



# EPA ENERGY STAR and Portfolio Manager

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U.S. EPA  
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Learn more at [energystar.gov](http://energystar.gov)

# What Is...

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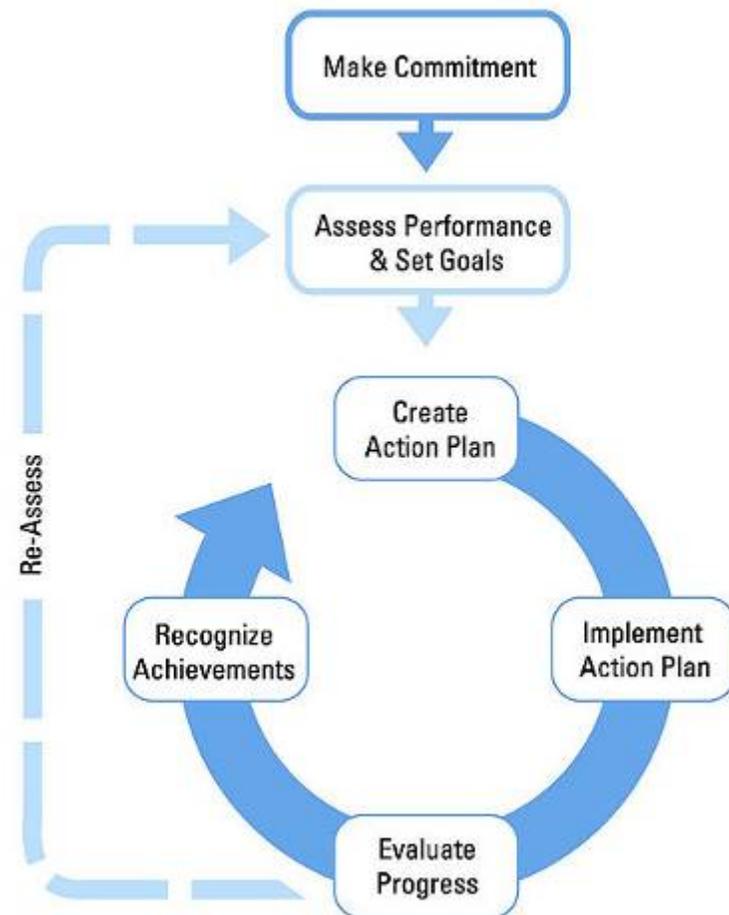
- ENERGY STAR?
- EPA Energy Performance Rating System?
- Portfolio Manager?

# A Strategic Approach To Energy Management



- EPA offers a proven strategy for superior energy management with tools and resources at each step.
- How partners use ENERGY STAR
  - Identify “high-opportunity” buildings for efficiency upgrades
  - Set goals, targets, prioritize capital improvements
  - Technical guidance
  - Incorporate into energy awareness campaigns
  - Financial analysis tools and businesses connections
  - Networking opportunities

## ENERGY STAR® GUIDELINES FOR ENERGY MANAGEMENT



# EPA Rewards Improvements and Performance



**Challenge**



**Leader**



**Building Label**



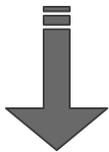
**Partner of the Year**



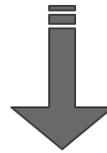
# Standardized Measurement Enables Energy Efficiency Strategy



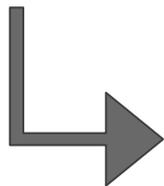
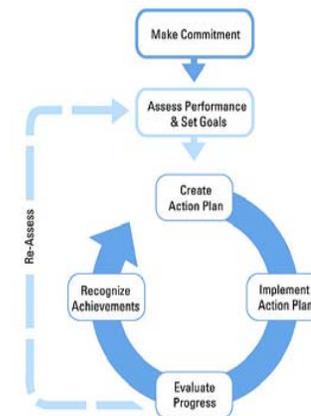
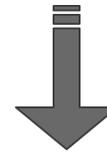
• Estimate Energy Use at Design



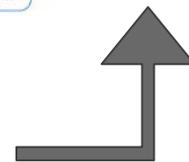
• Verify Energy Use in operation



• Monitoring progress as organizations manage energy better



Standardized metrics enables strategies, consistency



# Is Your Building Performing Well?



Fuel Efficiency  
MPG



Is 18 MPG high or low for an automobile?

Is 80 kBtu/SF/YR high or low for a building?

Energy Performance  
EPA Benchmarking

**STATEMENT OF ENERGY PERFORMANCE**  
**Margrave High School**  
 Building ID: 1021120  
 For 12-month Period Ending: January 31, 2004  
 Date SEP Generated: March 30, 2004

Margrave High School  
 2201 Hwy 10  
 Longwood VA 22079  
 Year Built: 1982

Owner: Fairfax County  
 Contact: John Doe  
 5225 Northfall Mt. View Drive  
 Suite 300  
 Arlington VA 22206  
 (703) 242-4900

Facility Space Use Summary	Area/SF	Number of Stories	Number of PCs	Cooling Percent
Computer Data Center	134	N/A	N/A	N/A
6-17 Trade	30,221	4-23	425	100

Site Energy Use Summary	Electricity (kBtu)	Gas (kBtu)	Total Energy (kBtu)
Electricity (kBtu)	5,649,861		
Gas (kBtu)		303,419	
Total Energy (kBtu)	5,953,280		5,953,280

Professional Verification  
 John Doe  
 5225 Northfall Mt. View Drive  
 Suite 300  
 Arlington VA 22206  
 (703) 242-4900

Request: LEED Gold (1-100) 94

Energy Intensity*	Site (kBtu/SF-yr)	Source (kBtu/SF-yr)
Energy Intensity*	17	43.4

Emissions  
 CO<sub>2</sub> (1000 Bu/yr) 6,791  
 SO<sub>2</sub> (1000 Bu/yr) 306  
 NO<sub>x</sub> (1000 Bu/yr) 21

Energy Cost  
 Cost (\$/yr) \$244,435  
 Intensity (\$/SF-yr) \$9.72

Indoor Environment Criteria\*  
 Smoke or tobacco prohibited? Yes  
 Adequate ventilation provided? Yes  
 Thermal conditions met? Yes  
 Adequate illumination provided? Yes

Notes: \*Based on ENERGY STAR's method and approach as required by 2002 ASHRAE 90.1-2001 and IEA Lighting Handbook for lighting quality. Tracking Number: SEP2004000001004542



# EPA's Energy Performance Rating System



- Normalizes building energy consumption
  - Accounts for weather, operating hours, occupant density, & plug load by standardized methods
- Benchmarks for comparison
  - Ratings compare to similar buildings nationwide
  - Rating system is available for over 60% of U.S. commercial building space.
  - Transparent and replicable technical documentation
- EPA provides recognition opportunities
  - ENERGY STAR label
  - Designed to Earn ENERGY STAR
  - ENERGY STAR Leaders

# EPA Rating: Source and Site Energy



- Because ENERGY STAR rates the whole building, the ratings must account for any mix of fuels
- Site Energy
  - Energy consumption expressed on utility bills
  - Includes combination of primary and secondary energy, which are not directly comparable
    - Some heat and electricity comes from fuels burned on-site (e.g. natural gas); some comes from fuels burned off-site (e.g. district steam)
- Source Energy
  - Traces on-site consumption back to energy content of primary fuels
  - Accounts for the losses in conversion from primary to secondary energy (which can occur either on-site or at a utility)
  - Accounts for losses in distribution to buildings

# EPA Rating: Technical Foundation

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- The rating **does**
  - Evaluate as-billed energy use relative to building operations
  - Normalize for operational characteristics
    - Size, Number of employees, Weekly operating hours, Climate
  - Depend on a statistically representative sample of the US commercial building population
- The rating **does not**
  - Attempt to sum the energy use of each piece of equipment
  - Normalize for technology choices or market conditions
    - Type of lighting, energy price
  - Explain how or why a building operates as it does

# Eligible Space Types



Hospitals



Retail



Office Buildings



Hotels



Medical Office Buildings



Waste Water Treatment Plants



Courthouses



Financial Centers



Warehouses



Dormitories



Supermarkets



Schools

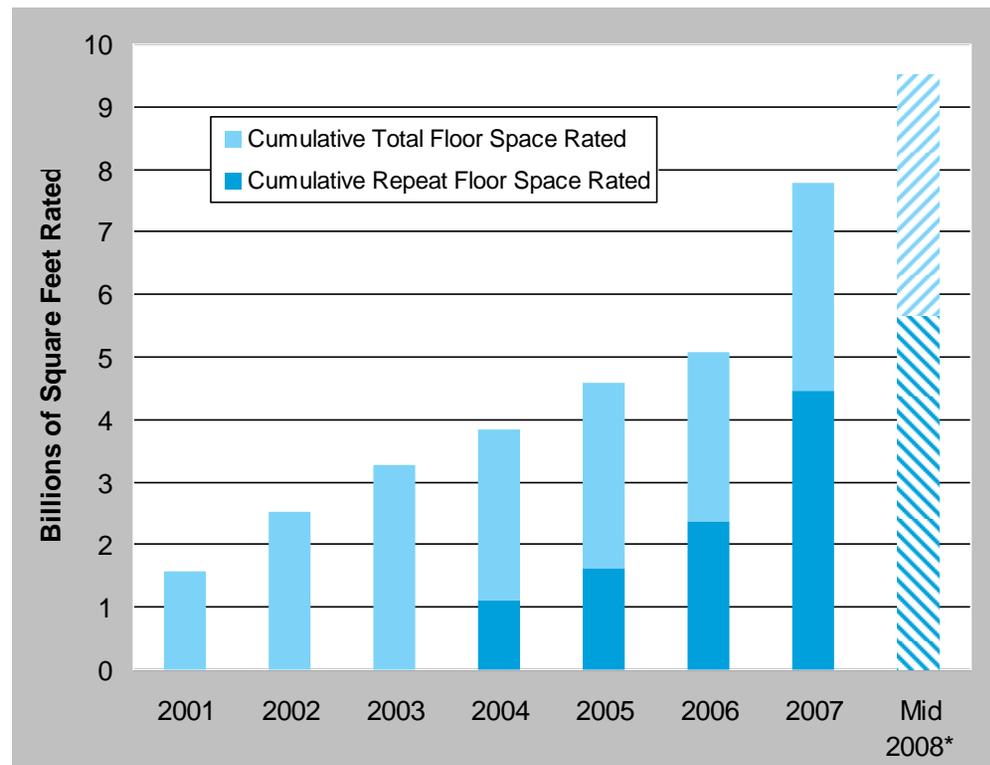


# Building Rating Activity Gains Momentum



## *Trends:*

- ~9.5 billion square feet rated through June 2008
- 25% increase in 6 months
- More than 13% of commercial floorspace



\* Note: 2008 data through June 30, 2008

# Portfolio Manager



- Free on-line tracking and benchmarking tool
  - Secure environment
- Available for any building
- Track energy use
  - Site EUI
  - Source EUI
  - Weather normalized source EUI
  - National average comparisons
- Energy performance ratings (for selected spaces)
- Track energy costs
- Track carbon emissions using Egrid
- Track water consumption
- Data sharing functions
- Apply for ENERGY STAR recognition

# Find Portfolio Manager



3. Click on:  
“Portfolio  
Manager”

ENERGY STAR

About ENERGY STAR News Room FAQs

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**SUPERIOR ENERGY MANAGEMENT  
CREATES ENVIRONMENTAL LEADERS**  
U.S. Environmental Protection Agency

Products Home Improvement New Homes Buildings & Plants Partner Resources

Home > Buildings & Plants

### Buildings & Plants

Improving the energy performance of buildings and plants requires managing energy strategically across the entire organization. EPA provides strategies, tools, professional assistance, and recognition opportunities to help you meet your goals and contribute to ENERGY STAR's nationwide challenge to improve the energy efficiency of facilities by 10 percent or more!

#### Strategy

**Guidelines for Energy Management**  
Get started by applying our proven strategy to set performance goals, create and implement action plans, assess performance and progress, and recognize your organization's achievements.

**New Building Design**  
Make energy performance a priority in your next building's design. Use [Target Finder](#) to set your energy performance target.

**Green Buildings and Energy Efficiency**  
Make sure your buildings deliver environmental and financial results.

#### Tools

**Tools & Resources Library**, including free resources like [Portfolio Manager](#), to assist your organization in meeting its energy performance goals.

**Buildings & Plants**

- Guidelines for Energy Management
- Tools & Resources Library
- Expert Help
- New Building Design
- Green Buildings

**Getting Started for...**

- Commercial Real Estate
- Corporate Real Estate
- Government
- Healthcare
- Higher Education
- Hospitality
- Industrial
- K-12
- Retail
- Small Business
- Congregations
- Service & Products Providers

**Buildings & Plants**

- Portfolio Manager Login
- Target Finder
- ENERGY STAR Challenge
- ENERGY STAR Leaders
- Earn the ENERGY STAR
- Purchasing & Procurement
- Service Providers Directory
- Find Labeled Buildings
- Communications Kit
- Online Training

**News**

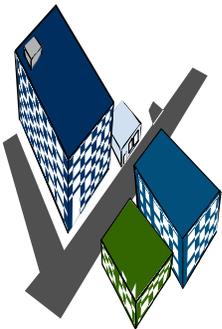
- Is Your Small Business Ready for Summer?
- Top 5 Ways to Cool Your



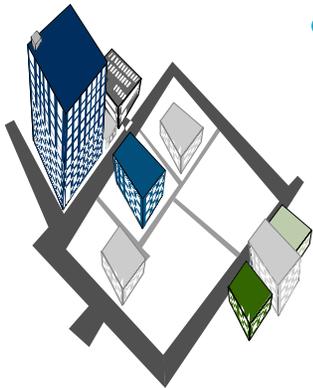
# How to Access the Rating



- Single Building Manual Entry
  - Enter building and energy consumption information into Portfolio Manager

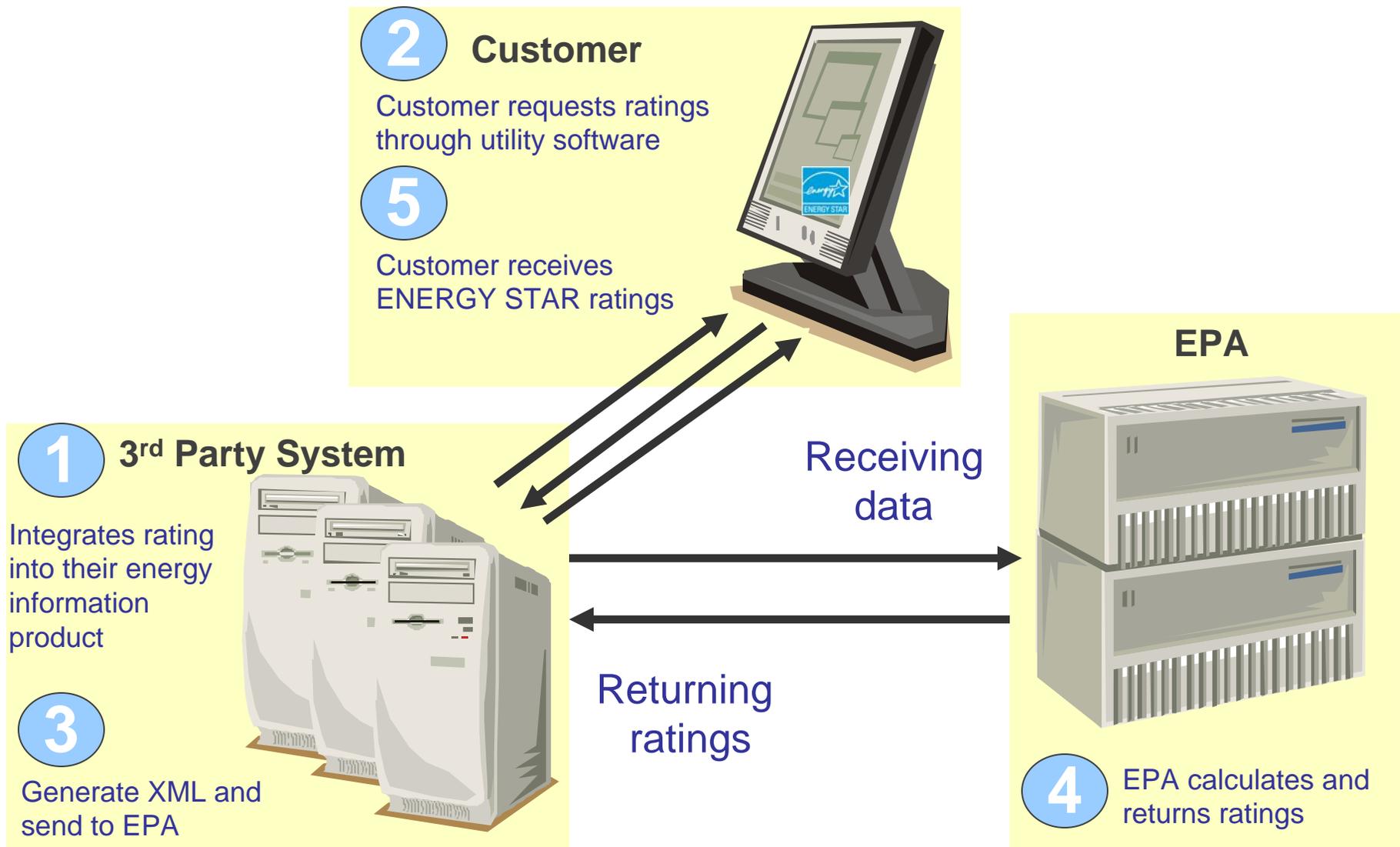


- Excel Data Upload
  - Upload building data in Portfolio Manager using an Excel template



- Automated Benchmarking Services (2<sup>nd</sup> Generation)
  - Service and Product Provider
  - Utility (ABS 2.0)
  - Organization

# How Does A 3<sup>rd</sup> Party Get the Rating?



# Terms and Conditions



A screenshot of a Mozilla Firefox browser window displaying the "Terms of Use" page for the Energy Star Portfolio Manager. The browser title is "Portfolio Manager - Mozilla Firefox" and the address bar shows "https://estest.sra.com/istar/pmpam/index.cfm". The page header includes the Energy Star logo, "PORTFOLIO MANAGER", and navigation links: ACCOUNT INFORMATION, CONTACTS, FAQ, FREQUENTLY ASKED QUESTIONS, CONTACT US, HELP, and LOGOUT. The breadcrumb trail is "Home &gt; My Portfolio &gt; ABS Terms of Use". The main content area is titled "Terms of Use" and contains the text: "Authorization for SRA TEST to transfer data to your account". Below this is a section titled "Terms of Use" with a text box containing: "Our legal department says you must agree to the following terms before we begin managing your data:" followed by a bulleted list: "- Terms" and "- Conditions". Underneath is an "Agreement\*" section with a checkbox and the text "I agree to my provider's Terms of Use". An "Important Privacy Information" section follows, with text explaining that authorizing the energy service provider grants access to edit and view data within the account. At the bottom right, there are two buttons: "&lt;&lt; BACK" and "CONTINUE &gt;&gt;". The browser's status bar at the bottom shows "Done" and the URL "estest.sra.com".



# New Enhancements



- **Increased Reporting Features**
  - Sharing information from EPA's system
  - Reports for energy management; local government
- **Additional Ratings**
  - From private data sources:
    - Data centers (1/10)
    - Assisted Living (7/10)
    - Other potential: automobile dealership
  - From CBECS:
    - Religious worship (7/09)
  - International?
- **Incorporate Target Finder into Portfolio Manager**
  - Save building energy use targets to manage design to operation
- **Support/improve Automated Benchmarking Services**

# How EPA Can Help Facilitate Initiatives?

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- Portfolio Manager platform
- Experience with administering and verifying program
- Functionality in Portfolio Manager
  - Automated benchmarking
  - Data sharing features
  - Reporting, including possible energy statement
- ? [Your input today and tomorrow]