



# How ENERGY STAR Helps Manufacturers Improve the Energy Performance of their Operations

# What is ENERGY STAR?



- Voluntary Government Partnership Program
- Established by EPA in 1992 to help address climate change
- Focused on the energy efficiency of:
  - Products
  - Homes
  - Buildings & Industrial Plants
  - Organizations
- National symbol for energy efficiency



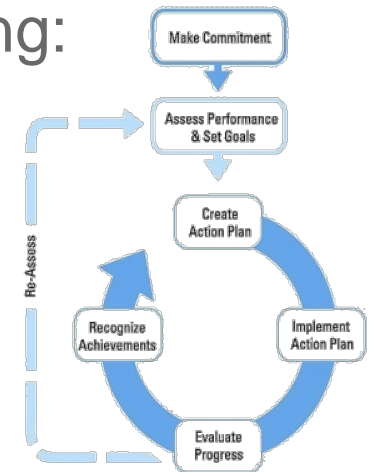
# ENERGY STAR for Buildings & Plants



ENERGY STAR works with companies to develop stronger energy management programs by offering:

- ✓ Instructive Partnership Program
- ✓ Energy Management Guidance
- ✓ Energy Program Resources
- ✓ Benchmarking & Tracking Tools
- ✓ Recognition Opportunities for Achievements
- ✓ Sector Specific Tools & Resources

**Emphasis on corporate energy management practices**



# The ENERGY STAR Partnership



- Companies can partner with ENERGY STAR
- Over 3000 companies & organizations have joined the ENERGY STAR partnership
- Partnering offers more opportunities to leverage ENERGY STAR resources and helps a company
- Companies join at the corporate level



# Why Companies Join



- Improve energy performance and competitiveness, and reduce costs
- Learn energy management techniques from the broad network of industrial companies in the partnership
- Launch a new energy management initiative
- Demonstrate commitment to reducing greenhouse gas (GHG) emissions through energy efficiency
- Leverage ENERGY STAR resources
- Earn recognition for energy performance achievements



# Energy Management Guidance



ENERGY STAR offers proven guidance for developing strong energy management programs. Key tools include:

## Guidelines for Energy Management

- Provides a framework for how to implement an energy program; based on ISO's "plan-do-act-check" approach

## Energy Program Assessment Matrix

- Evaluates energy management practices and program to identify gaps

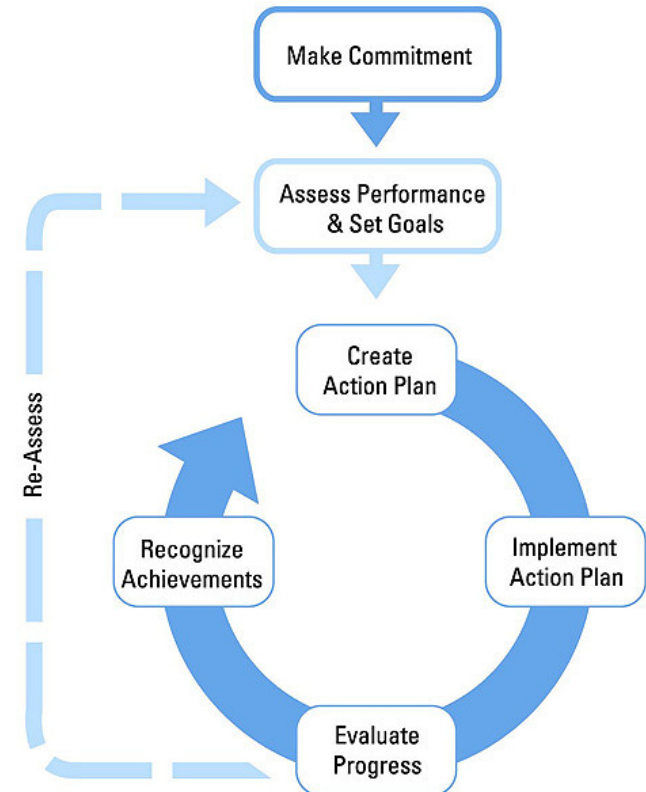
## Facility Energy Assessment Matrix

- Evaluates facilities' energy management practices to identify gaps

## Energy Strategy for the Road Ahead

- Helps company develop long-term strategies for addressing energy risks to the business

## ENERGY STAR Guidelines for Energy Management



# Energy Program Resources



ENERGY STAR offers tools and resources to support energy programs:

## Teaming Up to Save Energy

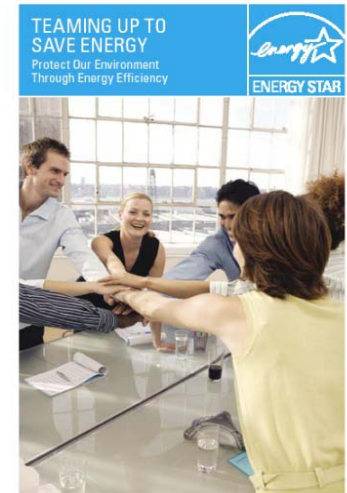
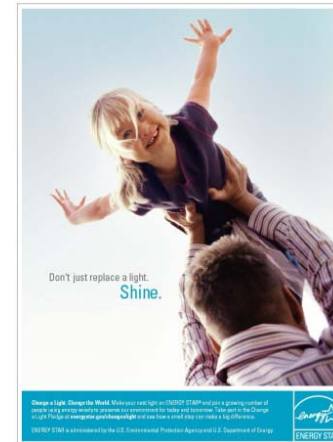
- Guidance on how to build an energy team

## Partner Networking Web Conferences

- Monthly series showcasing successful energy management strategies among the partnership

## Communication Resources

- Posters, materials and tools to help you drive change



# Benchmarking & Tracking Tools



ENERGY STAR offers tools to help companies benchmark and track their energy performance:

## Plant Energy Performance Indicators (EPIs)

- Scores the energy performance of specific industrial sites against the industry nationally

## Energy Tracking Tool

- Helps establish production-based energy intensity metrics, set goals, and track performance

## Portfolio Manager

- Scores the energy performance of selected commercial buildings and warehouses. Web-based energy tracking system for buildings.

[www.energystar.gov/industrybenchmarkingtools](http://www.energystar.gov/industrybenchmarkingtools)



# ENERGY STAR Recognition



Recognition from EPA through ENERGY STAR helps energy programs to motivate teams, develop momentum, and build support.

ENERGY STAR offers three forms of recognition for manufacturers:

## ENERGY STAR Partner of the Year

- Recognizes world-class corporate energy management programs



## ENERGY STAR Plant Label

- Recognizes plants that score in the top 25 percent on the ENERGY STAR energy performance scale based on use of an ENERGY STAR Plant Energy Performance Indicator



## ENERGY STAR Challenge for Industry

- Recognizes sites that reduce energy intensity by 10%





# Industrial Focuses

For specific industries, EPA convenes “Industrial Focuses”


16 manufacturing industries & sub-sectors currently participate in ENERGY STAR Industrial Focuses

Key activities include:

- ✓ **Energy Guide** that identifies energy efficiency opportunities
- ✓ **Energy Performance Indicator (EPI)** to benchmark performance of plants in the industry
- ✓ **Sharing of Best Practices**
- ✓ **Networking** among industry’s energy managers


# ENERGY STAR Industrial Focuses



Focus	Years Active	Scope	Peer Exchange Network	Industrial Energy Guide	Energy Performance Indicator	
<b>Cement Manufacturing</b>	5	75% of U.S.-based clinker production	★	Published	Released 2 <sup>nd</sup> Version – Fall 2010	✓
<b>Corn Refining</b>	6	95% of U.S.-based refining capacity	★	Published	Released	✓
<b>Food Processing</b> <ul style="list-style-type: none"> <li>• Cookies &amp; Crackers</li> <li>• Juice</li> <li>• Potato Products</li> <li>• Tomato Products</li> </ul>	4	80% of U.S.-based processed fruit, vegetable, and grain sales	★	Published	Draft Released Released Draft	✓
<b>Glass Manufacturing</b> <ul style="list-style-type: none"> <li>• Fiberglass</li> <li>• Flat glass</li> <li>• Container glass</li> </ul>	4	50% of U.S. flat, container, and fiberglass sales	★	Published	Fall 2010 Released Released	✓
<b>Motor Vehicle Manufacturing</b>	7	95% of the industry with U.S.-based production	★	Published	2 <sup>nd</sup> Version Released	✓
<b>Petrochemical Manufacturing</b>	3	83% of U.S.-based production capacity	★	Published	Draft	

# ENERGY STAR Industrial focus (cont'd)



Focus	Years Active	Scope	Peer Exchange Network	Industrial Energy Guide	Energy Performance Indicator	
<b>Petroleum Industry</b>	5	64% of U.S.-based refining capacity	★	Published	Private system recognized by EPA	✓
<b>Pharmaceuticals</b>	5	Over 50% of global and U.S. manufacturing capacity	★	Published	Released	✓
<b>Pulp &amp; Paper</b> • Integrated Mills • Pulp Mills	3	70% of U.S.-based companies' global sales	★	Published	Draft	
<b>Steel</b> • Primary Steel • Mini Mills	1	95% of integrated production	★	In process	In development	
<b>Metal Casting</b>		Partnership with the American Foundry Society	★	In process	Exploring options	
<b>Dairy Processing</b> • Fluid Dairies • Cheesemaking • Ice Cream		Partnership with the International Dairy Foods Association				

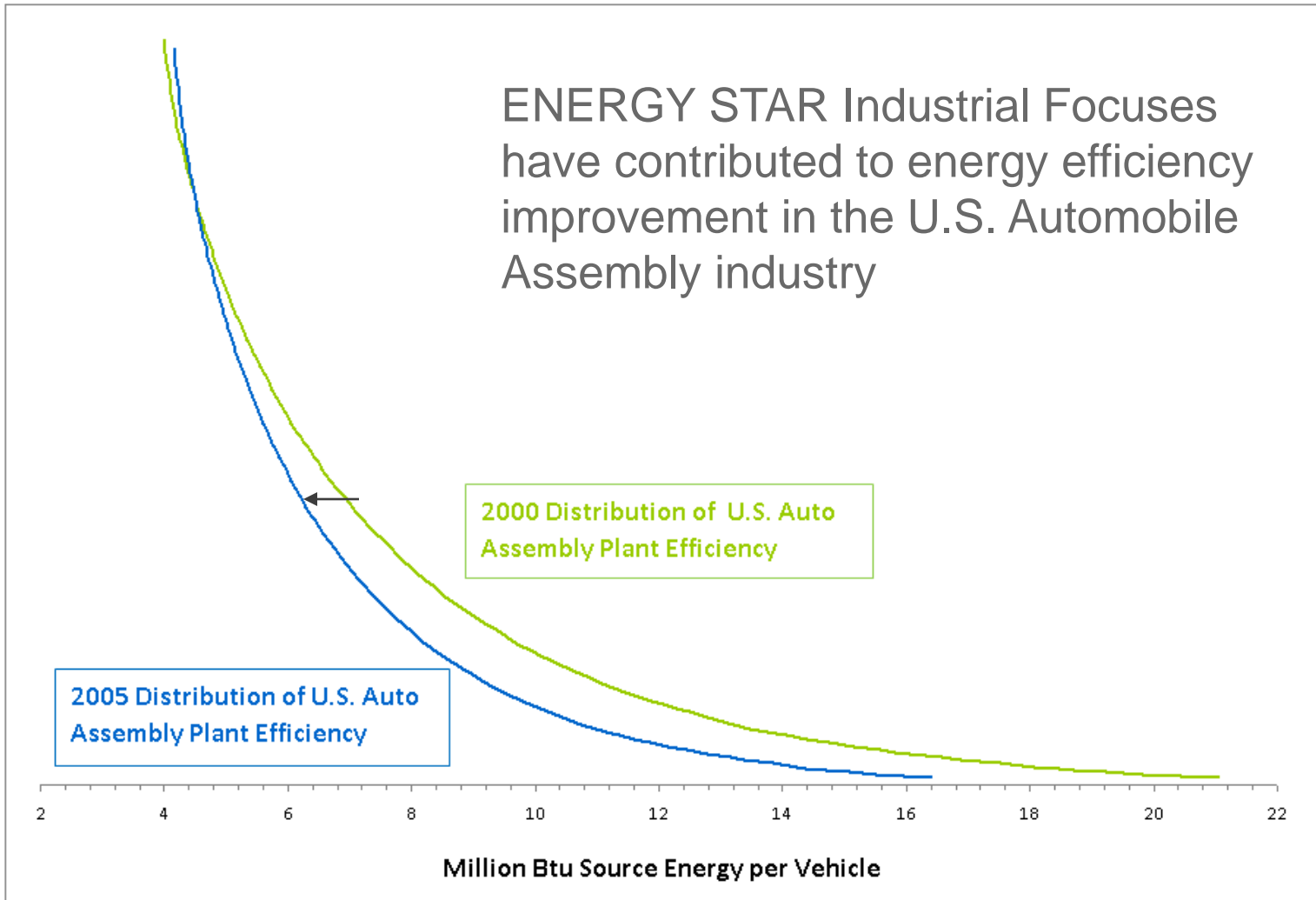
# ENERGY STAR Plants



- Must have an Energy Performance Indicator (EPI) score of 75 or higher
- Must pass an environmental compliance screen
- Current industries eligible for the ENERGY STAR:
  - Auto Assembly
  - Cement
  - Food Processing
  - Glass Manufacturing
  - Petroleum Refining
  - Pharmaceuticals
  - Wet Corn Milling










# Results: Industrial Focus



# Results: Partner Goals & Achievements



 <b>Worldwide</b>	<p>20% reduction in energy use per unit product for 2005-2010 19.8% energy reduction per unit achieved through 2009</p>
	<p>25% energy intensity improvement by 2012 versus 2007 5.3% energy intensity reduction in 2009</p>
	<p>30% energy productivity improvement by 2012 versus 2006</p>
	<p>15% energy reduction corporate-wide by 2011 versus 2006 13.6% energy reduction through 2009, 38% since 2000</p>
	<p>25% energy intensity reduction by 2009 versus 2004 30% reduction achieved through 2009, exceeding goals</p>
	<p>20% electricity, 25% fuel consumption reduction for 2006-2015 5.1% electricity reduction in 2009, 36% since 1999</p>
	<p>2.5% energy reduction per year for 10 years versus 2006</p>

# Results: More Partner Achievements



The Allergan logo, consisting of a blue square with a white stylized globe icon and the word "ALLERGAN" in white capital letters.	22% reduction in electricity per square foot during 2005-2008
The CalPortland logo, featuring a blue stylized "CP" icon above the word "CALPORTLAND" in blue capital letters.	27% total energy consumption reduction in 2009 2.1% energy intensity reduction in same period
The Fetter Group logo, featuring a stylized blue and green arrow icon above the word "FETTERGROUP" in blue capital letters.	23.1% reduction in energy intensity in 2009 from 2007 baseline
The Hanesbrands Inc logo, featuring the word "HANESbrandsINC" in a mix of purple and red colors.	9.6% energy intensity, 9.4% water reduction in 2009
The Kimberly-Clark logo, featuring a circular icon with a cross and the word "KIMBERLY-CLARK" in black capital letters.	15% global energy efficiency improvement goal for 2005-2010 8.5% global energy efficiency improvement since 2005
The Raytheon logo, featuring the word "Raytheon" in a bold, red, italicized font.	15% energy intensity reduction in 2009 40% energy intensity, 16% total energy reduction since 2002
The Sunoco logo, featuring a yellow diamond shape with red arrows and the word "SUNOCO" in black capital letters.	5% energy intensity reduction in 2009 in refineries



# Summary

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- Strong energy management programs & practices save more energy
- Energy management is the most cost-effective way to reduce greenhouse gas emissions
- ENERGY STAR offers easy-to-use and proven energy management resources
- ENERGY STAR resources & partnership are available to all U.S. companies with the desire to improve performance