



# **U.S. Environmental Protection Agency's Public Sector ENERGY STAR Program:**

## **K-12 and University Efforts**



# Overview of the ENERGY STAR Program

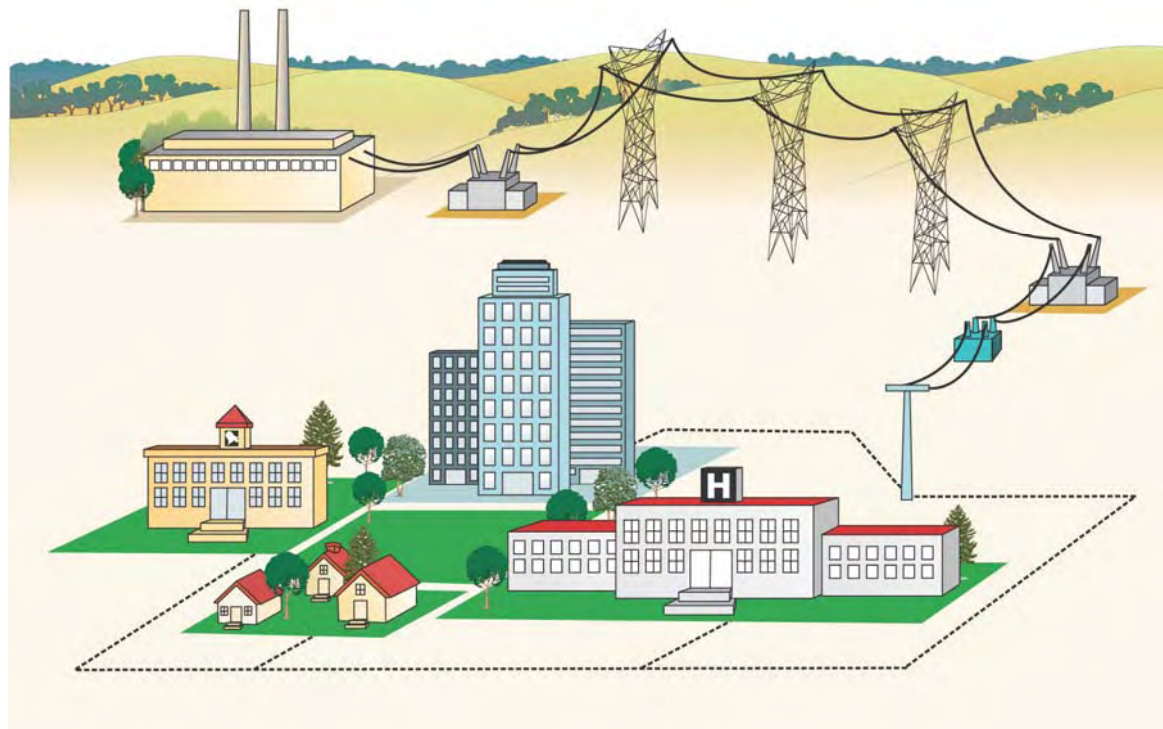
February 12, 2007

# The National Challenge — Eliminate Energy Waste



Energy waste at work, at home, and at school will cost U.S. organizations and consumers billions of dollars in the next 10 years.

**Wasted energy contributes to smog, acid rain, and greenhouse gas emissions.**



# What is ENERGY STAR ?



A voluntary partnership between organizations, businesses, consumers, and government, united in the pursuit of a common goal —

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A voluntary partnership between organizations, businesses, consumers, and government, united in the pursuit of a common goal — to protect our environment for future generations by changing to energy-efficient products and practices today.

# The Power of ENERGY STAR



Americans, with the help of ENERGY STAR, prevented 35 million metric tons of greenhouse gas emissions in 2005 alone – equivalent to the annual emissions from 23 million vehicles – and saved about \$12 billion on their utility bills.

# ENERGY STAR Offers



## Resources and tools to help:

- Measure and track energy and water use
- Allocate budget dollars for energy efficiency improvements
- Procure ENERGY STAR qualified products
- Earn recognition for energy efficiency achievements

# Energy Management Strategy



At every stage, ENERGY STAR assists K-12 school districts, colleges, and universities in implementing their energy management strategy.





# Portfolio Manager and EPA's Energy Performance Rating System

February 12, 2007

# Portfolio Manager and EPA's Energy Performance Rating System



K-12 school districts, colleges, and universities can use EPA's Portfolio Manager to:

- Measure and track building / campus energy use and savings over time
- Set building performance goals and prioritize upgrade work
- Earn the ENERGY STAR label for schools, residence halls, office buildings, and hospitals

# Portfolio Manager and EPA's Energy Performance Rating System



## Normalizes building energy consumption

For things like weather, hours, occupant density, plug load

## Benchmarks for comparison

Similar buildings in national stock or compare to self over time

## Recognizes top performing buildings

Top 25% qualify for the ENERGY STAR

## Recognizes portfolio improvement

Baseline improvements of 10, 20, and 30 percent

# Portfolio Manager and EPA's Energy Performance Rating System



Recent improvements to Portfolio Manager include:

- Water Tracking
- Percent Reduction
- Sharing Facilities and Master Accounts
- “Other” Space Type



# Automated Benchmarking

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# Automated Benchmarking



- Many providers have now integrated the EPA energy performance rating system into their suite of services.
- This service allows you to automatically receive monthly ratings in the same web-based or desktop interface that you view other energy and building information.

# When To Use Automated Benchmarking



Automated benchmarking services are most appropriate for organizations with:

- Energy information and bill handling services
- A large portfolio of buildings
- Interest in eliminating manual data entry
- Interest in improving energy management practices

# Advantages of Automated Benchmarking



- Receive monthly benchmarks without the burden of data entry
- ENERGY STAR rating is placed side-by-side with other facility performance metrics in your primary data tracking system
- Facilitate organization-level and building-level recognition opportunities



# ENERGY STAR and K-12 Schools

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# Energy and the Nation's Schools



- U.S. school districts spend \$8 billion each year on energy, second only to salaries.
- Top energy-performing schools use three times less energy than the least efficient schools.
- Technology + O&M = top performance

# School Districts are Working with ENERGY STAR



- Almost 250 school districts around the country are partnering with ENERGY STAR to protect the environment through superior energy efficiency.
- More than 650 K-12 school buildings have earned the ENERGY STAR for superior energy performance.
- More than 160 of these buildings earned the ENERGY STAR in 2006.

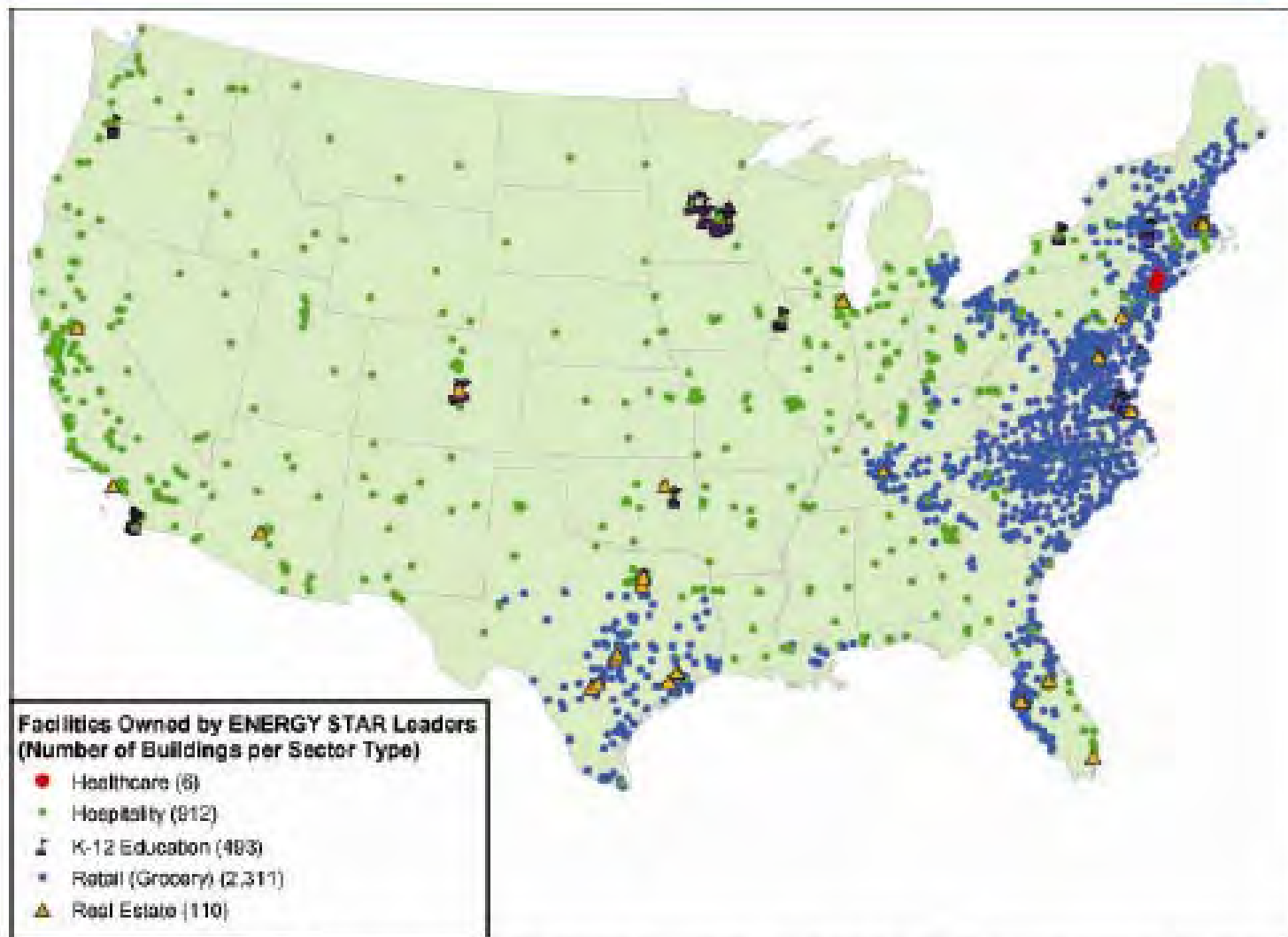
# School Districts are ENERGY STAR Leaders



- School districts that achieve a 10% or greater reduction in normalized source energy use can apply for ENERGY STAR Leaders.
- Districts can re-apply for recognition with each subsequent 10% reduction or when they achieve a portfolio-wide average rating of 75 or better.
- Seventeen partners became ENERGY STAR Leaders in 2006, the most recognized in a single year. Twenty-six total since 2004.
- K-12 schools represented more than 70 percent of the new Leaders in 2006.



# ENERGY STAR Leader Activity\*



\* Represents eligible buildings in ENERGY STAR Leader accounts as of 11/30/06. The map may not look true to scale due to multiple entries per zip code.



# ENERGY STAR and Higher Education

February 12, 2007

# Colleges and Universities are Working with ENERGY STAR



- Colleges and universities spend close to \$2 billion each year on energy.
- More than 150 colleges and universities around the country are partnering with ENERGY STAR to protect the environment through superior energy efficiency.
- The ENERGY STAR Higher Education Focus is a targeted effort to improve the energy efficiency of colleges and universities.

# Goals of the ENERGY STAR Higher Education Focus



- Create a dialogue to learn from college and university officials' experiences in improving energy efficiency
- Show how ENERGY STAR can be a key component of a college or university's energy management strategy
- Improve ENERGY STAR tools and resources so that EPA can continue to address the evolving energy efficiency needs of the sector

# Higher Education Focus Participants



- Alliance to Save Energy
- American University
- Appalachian State University
- Arizona State University
- Association of Teacher Educators
- California State University, Chico
- Chesapeake Climate Action Network
- City University of New York
- Duke University
- Duquesne University
- George Washington University
- Georgia Board of Regents
- Georgia Environmental Facilities Authority
- Ithaca College
- Johns Hopkins University
- Lane Community College
- Massachusetts Institute of Technology
- National Association of College and University Business Officers

# Higher Education Focus Participants



- National Wildlife Federation Campus Ecology Program
- New Jersey Higher Education Partnership for Sustainability
- Ohio Foundation of Independent Colleges
- Pennsylvania State University
- Partnership for Environmental Technology Education
- Society for College and University Planning
- Southern Alliance for Clean Energy
- State University of New York
- University of California System
- University of Colorado at Boulder
- University of Louisville
- University of Michigan
- University of Nevada Las Vegas
- University of New Hampshire
- University of Northern Colorado
- Virginia Cooperative Extension
- Virginia Tech University
- Western Michigan University

# Possible Outcomes of the Focus



- A way to measure and track energy use that accounts for variables such as weather, climate, operating characteristics, and other important differences between higher education institutions
- An Energy Efficiency Assessment and Opportunities Report that describes best practices to increase energy efficiency
- Energy Management Guidelines to help organizations set goals and determine action steps
- Financing information that provides innovative solutions to paying for energy efficiency projects
- Technical training and support for use of EPA's Performance Rating system, the ENERGY STAR Portfolio Manager tool, and other ENERGY STAR tools
- EPA recognition of energy performance improvement

# Information Sources



**ENERGY STAR Web Site: [www.energystar.gov](http://www.energystar.gov)**

**ENERGY STAR for K-12 Schools: [www.energystar.gov/schools](http://www.energystar.gov/schools)**

**ENERGY STAR for Higher Education: [www.energystar.gov/highered](http://www.energystar.gov/highered)**

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