



## EPA's ENERGY STAR Market Demand and Automated Benchmarking System

EPA

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

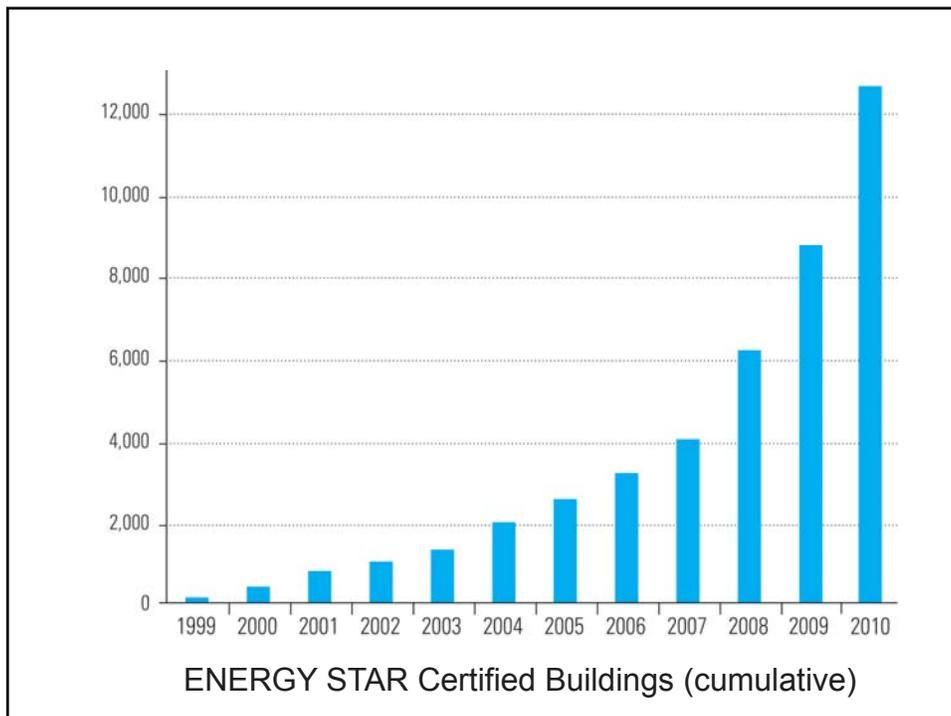
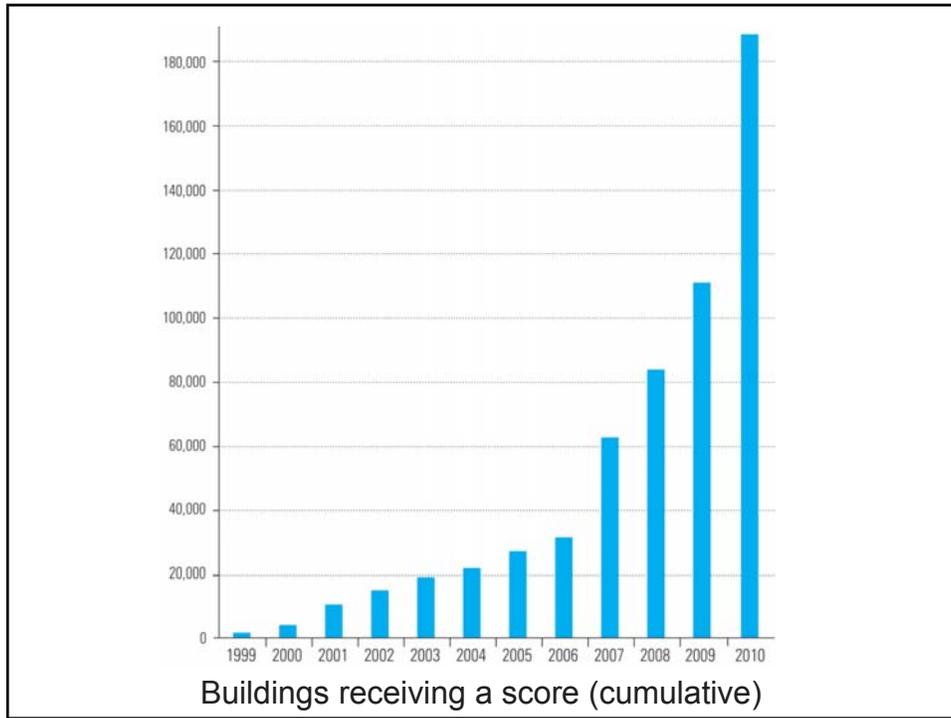
## Agenda



- Overview of Benchmarking Demand Growth
- Over view of Automated Benchmarking System

2





## Benchmarking Activity Continues to Increase



- More than 5,800 C&I companies have committed to benchmark their portfolio of buildings.
- As of December 2010
  - Over 200,000 buildings have been rated
  - Over 12,600 buildings have qualified for the ENERGY STAR certification, EPA's recognition for top energy performance
- 22 percent of the market has been rated

7

## State and Local Benchmarking Legislation Summary



Jurisdiction	Public Buildings	Private Buildings	Disclosure	Utility Data Requirement
California	√	√	Transactional	√
Washington	√	√	Transactional	√
Michigan	√			
Ohio	√			
Hawaii	√			
San Francisco, CA	√	√	Annual	
D.C.	√	√	Annual	
Austin, TX	√	√	Transactional	
Denver, CO	√			
West Chester, PA	√	√		
Seattle, WA	√	√	Transactional	√
City of New York	√	√	Annual	

8

## Mandatory State Initiatives



- CA: Assembly Bill (AB) 1103
  - Required all utilities to make available data for uploading into Portfolio Manager upon request from a commercial building owner
  - Requires the disclosure of an ENERGY STAR score and energy use data as part of commercial real estate transactions involving the sale, lease, or financing of a whole building (expected to go into effect in early 2012)  
Three-year phase-in for multi-tenant buildings >50,000 SF
- WA: State Bill 5854 - 2009-10
  - Benchmarking disclosure law similar to CA law

9

## Mandatory Local Initiatives



- City of New York: Greater, Greener Buildings Plan
  - Requires eligible privately owned buildings >50,000 sq. ft. and all municipal buildings >10,000 sq. ft. to benchmark annually in Portfolio Manager
  - 22,000 buildings affected
  - Initial reporting required by May 1, 2011
- Washington DC: Clean and Affordable Energy Act of 2008
  - Requires eligible privately-owned commercial buildings to benchmark using Portfolio Manager on an annual basis.
  - Phased in over three years starting for >200,000 SF in 2010. Applies to buildings >50,000 SF in 2013
  - Results published online

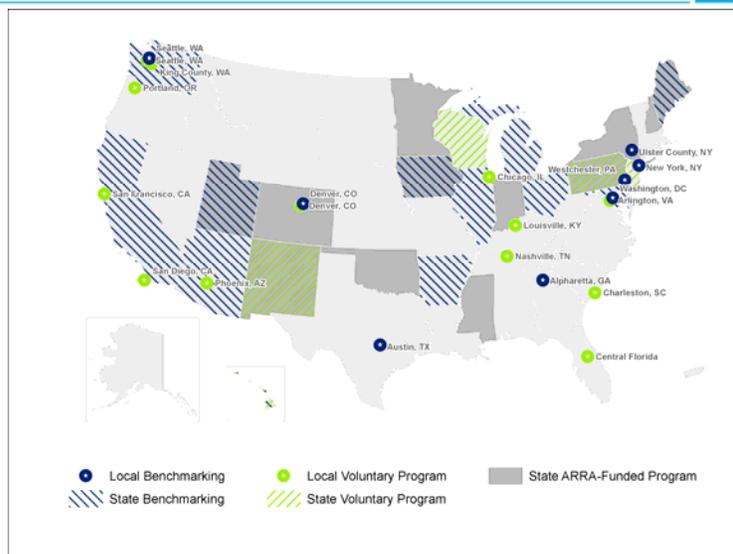
10

## Voluntary Campaigns and Incentives

Location/Company	Program
City of Albuquerque	Green Path Program
City of Chicago	Chicago Green Office Challenge
State of WI	Lt. Governor ENERGY STAR School Challenge
City of Denver	Watts to Water
City of Louisville	Louisville Kilowatt Crackdown
Central Florida	Central Florida Kilowatt Crackdown
City of Portland	Portland Energy Showdown
State of PA	Conservation Works and Small Business EE Grants
New England EPA Region 1	Community Energy Challenge
State of NM	HB 534: Sustainable Building Tax Credits
City of Seattle	Seattle Kilowatt Crackdown
City of San Francisco	Earth Hour 24x7 Energy Challenge
Travelocity	Travel for Good – Green Hotel Directory
Orbitz	Eco-Tourism
CoStar	Commercial Real Estate Multiple Listing Service

11

## State and Local Governments Leveraging Portfolio Manager – Voluntary and Mandatory Programs



12

## LEED For Existing Buildings\*



- ENERGY STAR benchmarking is a prerequisite for LEED EB Energy and Atmospheric credits
- 817 projects earned recognition
- Over 2,600 projects registered for LEED EB
- High growth area for LEED



\* Statistics as of January 2011

13

## Federal Executive Order (EO 13423 – January 2007)



- Requires agencies to reduce greenhouse gases through a reduction in energy intensity
  - 3% annually, 30% by the end of 2015
- Federal government owns approximately 445,000 buildings equal to more than 3 billion sq ft
  - Leases additional 57,000 buildings (374 million sq ft)
- EPA, DOE, and GSA partnered to create a checklist to comply with EO 13423
  - The checklist calls for all existing federal buildings to track energy performance in Portfolio Manager

14

## Federal Agency Leasing Requirements



- **Federal agencies must lease space in ENERGY STAR buildings**
  - 500,000 buildings owned or leased by feds
  - US government is the largest energy user - \$7 billion yearly
- Who is affected?
  - **All agencies** entering into a lease >10,000 SF
  - **Owners/managers** of commercial buildings with existing federal leases >10,000 SF
  - Owners/managers of commercial real estate interested in attracting Federal clients

15

## Federal Agency Leasing Requirements



- Section 435 of the *Energy Independence and Security Act (EISA) 2007*
  - Federal agencies **required** to lease space in buildings that have *earned EPA's ENERGY STAR*
  - **New leases** entered into *on or after December 19, 2010*
  - ENERGY STAR **label** not more than **12 months prior** to the lease award date
  - When building is not eligible to earn ENERGY STAR, owners **must implement cost-effective energy efficiency upgrades to the building**

16

## ARRA-Funded Programs



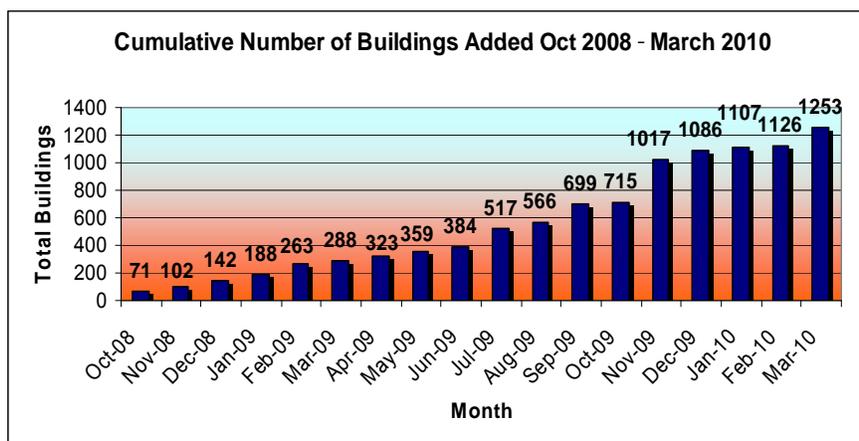
- Measuring and reporting performance required for ARRA funded programs and some programs require or encourage the use of Portfolio Manager
  - Iowa SEP Grant Program
  - Efficiency Maine Commercial Project EECBG Grant Program
  - New York Energy Efficiency Program
  - Pennsylvania Conservation Works! Program
  - Utah Advanced Energy Efficiency Strategies for Buildings Program
  - New Hampshire Office of Energy and Planning EECBG Grant Program
- List is growing rapidly due to DOE recommendation that grantees use Portfolio Manager to measure success of ARRA projects

17

## Benchmarking Demand: Utility Example



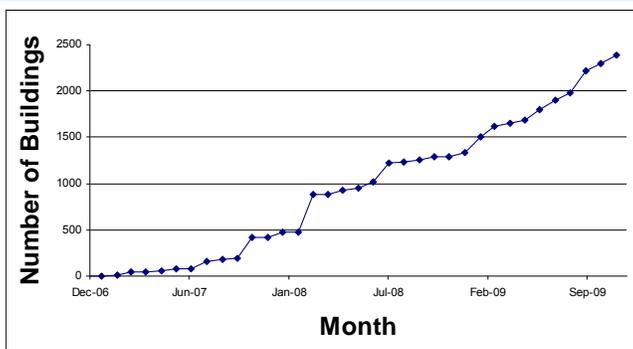
### ComEd's Energy Usage Data System



- ComEd designed the system to provide whole building energy consumption data for Portfolio Manager benchmarking.

18

## PG&E Case Study: Buildings Using PG&E's ABS



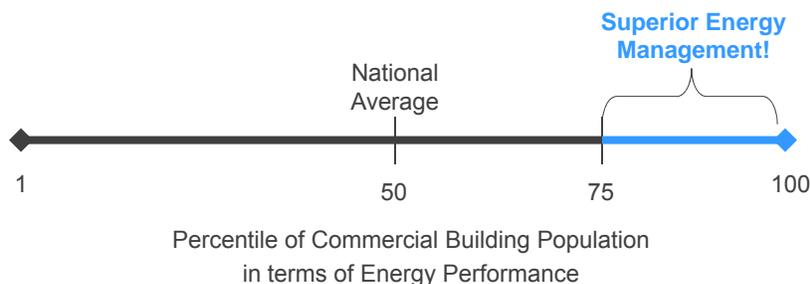
- PG&E designed system to comply with California benchmarking law.
- Results on chart represent voluntary benchmarking prior to CA law going into effect.

Year	New Buildings Using ABS	Cumulative Buildings Using ABS
2007	417	418
2008	870	1288
2009	1094	2382

## ENERGY STAR Certification for Commercial Buildings



- National recognition for top energy performance of commercial buildings.
- Over 12,600 buildings have earned EPA's ENERGY STAR through December 2010.



## Energy Efficient Buildings – A Market Differentiator



Commercial Real Estate properties that earn ENERGY STAR certification:

- Save \$.50 sq/ft (on average)
- Consume 35% less energy

**AND**

- Savings persist over time
- Occupancy/tenant retention is higher
- Savings leveraged into higher asset value upon disposition

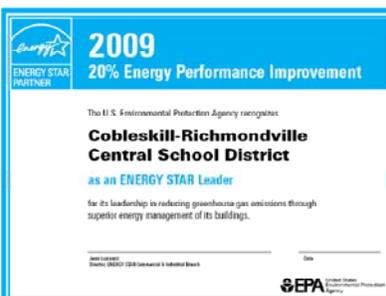
Kats & Perlman, 2006

21

## Earn Recognition for Superior and Improved Energy Performance



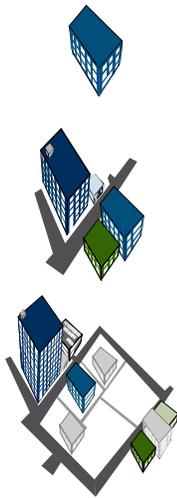
- **ENERGY STAR Leaders** for portfolio-wide improvements
  - Benchmark portfolio of buildings
  - Show improvement of 10%, 20%, 30%, etc.
  - Average portfolio score of 75 or higher



22

## Automated Benchmarking System Overview

### Benchmarking with Portfolio Manager



- **Single Building Manual Entry**
  - Enter benchmarking information into Portfolio Manager.
- **Bulk Data Upload**
  - Upload large sets of data in Portfolio Manager using an Excel template.
- **Automated Benchmarking Services**
  - A framework for exchanging data using web services between the EPA's rating system and third parties.

## What is the Automated Benchmarking System (ABS)?



- The ideal approach for utilities and energy service companies to meet the growing demand for ENERGY STAR benchmarking from their clients.
- A framework for exchanging data between EPA's Portfolio Manager and a third party system
- Enables third party tools to deliver EPA benchmarking data as an alternative or in addition to a Portfolio Manger account
- Includes Web-based services using Extensible Markup Language (XML) to...
  - authorize data release
  - transfer energy and/or building data
  - report energy benchmarking results

25

## Automated Benchmarking Approach



- Service providers can integrate ABS into existing energy management software products to provide ENERGY STAR 1 to 100 scores in their proprietary products
- Service providers can transfer data into Portfolio Manager automatically
  - Facilitates easy initial upload of all building and energy data into Portfolio Manager
  - Can map to existing building already in Portfolio Manager
  - Updates energy performance scores with new utility energy data on an ongoing automated basis
- Utility can provide benchmarking metrics in customer "my account" web site or energy management software applications.

## Data Available From ABS



- 1 to 100 energy performance scores
- Weather normalized and non-weather normalized energy intensity values (kbtu/square foot) and annual energy consumption (kbtu)
- Direct, indirect, and total greenhouse gas emissions;
- Non-weather normalized site energy intensity for the particular facility for a rating of 50.
- Non-weather normalized site energy intensity for the particular facility for a rating of 75.
- Building size, type, and attributes (# of PCs, operating hours, etc.)

27

## ABS in the Market



- SPPs Offering ABS
  - 32 commercial products/services in the market
  - Listed on Energy Star Web site at [www.energystar.gov/abs](http://www.energystar.gov/abs) via “participating providers” link
- Current Utility ABS providers
  - ComEd, Avista Utilities, Puget Sound Energy, WPPI Energy, PG&E, SDG&E, SoCal Gas, SCE, SMUD

28

## New Automated Benchmarking Products in 2010



### 2010 Press Releases

- “**EnergyPrint** Launches National Energy Benchmarking Product and Partnership with EPA’s Energy Star® Program” – 2/8/2010
- “**AirAdvice** Upgrade Automates Benchmark Reporting Within Industry-Leading Energy Services Program” – 2/22/2010
- “**Avista** Offers Tool to Help Commercial Customers Get Energy Star Benchmarking Information” - 2/25/2010
- “**TRIRIGA** Announces ENERGY STAR Integration to Streamline Energy Benchmarking” – 3/31/2010
- “**CA Technologies** Unveils Next Generation of Energy and Sustainability Solution to Manage Environmental Resources, Energy Efficiency and Carbon Impact” – 6/21/2010

29

## New Automated Benchmarking Products in 2010



### 2010 Press Releases

- “**Calico Energy Services** Announces Partnership with EPA’s ENERGY STAR® Program” – 8/16/2010
- “**FM:Systems** Announces FM:Interact Integration with EPA’s ENERGY STAR® Energy Performance Rating System” – 10/26/2010
- “U.S. EPA Approves **Jones Lang LaSalle** as an Automated Benchmarking System Participant for ENERGY STAR Portfolio Manager” – 11/3/2010
- “**EnergyCAP** Launches Online Energy Management Software” – 12/8/2010

30

## Contact Information



Bill Von Nedia  
[vonneida.bill@epa.gov](mailto:vonneida.bill@epa.gov)

Tracy Narel  
[Narel.tracy@epa.gov](mailto:Narel.tracy@epa.gov)

Peter Flippen  
[pflippen@icfi.com](mailto:pflippen@icfi.com)

For technical questions about ABS, please contact  
[buildings@energystar.gov](mailto:buildings@energystar.gov)

Additional Information: [www.energystar.gov/abs](http://www.energystar.gov/abs)

31