ENERGY STAR® for K-12 Schools and Higher Education

Leslie Cook

U.S. Environmental Protection Agency (EPA)
ENERGY STAR for Commercial Buildings
2008

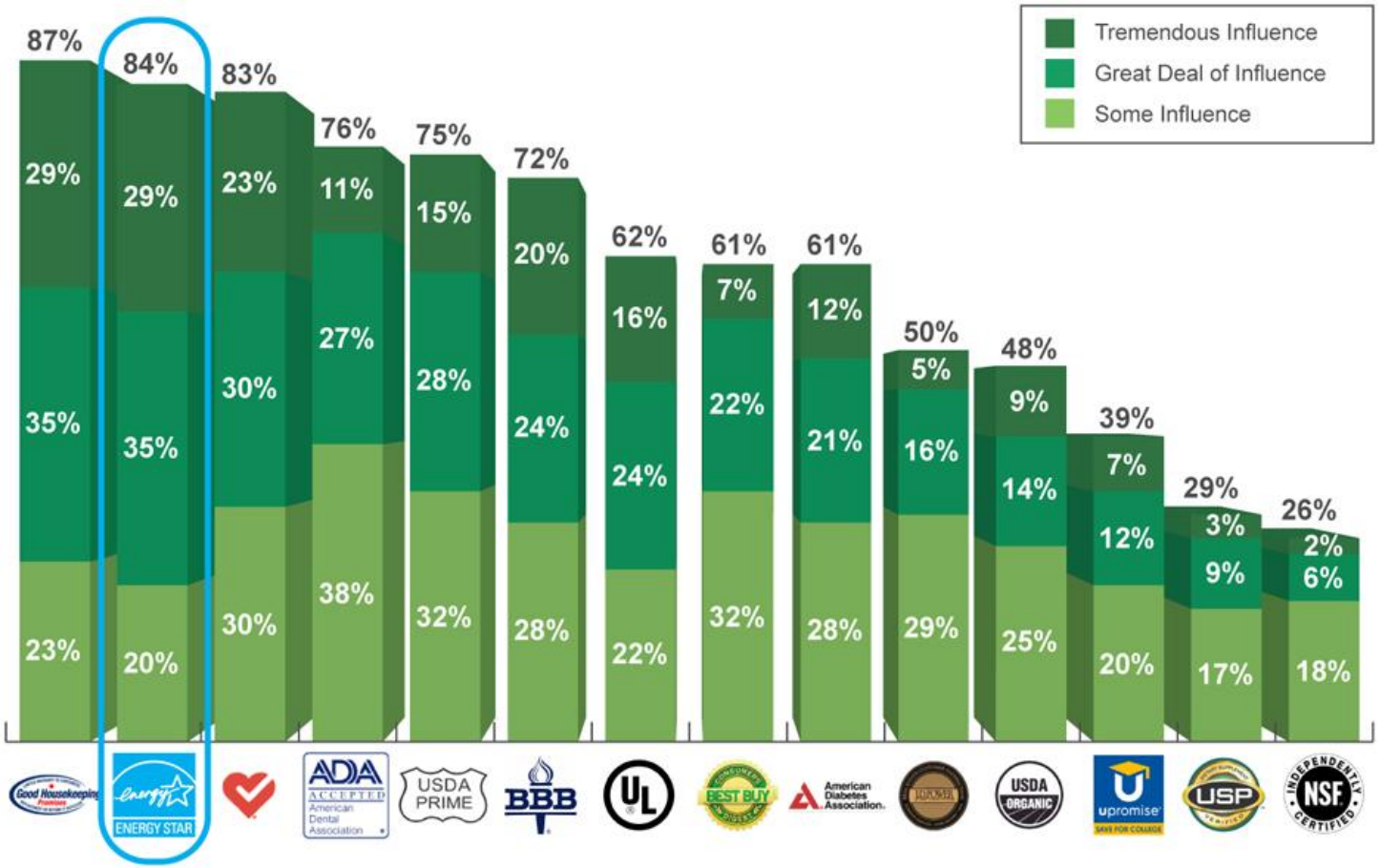
Agenda

- What is ENERGY STAR
- Benefits of Improved Energy Performance
- Benchmarking Using Portfolio Manager
- Other Opportunities for Your Organization

What is ENERGY STAR?

- Voluntary climate protection partnership with EPA
- Strategic approach to energy management, promoting energy efficient products and practices
- Helps organizations save money and protect the environment
- Influential brand recognized by over 70 percent of Americans

The ENERGY STAR Brand: Recognized, Trusted, Influential



Source: Fairfield Research, Summer 2007

Why Partner with EPA?

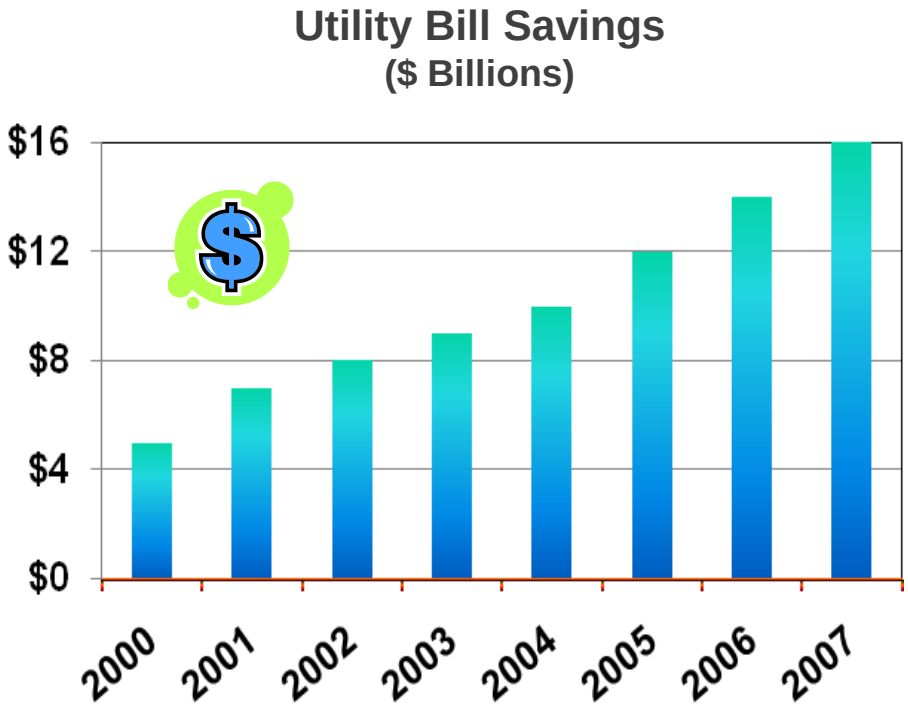
- **Unbiased:** A trusted, unbiased source of research and technical analysis
- **Best practices:** Looks across the commercial sector supply chain to identify best practices
- **Environmental and financial benefits:** Develops market tools and resources resulting in verifiable, sustainable, and easily communicated environmental and financial benefits
- **Carbon mitigation:** Reduce your organization's environmental footprint and carbon impact

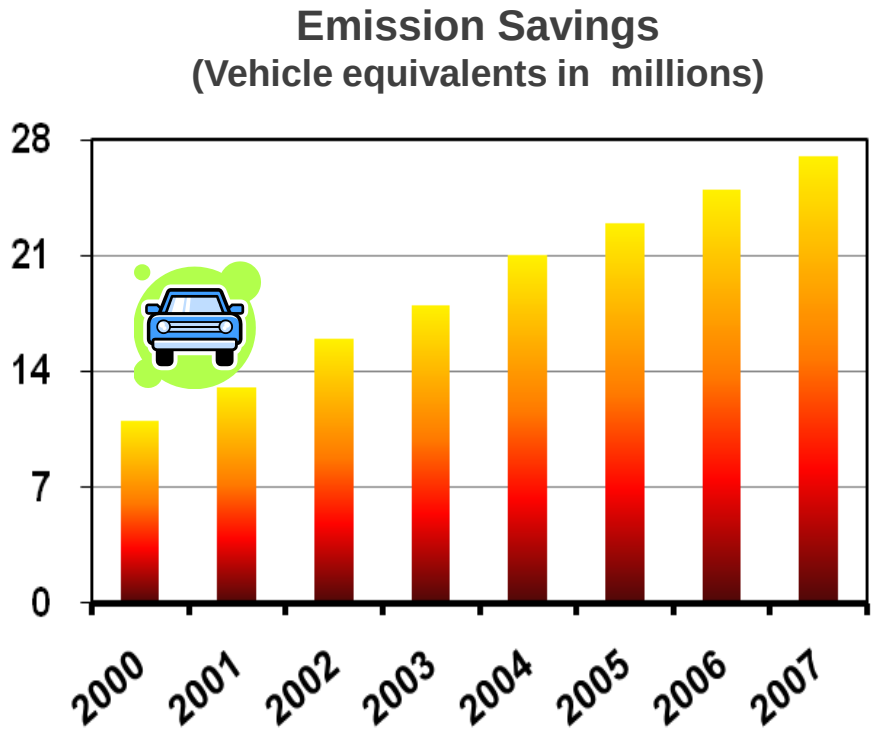
Strategic Approach to Energy Management

A roadmap to help partners –

- Assess energy performance
- Set reduction goals
- Track savings over time
- Reward improvements

ENERGY STAR 2007 Accomplishments





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Why Green Starts with Energy Efficiency

- Organizations that are leaders in energy efficiency use 40 percent less energy than competitors
- Energy efficient buildings emit 35 percent less carbon dioxide into the atmosphere
- Energy efficiency provides financial returns that can support future “green” investments
- “Green” does not necessarily mean energy efficient!

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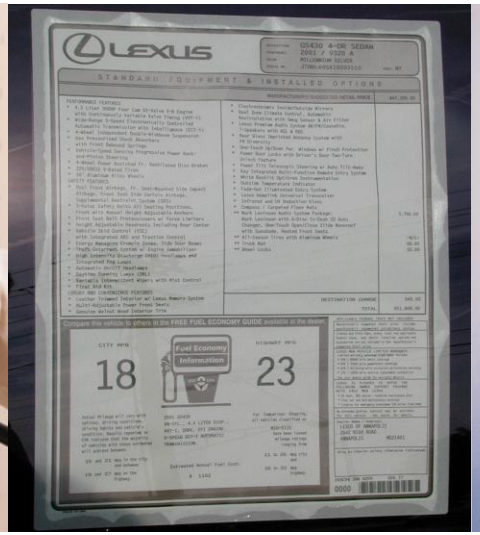
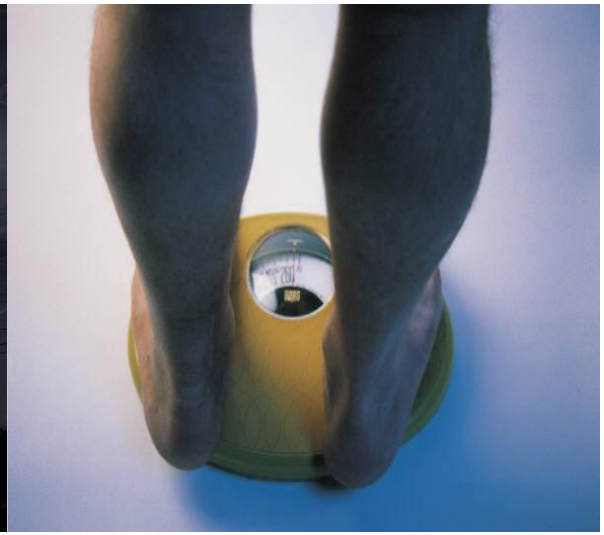
Benchmarking





A benchmark is a point of reference from which to make comparisons

Why Benchmark?

Benchmarking enables you to *make more informed decisions:*

- Identify billing errors
- Assess effectiveness of current operations, policies, practices
- Assist in planning: set goals, targets, timelines, prioritize capital improvements
- Document role in environmental stewardship and demonstrate success
- Set priorities for investments in upgrade efforts and retrofits
- Track, verify, and recognize achievements

Benchmarking

Portfolio Manager

- Benchmark the energy use of all of your buildings – receive an energy use intensity (EUI)
- Many building types, including K-12 schools, offices, and dorms can receive energy performance ratings on a 1-100 scale.
- Track changes in energy use over time in single buildings, groups of buildings, campuses, or entire portfolios.
- Track cost savings and CO_2 emissions.
- Apply for the ENERGY STAR.
- Track water usage.

www.energystar.gov/benchmark

EPA

Track Greenhouse Gas Emissions

- Direct, indirect, and total emissions
- CO_2, Methane, and Nitrous Oxide

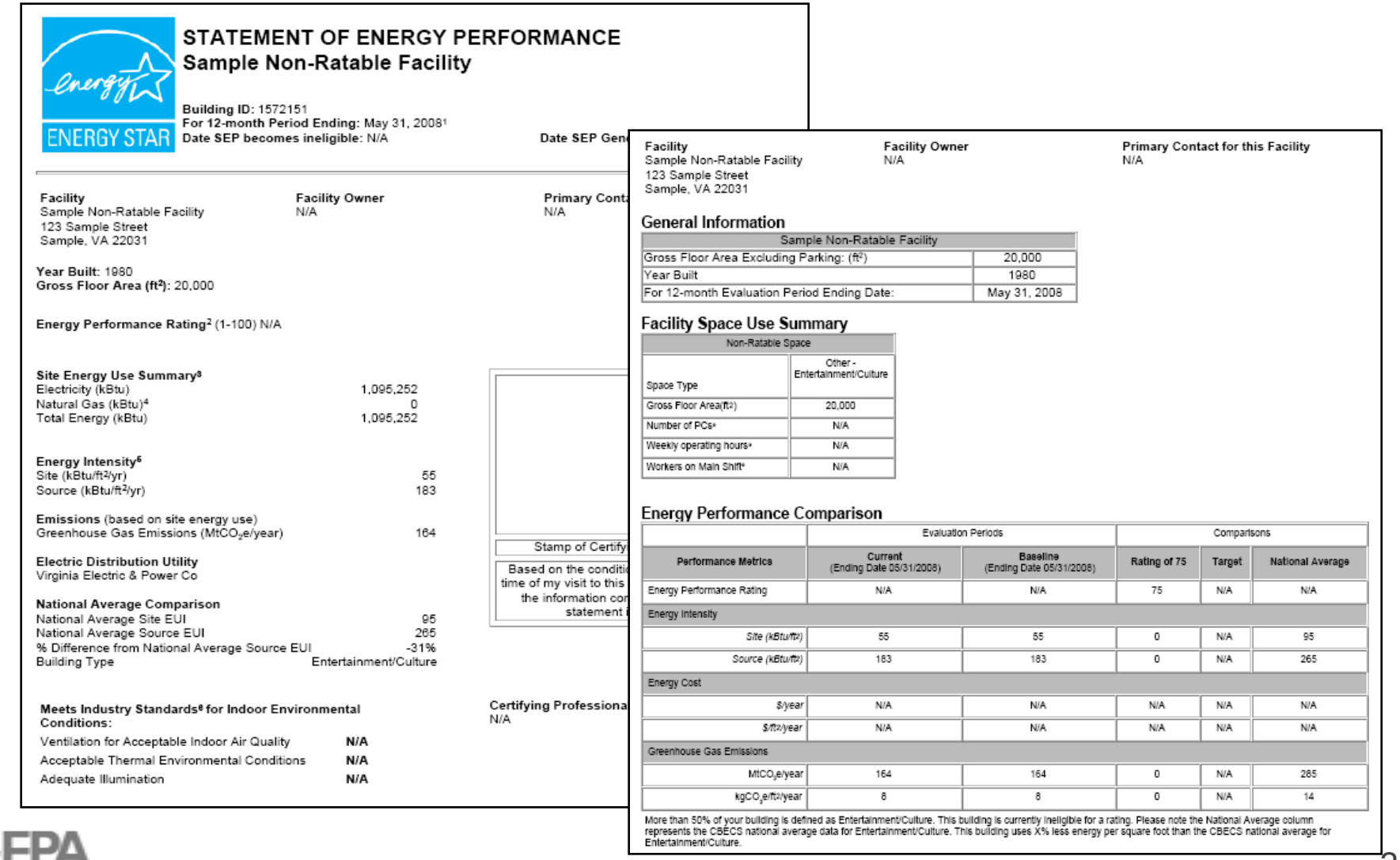
Facility Performance Set Baseline Period | Set Energy Performance Target

Select View: Performance: GHG Emissions Create View | Edit View

12 Months Ending	Current Total Site Energy Use (kBtu)	Current Direct GHG Emissions ($MtCO_2e$)	Current Indirect GHG Emissions ($MtCO_2e$)	Current Total GHG Emissions ($MtCO_2e$)	Baseline Total GHG Emissions ($MtCO_2e$)	Change from Baseline: GHG Emissions ($MtCO_2e$)
August 2008 (Current)	871,766.00	0.00	130.37	130.37	163.79	-33.42
Select Date						
Change						

REFRESH VIEW

Sample Statement of Energy Performance



STATEMENT OF ENERGY PERFORMANCE
Sample Non-Ratable Facility

Building ID: 1572151
For 12-month Period Ending: May 31, 2008[1]
Date SEP becomes ineligible: N/A
Date SEP Gen

Facility
Sample Non-Ratable Facility
123 Sample Street
Sample, VA 22031

Facility Owner
N/A

Primary Cont
N/A

Year Built: 1980
Gross Floor Area (ft²): 20,000

Energy Performance Rating[2] (1-100) N/A

Site Energy Use Summary[3]

Electricity (kBtu)	1,095,252
Natural Gas (kBtu)[4]	0
Total Energy (kBtu)	1,095,252

Energy Intensity[5]

Site (kBtu/ft²/yr)	55
Source (kBtu/ft²/yr)	183

Emissions (based on site energy use)

Greenhouse Gas Emissions ($MtCO_2e$/year)	164

Electric Distribution Utility
Virginia Electric & Power Co

National Average Comparison

National Average Site EUI	95
National Average Source EUI	265
% Difference from National Average Source EUI	-31%
Building Type	Entertainment/Culture

Meets Industry Standards[6] **for Indoor Environmental Conditions:**

Ventilation for Acceptable Indoor Air Quality	N/A
Acceptable Thermal Environmental Conditions	N/A
Adequate Illumination	N/A

Stamp of Certify

Based on the conditi
time of my visit to this
the information cor
statement

Certifying Professiona
N/A

Facility
Sample Non-Ratable Facility
123 Sample Street
Sample, VA 22031

Facility Owner
N/A

Primary Contact for this Facility
N/A

General Information

Sample Non-Ratable Facility	
Gross Floor Area Excluding Parking: (ft²)	20,000
Year Built	1980
For 12-month Evaluation Period Ending Date:	May 31, 2008

Facility Space Use Summary

Non-Ratable Space	
Space Type	Other - Entertainment/Culture
Gross Floor Area(ft²)	20,000
Number of PCs[a]	N/A
Weekly operating hours[a]	N/A
Workers on Main Shift[a]	N/A

Energy Performance Comparison

	Evaluation Periods		Comparisons		
Performance Metrics	Current (Ending Date 05/31/2008)	Baseline (Ending Date 05/31/2008)	Rating of 75	Target	National Average
Energy Performance Rating	N/A	N/A	75	N/A	N/A
Energy Intensity					
Site (kBtu/ft²)	55	55	0	N/A	95
Source (kBtu/ft²)	183	183	0	N/A	265
Energy Cost					
$/year	N/A	N/A	N/A	N/A	N/A
$/ft²/year	N/A	N/A	N/A	N/A	N/A
Greenhouse Gas Emissions					
$MtCO_2e$/year	164	164	0	N/A	265
$kgCO_2e/ft²$/year	8	8	0	N/A	14

More than 50% of your building is defined as Entertainment/Culture. This building is currently ineligible for a rating. Please note the National Average column represents the CBECS national average data for Entertainment/Culture. This building uses X% less energy per square foot than the CBECS national average for Entertainment/Culture.

How to Get Started

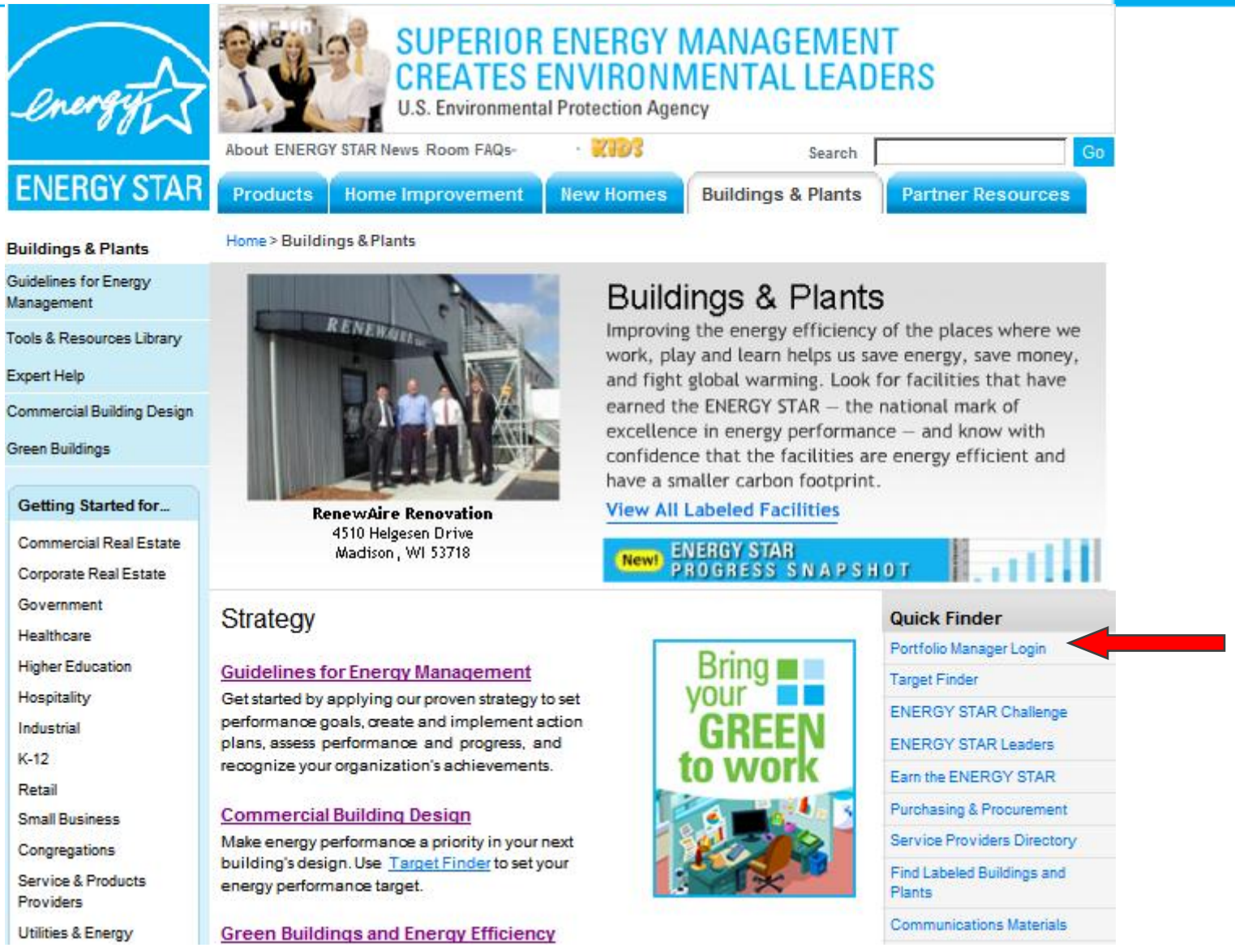
- Go to www.energystar.gov/benchmark
- Click *Login*
- Input user name and password
- Click *Add Facility*
- Input space and energy data

Download a Quick Reference Guide
for step-by-step instructions!

ENERGY STAR Buildings & Plants
www.ENERGYSTAR.gov

EPA

Portfolio Manager



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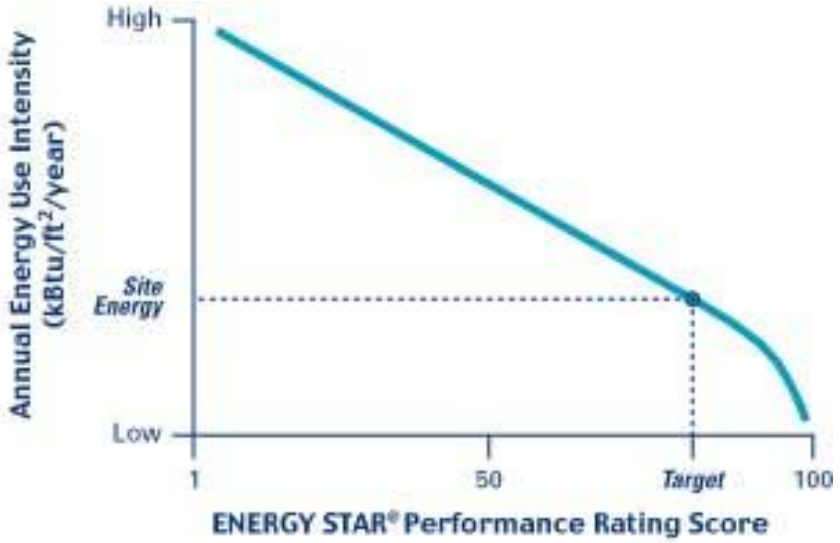
Target Finder: Set Energy Goals in New Buildings

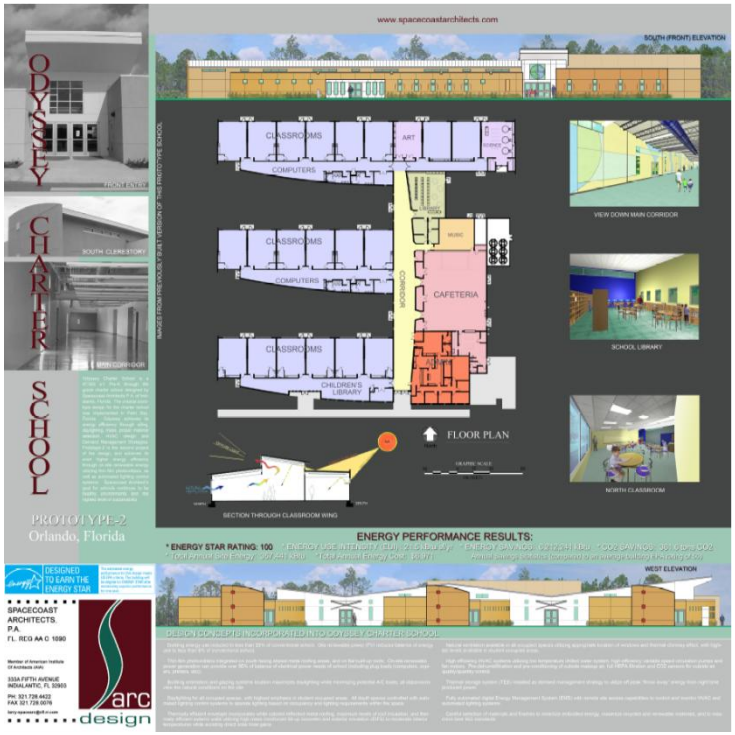
Energy Performance Rating

- Based on actual "whole – building" energy performance data
  - DOE-CBECS

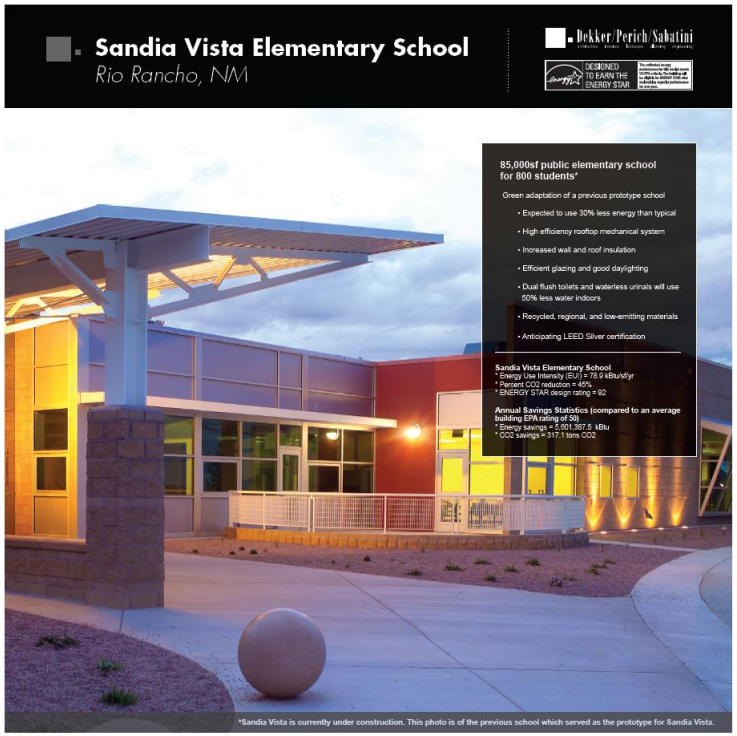
- Normalizes for factors that affect energy use intensity
  - Climate/weather
  - Size
  - Occupancy



Designed to Earn the ENERGY STAR



Odyssey Charter School – Prototype 2, FL



Sandia Vista Elementary School, NM

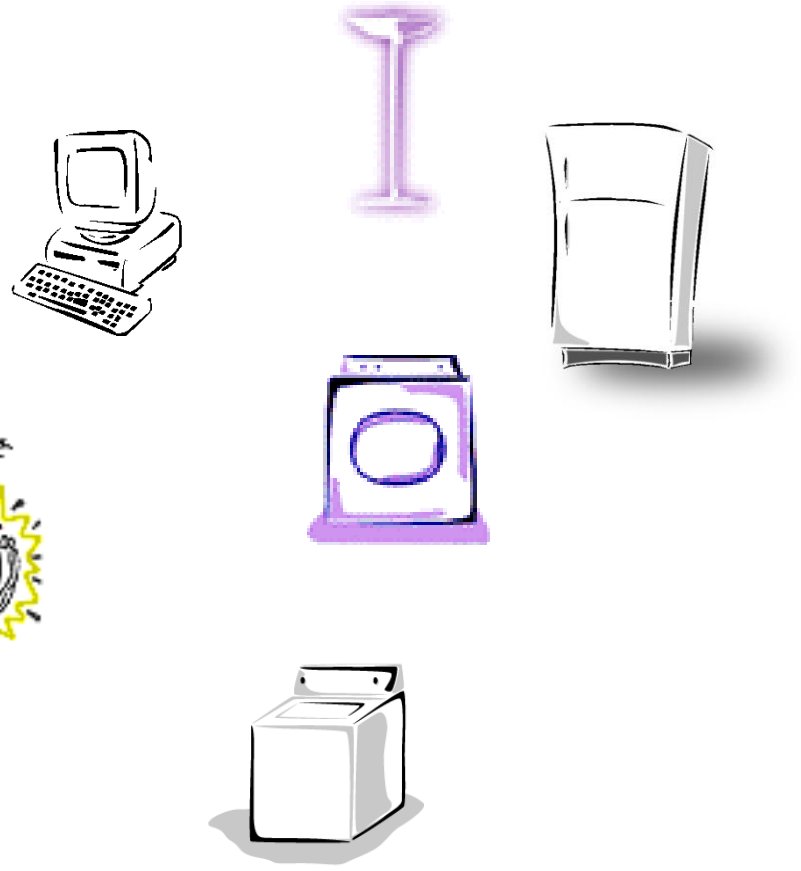
Purchase Energy-Efficient Products

Energy-efficient products for your organization earn the ENERGY STAR by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the Department of Energy.

EPA

Qualified Products

- Water Coolers
- Commercial Kitchen Equipment
- Lighting
- Office Equipment
- Heating & Cooling Equipment
- Transformers
- Ventilation Fans
- Appliances
- Consumer Electronics



more than 50 product categories

Quantity Quotes

A Web site created by the U.S. Department of Energy to connect large-quantity buyers with suppliers of energy-efficient products

The Quantity Quotes Concept

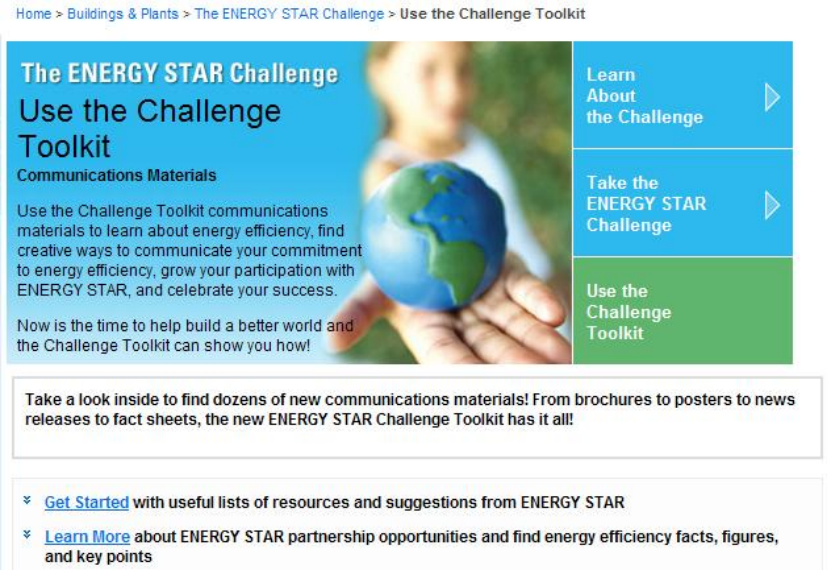
- Begin by visiting www.energystar.gov/quantityquotes
- The purchaser submits a purchase request to suppliers through the Web site.
- Interested suppliers respond to the purchaser through the Web site.
- The purchaser follows up with suppliers and chooses one with whom to negotiate.

The ENERGY STAR Challenge

- National call to action to improve the energy efficiency of commercial and industrial buildings by 10 percent or more
- Participants asked to:
  - Measure and track energy use
  - Develop a plan for energy improvements
  - Make energy efficiency upgrades
  - Help spread the energy efficiency “word” to others

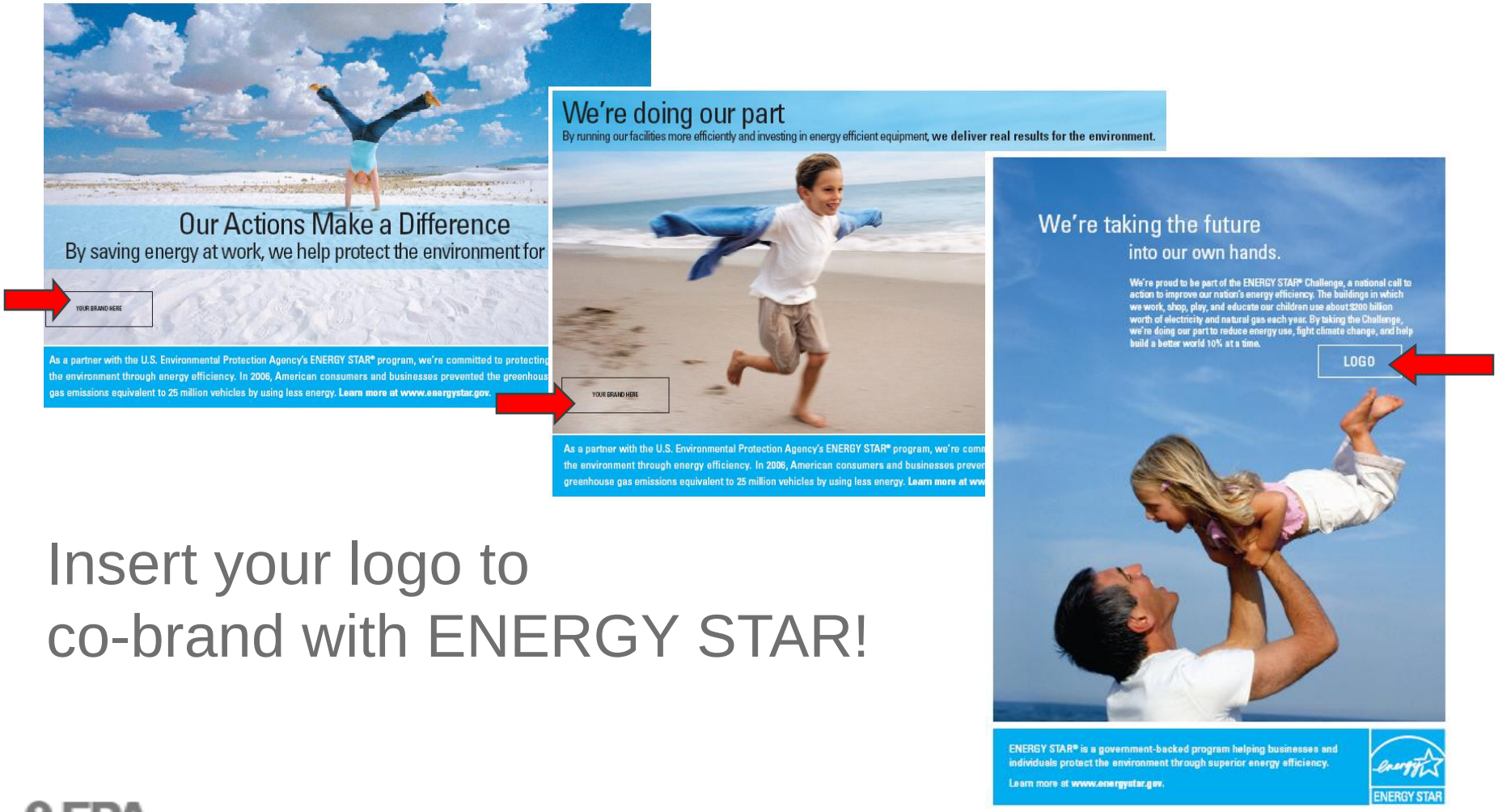
ENERGY STAR Communications Toolkit

- Co-brandable posters and print advertisements
- Templates for press releases
- Brochures
- Fact sheets
- Key messages
- Web banners



http://www.energystar.gov/challenge

Promotional Opportunities



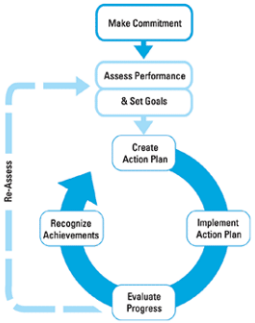
Insert your logo to
co-brand with ENERGY STAR!

Partner of the Year – Organization-wide Recognition

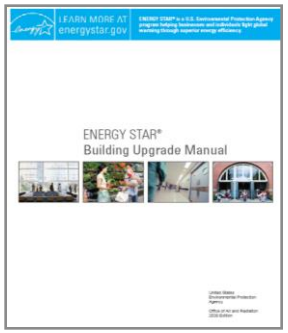
ENERGY STAR Annual Awards Ceremony

Recognition for outstanding performance

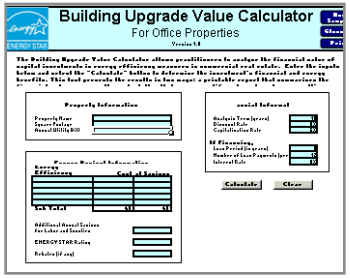
Additional Tools and Resources



[Guidelines for Energy Management]



[Building Upgrade Manual]



[Financial Evaluation Tools]

[Purchasing and Procurement]

[Target Finder]

[ENERGY STAR Trainings]

[National Campaigns]

Portfolio Manager:
www.energystar.gov/benchmark

ENERGY STAR for K-12:
www.energystar.gov/k12

ENERGY STAR for Higher Education:
www.energystar.gov/highered

Leslie Cook
Cook.leslie@epa.gov
202-343-9174