 - Site energy coordinators
 - Corporate energy network
 - Employees aware of their important roles
- Energy management systems in place
 - Procedures and process established
 - Tracking, benchmarking, reporting
 - Mechanisms for regular assessments
- Capital projects and no/low cost behavioral projects pursued
- Strong communication components in the program

The successful pathway



1. Evaluate risks, prepare energy strategy including senior management
2. Company-wide energy program based on ENERGY STAR guidelines
3. Pursue energy management with suppliers and customers

Step 1 - energy strategy



Energy Strategy for the Road Ahead



Scenario Thinking for Business Executives
and Corporate Boards

2007

GBN Global Business Network
a member of the Monitor Group

Energy Strategy for the Road Ahead

- helps companies prepare a strong energy strategy
- developed with 20 leading companies and their senior managers

•Report at:

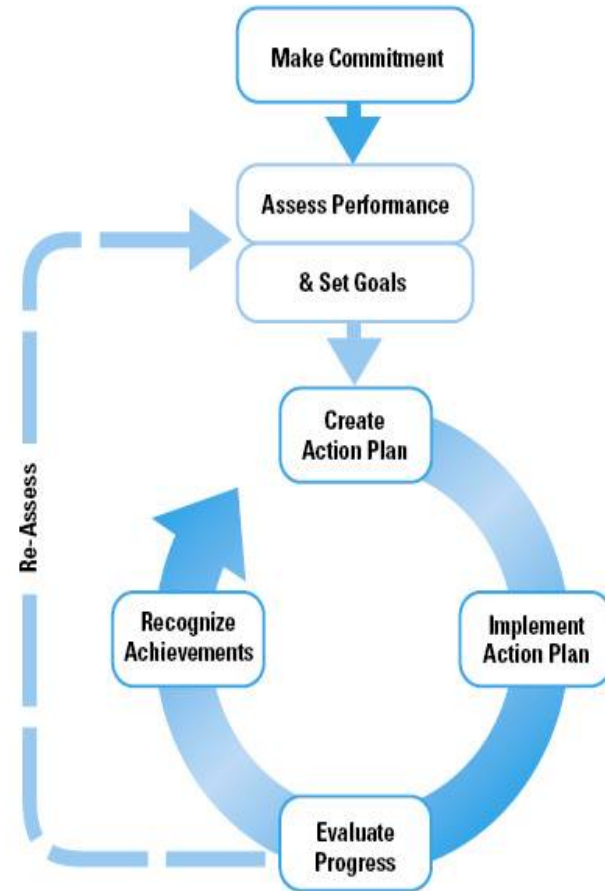
www.energystar.gov/energystategy

Step 2 - manage energy



ENERGY STAR Guidelines for Energy Management

- help to put in place a strong energy management program
- helps to benchmark energy use and practices
- based on the successful practices of ENERGY STAR's partners
- www.energystar.gov/guidelines

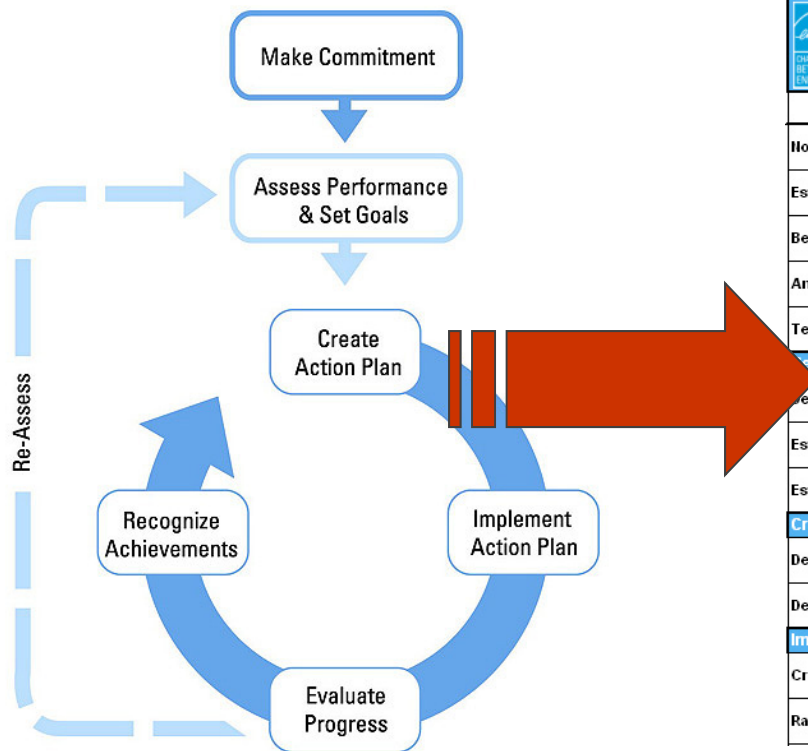


Assess your energy program

— how does it compare?



Benchmark company and facility energy management practices



ENERGY STAR [®] Guidelines for Energy Management Matrix			
	Little or no evidence	Some elements/degree	Fully implemented
Normalize	Not addressed	Some unit measures or weather adjustments	All meaningful adjustments for corporate analysis
Establish baselines	No baselines	Various facility-established	Standardized corporate base year and metric established
Benchmark	Not addressed or only same site historical comparisons	Some internal comparisons among company sites	Regular internal & external comparisons & analyses
Analyze	Not addressed	Some attempt to identify and correct spikes	Profiles identifying trends, peaks, valleys & causes
Technical assessments and audits	Not addressed	Internal facility reviews	Reviews by multi-functional team of professionals
Set Performance Goals			
Determine scope	No quantifiable goals	Short term facility goals or nominal corporate goals	Short & long term facility and corporate goals
Estimate potential for improvement	No process in place	Specific projects based on limited vendor projections	Facility & corporate defined based on experience
Establish goals	Not addressed	Loosely defined or sporadically applied	Specific & quantifiable at various organizational levels
Create Action Plan			
Define technical steps and targets	Not addressed	Facility-level consideration as opportunities occur	Detailed multi-level targets with timelines to close gaps
Determine roles and resources	Not addressed	Informal interested person competes for funding	Internal/external roles defined & funding identified
Implement Action Plan			
Create a communication plan	Not addressed	Tools targeted for some groups used occasionally	All stakeholders are addressed on regular basis
Raise awareness	No overt effort made	Periodic references to energy initiatives	All levels of organization support energy goals

Hundreds of corporations use these to gauge progress



The efficiency equation



Where:

Energy Efficiency = Engineering + Culture Change

Then:

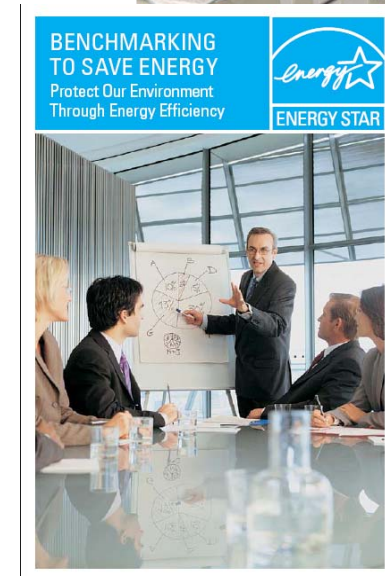
- If your company does not have an energy program & team – it needs to form one!
- If your company has energy program – focus together on culture change.
- People make or break the success of an energy program!

ENERGY STAR resources



- **Basics for building an energy program**
 - *ENERGY STAR Guidelines for Energy Management*
 - *Benchmarking to Save Energy*
- **Advanced energy strategy**
 - *Energy Strategy for the Road Ahead*
- **Energy program and facility assessment matrices**
 - Facility energy program assessment matrix
- **Building capacity**
 - *Teaming Up to Save Energy*
- **Communication resources**
- **Partner networking**
 - Energy management practice benchmarking
- **And lots more!**

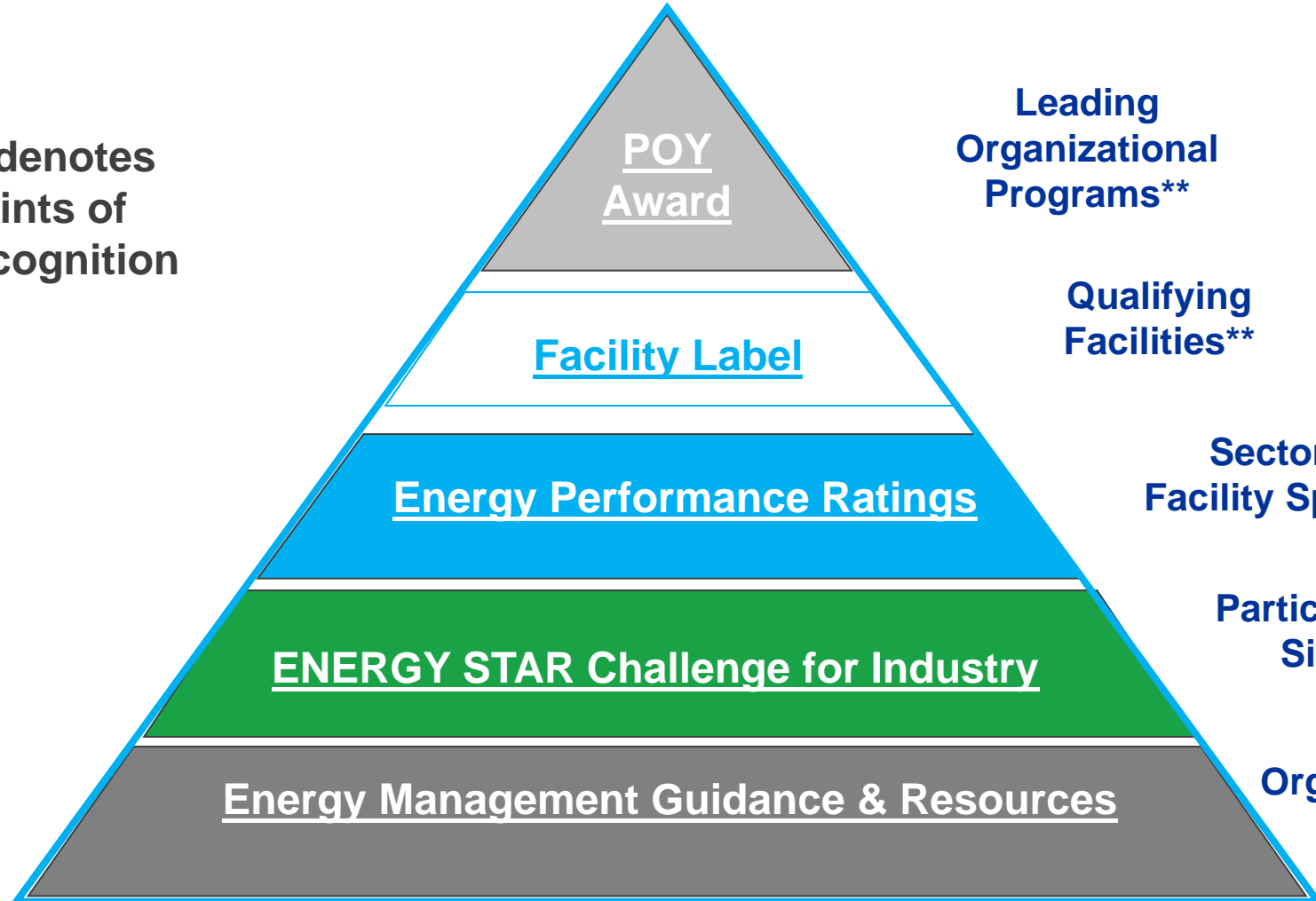
www.energystar.gov/industry



Advance with **ENERGY STAR** recognition for achievements



** denotes points of recognition



Become an ENERGY STAR Partner!



- Easy –Download letter and print it on your letterhead
 - http://www.energystar.gov/index.cfm?c=business.bus_commit
- Have CEO sign letter and mail it in
- You are a partner!

Additional benefits of ENERGY STAR Partnership



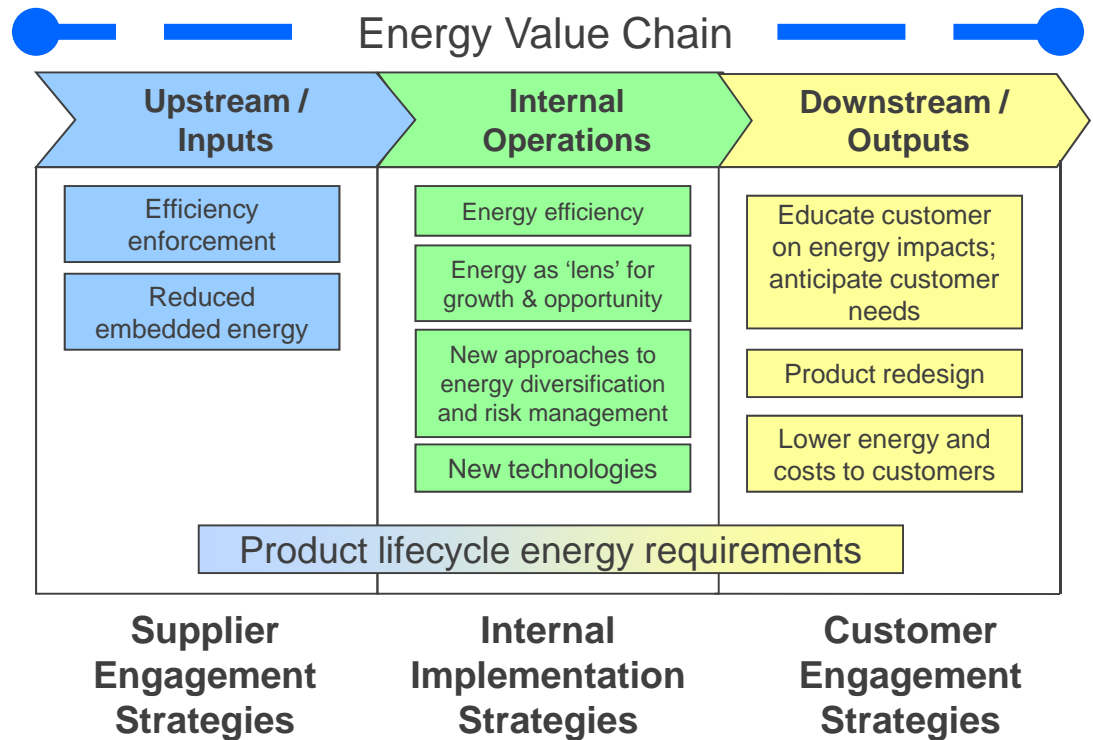
- Learn from over 625 industrial ENERGY STAR Partners
- Monthly energy management webcasts
- Recognition for energy management achievements

Step 3: manage energy value chain

Manage the energy value chain

Internally-driven initiatives:

- Focus on management practices of suppliers.
- Strategic engagement with key suppliers to help:
 - Control energy costs
 - Prepare for CO₂ regulation
 - Ensure reliability
- Engagement with customers



Source: Energy Strategy for the Road Ahead



Another way ARPA members can benefit from ENERGY STAR

ENERGY STAR Focus on Energy Efficiency in Cement Production

What is the “cement focus”?



- a concentrated effort to improve energy efficiency within the cement industry

Generally, an *ENERGY STAR* focus is:



A collaborative process to develop:

- ✓ Energy Performance Indicator (EPI) to benchmark plant energy performance
- ✓ Energy Guide

Facilitates:

- ✓ Sharing of best practices
- ✓ Networking
- ✓ Development of stronger corporate energy programs

And, results in:

- ✓ Sophisticated plant benchmarking tool
- ✓ Recognition for energy-efficient plants with the ENERGY STAR
- ✓ Increased momentum for continued improvement
- ✓ Improved efficiency within an industry sector
- ✓ Prevention of carbon emissions

The Cement Focus



- Active with major producers for 8 years
- Benchmarked cement plants and the tool is well used by the industry
- Cement Plant Energy Guide is done and used by industry
- Cement producers in the focus are now looking at up & downstream energy impacts

ARPA members



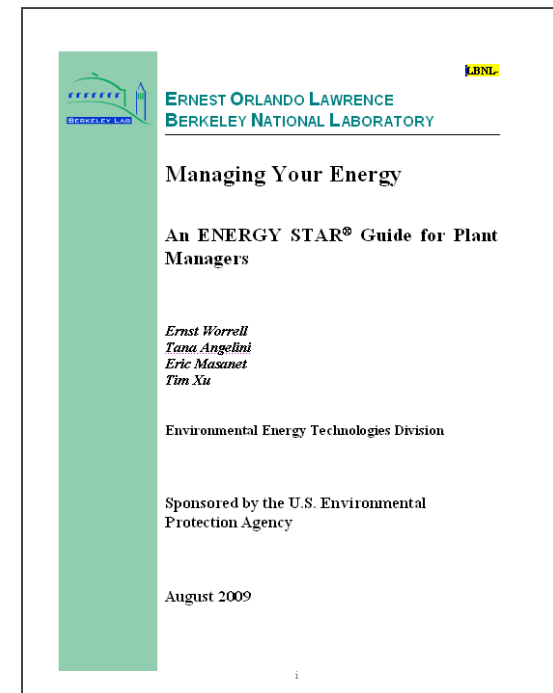
- You are up, within and downstream of the cement plant
- ENERGY STAR Focus invites you to participate in the cement focus, expand it to improve energy management in sand, stone, aggregate, ready-mix and asphalt industries, AS HAS BEEN DONE IN CEMENT

An Energy Guide for you?



- What is an energy guide?
 - Identifies energy efficiency opportunities
 - Quantifies potential energy and cost savings
 - Serves as a checklist for energy managers
 - Reduces information barriers
 - Highlights industry success stories

EPA is willing to invest in developing a guide for the broader industry but must hear from you that it will be used



Energy performance indicator



Is 10 MPG for a 2-door economy car high or low?



Answer: Common Knowledge

Is 10 mMBtu per vehicle for a plant that makes the 2-door economy car high or low?



Answer: ?



The EPI is the missing comparative metric

What an EPI does



- Plant energy performance indicators (EPI)
 - Enable energy management at a level not currently available to the industry
 - Compare how efficiently a plant uses energy relative to those of its industry
 - Provide a percentile score (1-100) of a plant's energy performance in the industry normalized to the plant's configuration
 - Enable informed goal setting
 - Empower management to require greater energy performance from plants
 - Enable ENERGY STAR recognition

EPIs for your sectors?



- EPI development depends on:
 - Availability of data for plant types
 - Adequate amount of data
 - Right type of data (energy uses by amount, product information by amount), and other information that affects energy use in the plant type
- *EPA would have to make a judgment on feasibility for each subsector, but most importantly, sector commitment to use it is required.*

Rewarding energy performance: ENERGY STAR



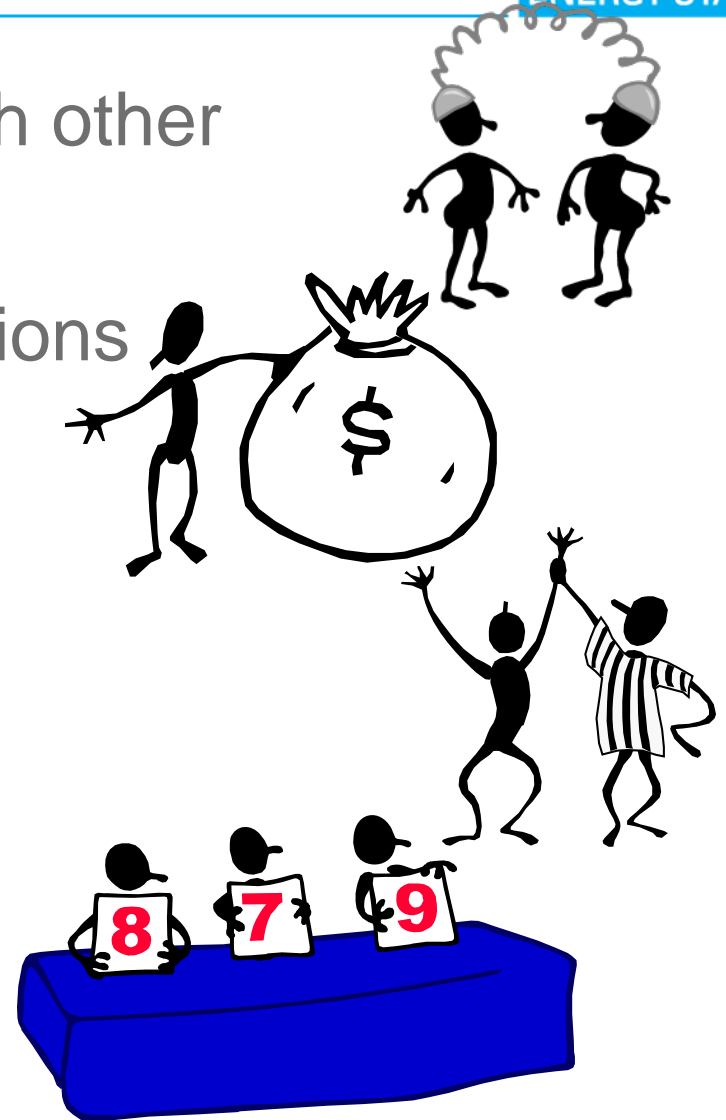
- Facilities scoring 75 or higher in EPA's ENERGY STAR rating system are eligible
- Must meet environmental compliance screen
- Earn plaque, flag/banner template from EPA



Benefits of a focus for your industry



- Learn best practices from each other
- Reduce energy costs & emissions
- Demonstrate environmental leadership
- Improve competitiveness



Focuses can be fun and energize your program



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