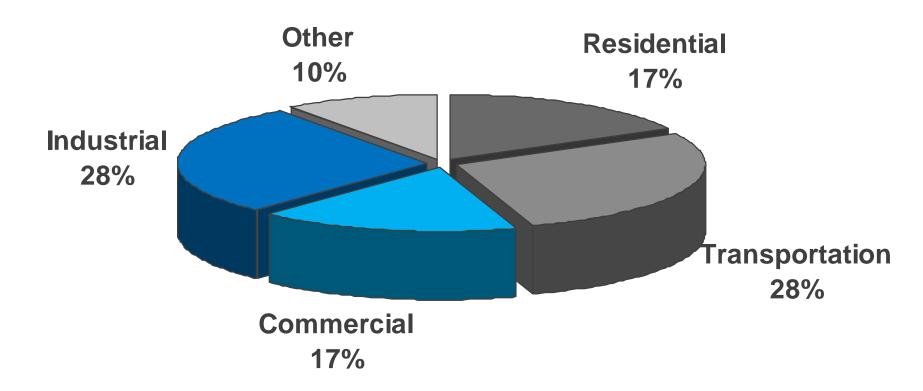# Promote Energy Efficiency with ENERGY STAR

*July 2011*
*US Environmental Protection Agency*
*ENERGY STAR  Buildings*

# The Big Picture: Greenhouse Gas Emissions in the United States



*Commercial buildings and industrial facilities are responsible for 45% of U.S. greenhouse gas emissions.*

*Inventory of U.S. Greenhouse Gas and Sinks: 1990-2005, US EPA*

# Opportunities in Buildings

➢ Commercial buildings and industrial facilities generate about **50 percent** of U.S. carbon dioxide emissions.

➢ **30 percent** of energy consumed in commercial and industrial buildings is wasted.

➢ Reductions of **10 percent** in energy use can be possible with little or no cost.

# What is ENERGY STAR for Buildings?

- U.S. Environmental Protection Agency energy management program.

- Offers proven solutions to help building owners and managers reduce energy consumption.

- Program for new construction and existing buildings.

- Works in markets with a focus on:
  - Commercial property (offices, retail, hotels)
  - Public sector (government, K-12, higher ed)
  - Healthcare
  - Small business and congregations

# Join as an ENERGY STAR Partner



✓Announce your partnership and show commitment

✓Gain access to the ENERGY STAR Partner graphic for PR materials

✓Add your story to EPA's directory of ENERGY STAR Partners

Join as a Partner at www.energystar.gov/join

It's voluntary and free!

# National Recognition

➤ ENERGY STAR Partner

➤ Designed to Earn the ENERGY STAR

➤ The ENERGY STAR for Existing Buildings

➤ ENERGY STAR Leaders

➤ ENERGY STAR Partner of the Year

# Assess Building Performance with EPA's Portfolio Manager

➢ Measure and track the energy use of all of your buildings – receive an energy use intensity (EUI). Many buildings, including office buildings can receive energy performance scores on a 1-100 scale.

➢ Track changes in energy and water use over time in single buildings, groups of buildings, or entire portfolios.

➢ Track and report cost savings and $CO_2$ emissions.

➢ Apply for the ENERGY STAR.
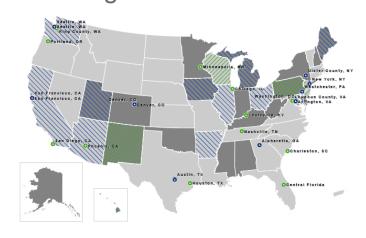
➢ www.energystar.gov/benchmark

# Benchmarking for Local and State Governments

- Governments across the US are using Portfolio Manager to measure and track energy and water use

  - http://www.energystar.gov/ia/business/government/State_Local_Govts_Leveraging_ES.pdf

- Learn more about leveraging EPA's Portfolio Manager

  - http://www.energystar.gov/ia/business/government/Leveraging_Portfolio_Manager_Factsheet.pdf

- Benchmarking helps state and local officials and building managers to identify their best opportunities for improvement, track performance over time, and document savings.

# Local Government Benchmarking Mandates

- Jurisdictions with policies requiring buildings to benchmark with ENERGY STAR Portfolio Manager include:
  - Alpharetta, GA
  - Austin, TX*
  - Denver, CO
  - New York, NY*
  - San Francisco, CA*
  - Seattle, WA*
  - Washington, DC*
  - West Chester, PA

\* These jurisdictions also require the disclosure of buildings' energy performance, either online or during a real estate transaction
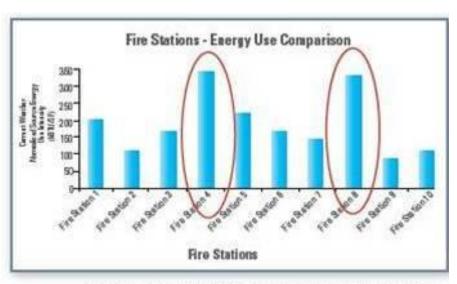
# Benefits of Benchmarking with EPA's Portfolio Manager Tool

**Make More Informed Decisions**:

- Assess whole building performance based on utility data
- Identify under-performing facilities and prioritize resources
- Set improvement goals, targets, and timelines
- Verify pre- and post-project energy use, GHG emissions, and energy costs
- Continue momentum from ARRA-funded programs: analyze Portfolio Manager benchmarking results to verify commercial building retrofit results and inform future projects.

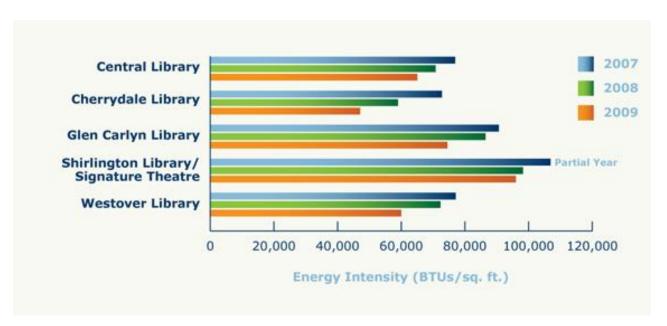

Fire Stations - Energy Use Comparison

Prioritize efforts by identifying under-performing buildings.

# Verify Improvements… and Communicate Them!

- **Arlington County, VA's 2007-2009 Building Energy Report Cards**
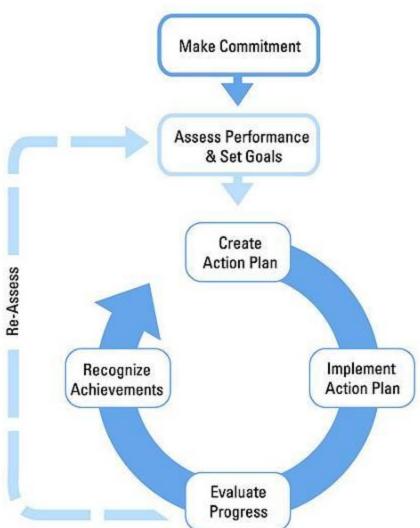


- **More about the County's Building Energy Report Cards at: www.arlingtonva.us/portals/topics/aire/page66219.aspx**

# Superior Energy Management Approach

Based on the successful practices of ENERGY STAR partners, EPA has identified the key components for a successful energy management program.

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

# Tap Into Expert Help

- ENERGY STAR Performance Contracting Best Practices: www.naesco.org/resources/industry/documents/2008-05.pdf
    - Why and how ESCOs use the ENERGY STAR tools in the context of a typical EPC project
    - Sample text to integrate ENERGY STAR tools into an EPC project

- Search for Most Active ENERGY STAR Service & Product Providers: www.energystar.gov/index.cfm?fuseaction=spp_activity
    - Provided Clients with Portfolio Manager benchmarks
    - Helped Clients Earn the ENERGY STAR
    - Improved Client buildings by 10 points or more
    - Served Clients who are ENERGY STAR Leaders

- Search for Service Providers that Offer Automated Benchmarking: www.energystar.gov/index.cfm?c=spp_res.pt_spps_automated_benchmarking

# Leverage ENERGY STAR in Your Community Outreach

# Local Recognition Goes a Long Way



Mayor Abramson and the Kentucky Office
of Energy Policy recognize buildings that earn the ENERGY STAR in Louisville, Kentucky .
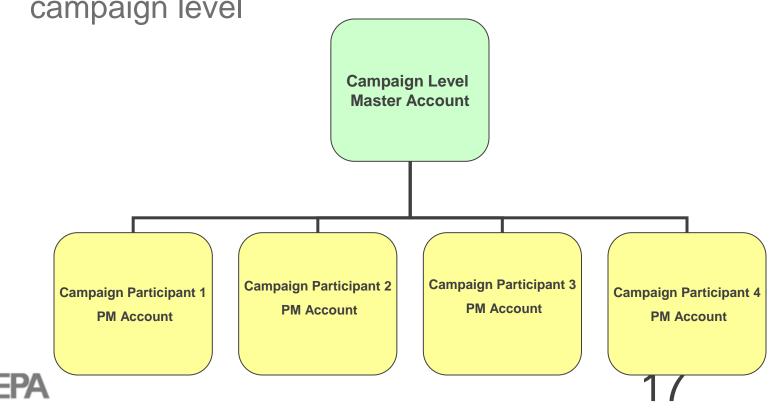
# Local Campaigns Engage Building Owners

- Houston Green Office Challenge
- Chicago Green Office Challenge
- San Francisco Earth Hour 24x7 Energy Challenge
- Portland Office Energy Showdown
- Seattle/King County Kilowatt Crackdown
- Denver Watts to Water Program
- Central Florida Kilowatt Crackdown
- Arlington County Green Games

# Roll Up Results with a Portfolio Manager Master Account

- Participants benchmark energy use, GHG emissions, water use, and cost savings at the building level
- Campaign managers track aggregate results at the campaign level

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                    │   Campaign Level     │
                    │   Master Account     │
                    └──────────┬───────────┘
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    │Campaign │ │Campaign │      │Campaign │ │Campaign │
    │Participant 1│ │Participant 2│   │Participant 3│ │Participant 4│
    │PM Account│ │PM Account│      │PM Account│ │PM Account│
    └─────────┘ └─────────┘      └─────────┘ └─────────┘
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# The Savings are Adding Up!

- ## Louisville Kilowatt Crackdown
  - Over 100 Louisville buildings completed in the first contest year (schools, CRE, healthcare, hospitality, and others) and saved 4,766,977 KWh in energy use - **equal to electricity use of 415 homes for one year!**

- ## Chicago Green Office Challenge
  - First campaign year resulted in savings of 70 million KWh of electricity and 54,000 metric tons of carbon dioxide – **equal to removing more than 10,000 cars off Chicago streets!**

# Include ENERGY STAR Training Resources in Your Outreach

- **Benchmarking Starter Kit**
  - Animated Portfolio Manager training
  - Data Collection Worksheet
  - Step-by-step Quick Reference Guide

- **Live and recorded trainings**
  - Portfolio Manager 101
  - Best Practices to Improve Energy Performance
  - Computer Power Management with ENERGY STAR
  - Financing Energy Efficient Upgrades

  ……Many more available!



www.energystar.gov/businesstraining

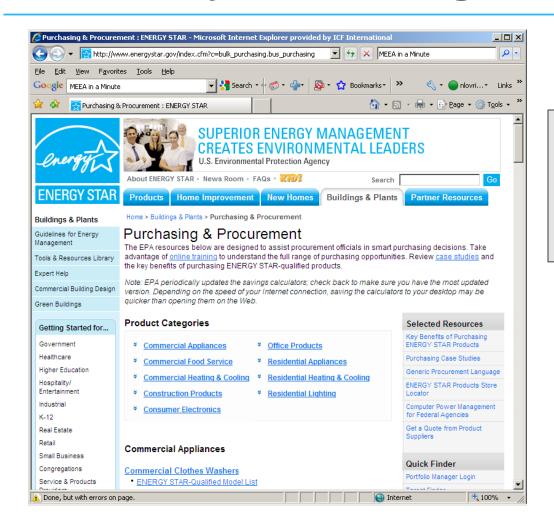# Engage Employees/Tenants with EPA's "Bring Your Green to Work"



**Off-the-Shelf Energy Awareness Program**
- Green Team checklist
- Employee Training Toolkit
- Behind the scenes tour
- Interactive cubicle
- Energy quiz
- Publications

All available at  www.energystar.gov/work

# Promote Tools for Energy Efficiency Purchasing



- Savings Calculators
- Qualified Product Lists
- Sample Procurement Language
- Store Locator

**www.energystar.gov/purchasing**

# Reach out to Small Business Owners



Available at  www.energystar.gov/smallbiz

# Promote Residential Energy Savings

- Home Energy Advisor
  Make a plan
    **www.energystar.gov/homeadvisor**

- ENERGY STAR @ Home
  Go room-by-room
  **www.energystar.gov/home**
  *Can be hosted on your site*

- Home Energy Yardstick
  Track your progress
  **www.energystar.gov/yardstick**
  *Can be hosted on your site*

# Example: GreeNYC
# "Be Cool & Smart" ad campaign

# Wrap up

- Partner with ENERGY STAR and leverage EPA's off-the-shelf resources

- Lead by example, meet your energy efficiency goals, and earn EPA recognition

- Help building owners throughout your community save energy, money, and reduce greenhouse gas emissions

# For More Information

Visit: **www.energystar.gov/benchmark**
E-mail: **buildings@energystar.gov**

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