SUSTAIN ABILITY

DC

DC Energy Benchmarking Requirements and Results

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Built Environment and Energy Advisory Committee
Washington, DC

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Why Benchmarking?

Sustain DC

Overall Vision:

In just one generation—20 years—the District of Columbia will be the healthiest, greenest, and most livable city in the United States.

Energy Target:

By 2032, cut citywide energy use by 50% and increase use of renewable power to 50%

Benchmarking:

Tracking a building's energy and water use and using a standard metric to compare the building's performance against past performance and to its peers nationwide.

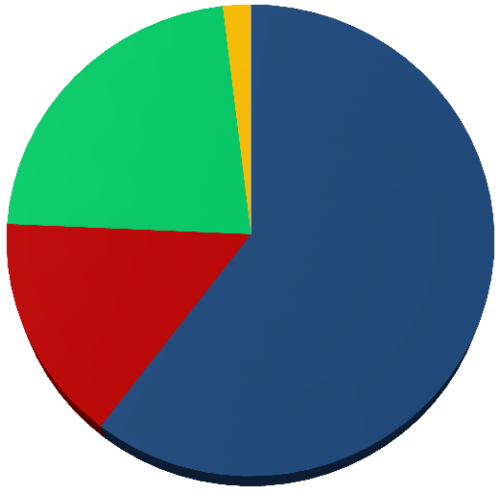
Why Benchmark?

Utilities are the largest non-fixed expense for DC building owners.

32% - Utilities
22% - Repairs/Maintenance
21% - Admin
5% - Security
1% - Grounds

Source: BOMA

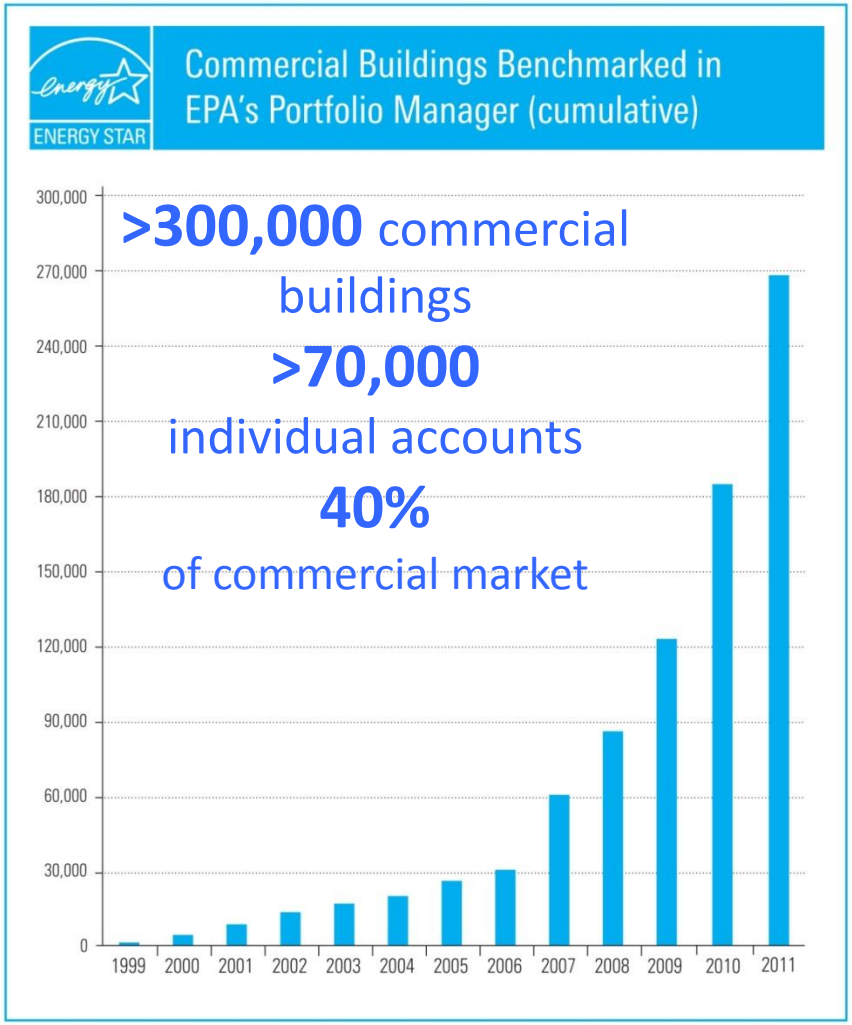
Buildings are DC's largest source of Greenhouse Gas Emissions:



Source: DC 2011 GHG Inventory
(2006 Inventory results were similar)

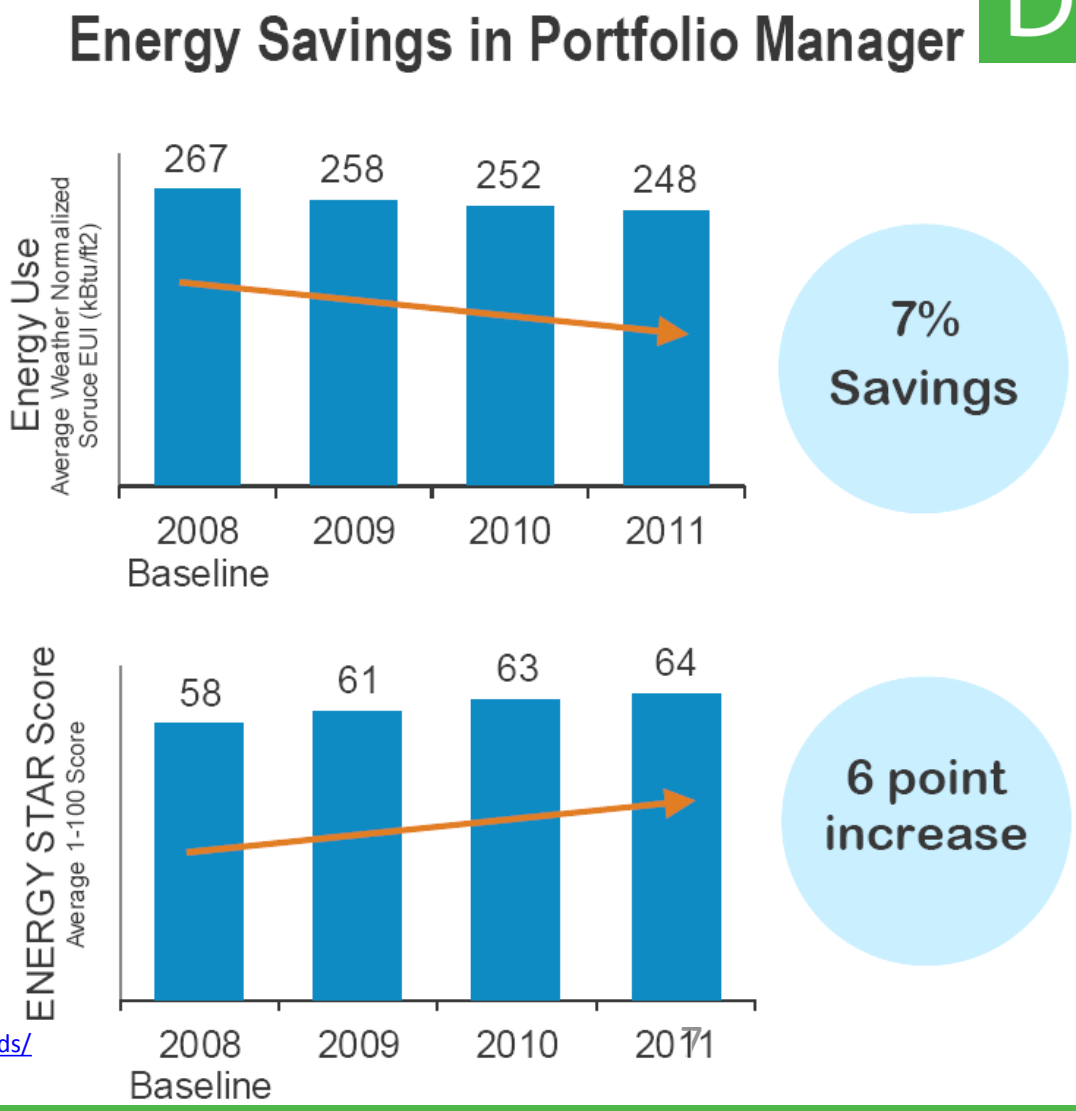
ENERGY STAR® Portfolio Manager®

- Operational Rating
- Management tool
- Free, online, user-friendly
- All New Design
- 1-100 score for many buildings
- Certification option
- Strong support from EPA
- Strong brand recognition
- 12-year track record
- Electronic Reporting
- Industry-standard



Value of Benchmarking

Consistent benchmarking in buildings results in energy savings and improved performance.



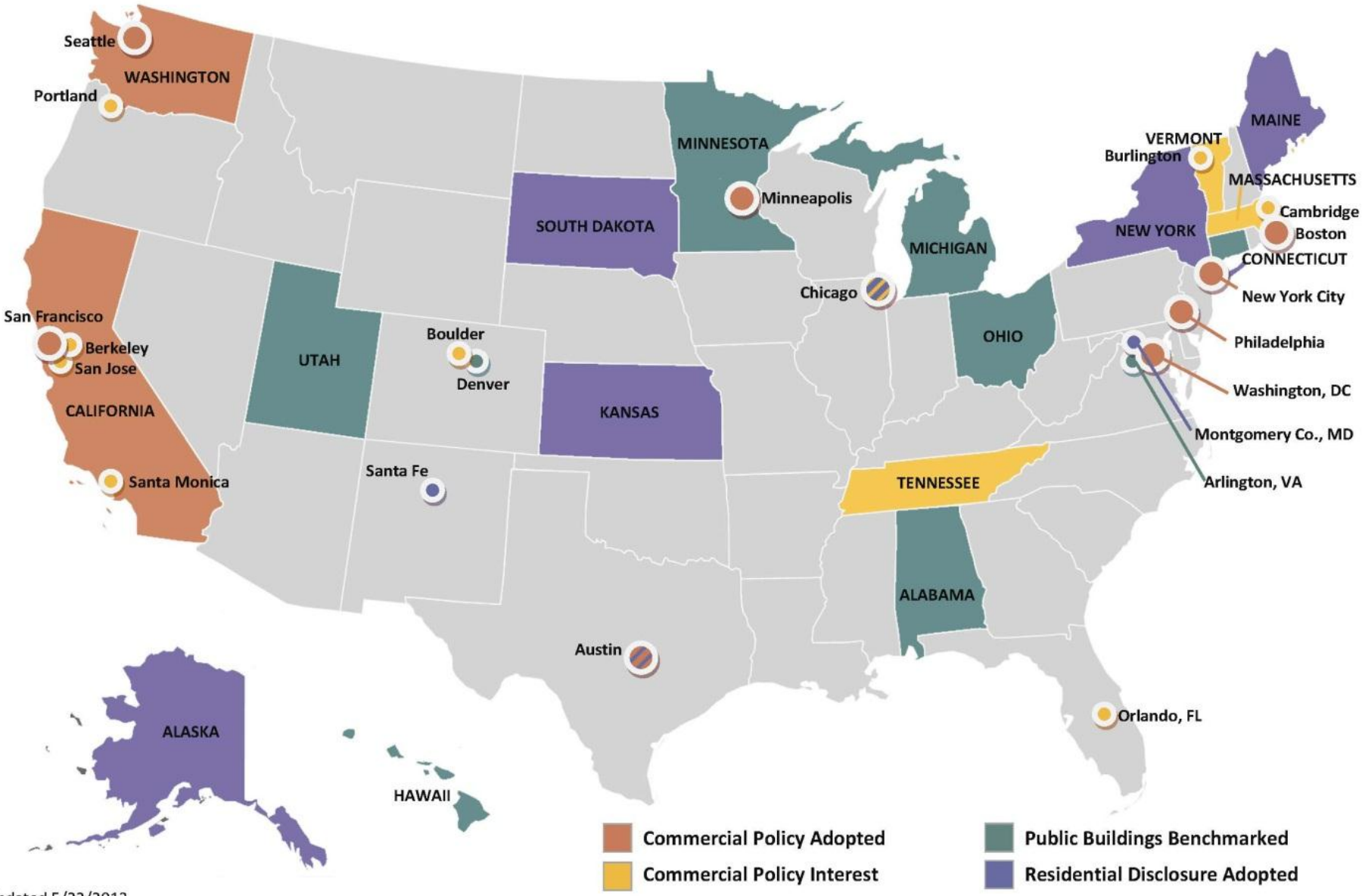
Source:
http://www.energystar.gov/ia/business/downloads/datatrends/DataTrends_Savings_20121002.pdf?8d81-8322

graphic by

IMT INSTITUTE FOR MARKET TRANSFORMATION

BuildingRating.org sharing transparency

U.S. Building Benchmarking and Disclosure Policies



Updated 5/22/2013

The Benchmarking Law

Green Building Act of 2006
Clean and Affordable Energy Act of 2008
(D.C. Official Code § 6-1451.03(c), 20 DCMR 3513)

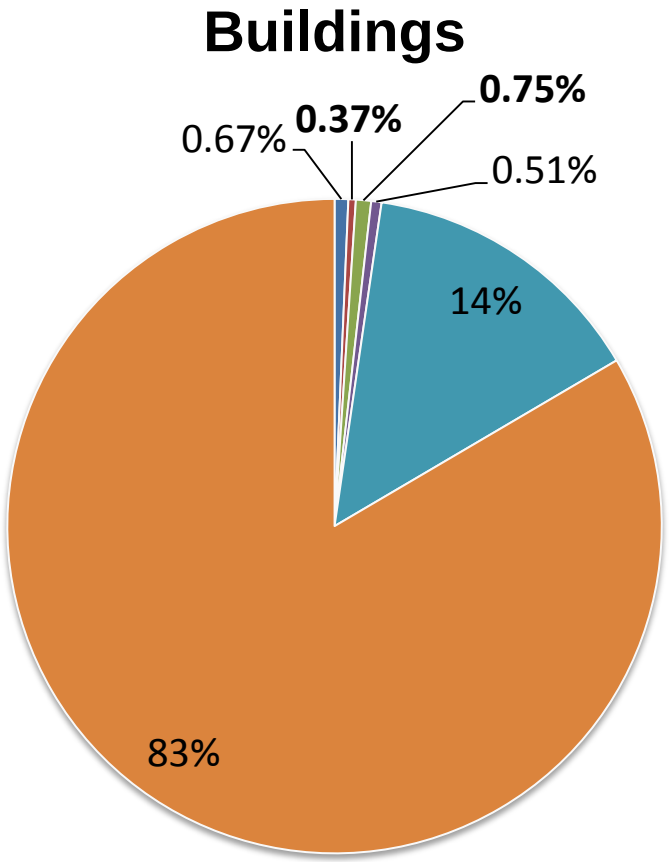
- **ENERGY STAR Portfolio Manager** benchmarking & public reporting
  - DC Government Buildings >10,000 sq. ft.
  - Private Buildings >50,000 sq. ft, **each April 1**
- **ENERGY STAR Target Finder** modeling for new buildings >50,000 sq. ft.

Building Stock: Phase-In

Building Size	Initial Utility Years	Revised Deadline	# Properties	Total GBA
District Buildings	2009	2010	300	33 million
200,000+	2010-2012	April 1, 2013*	350	145 million
150,000-200,000	2011-2012	*Extended to November 8, 2013	155	27 million
100,000-150,000	2012		230	28 million
50,000-100,000	**2013**	**April 1, 2014**	**670**	**48 million**

Building Stock: Effective Scale

2000 buildings, 357 million sq. ft. = 1.6% of the Buildings; 49% of the area



Federal Total

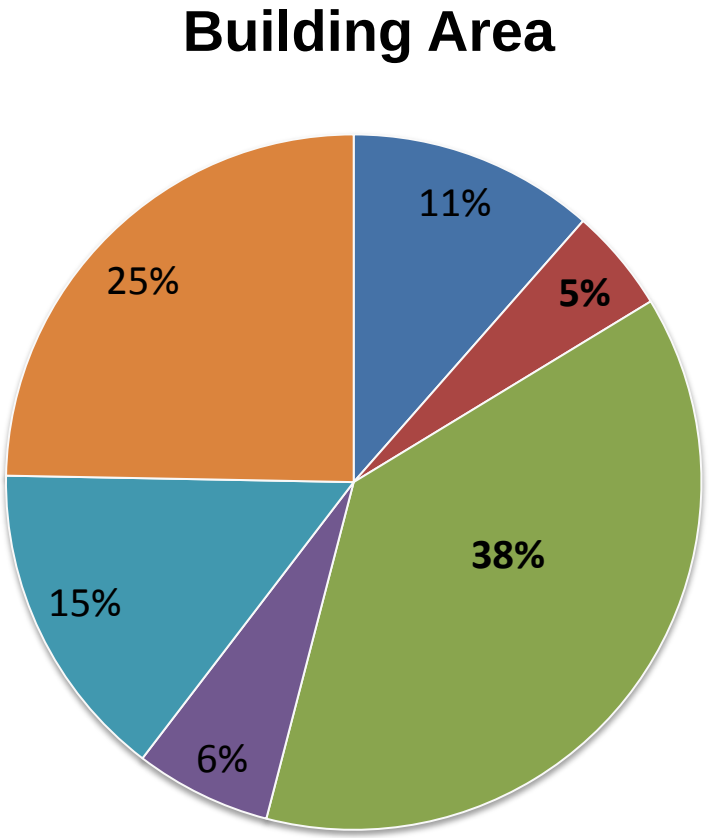
DC Total

Private Comm + MF > 100k

Private Comm + MF > 50-100k

Private Comm + MF < 50 k

Single Family

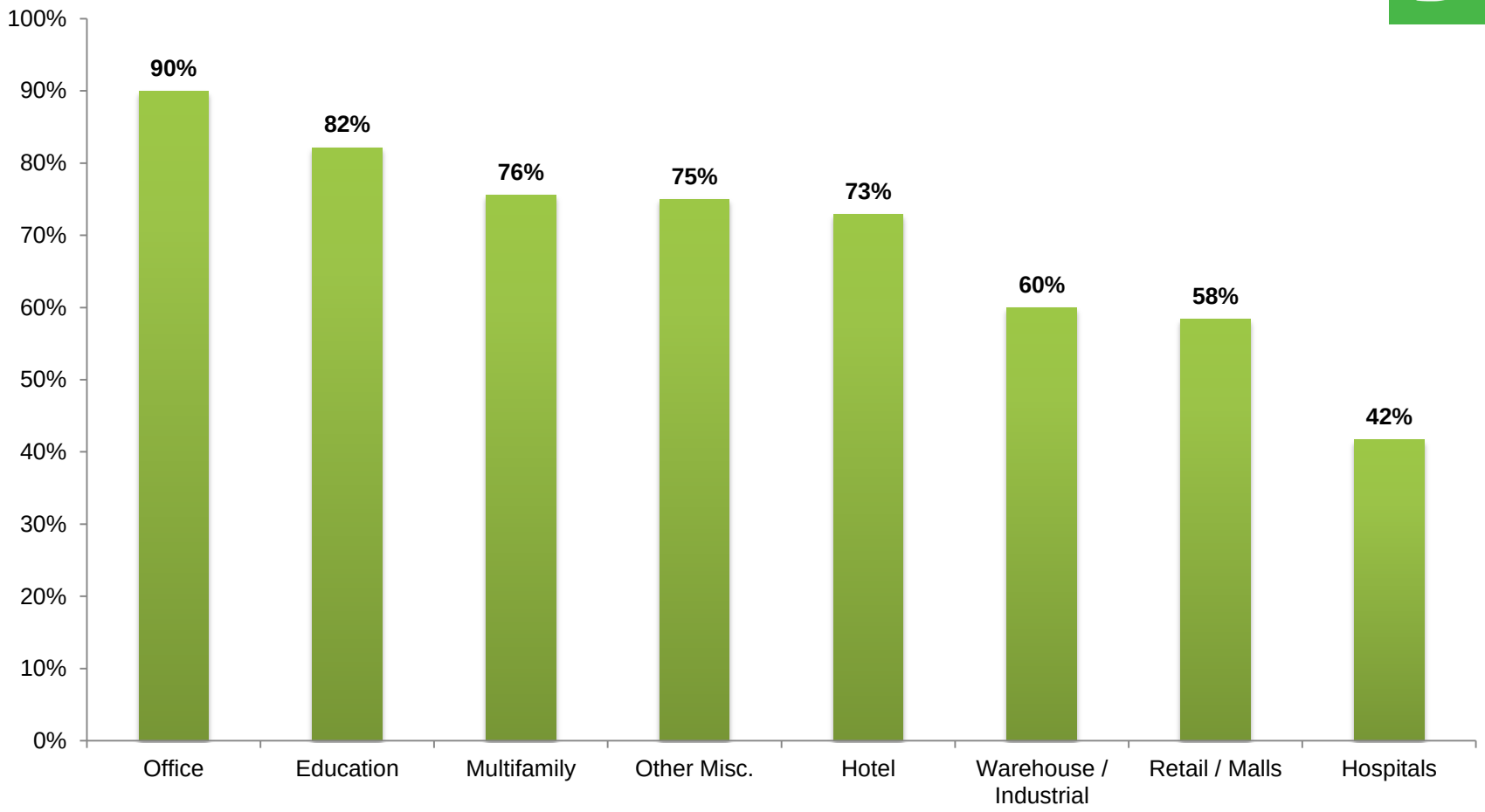


128 thousand buildings

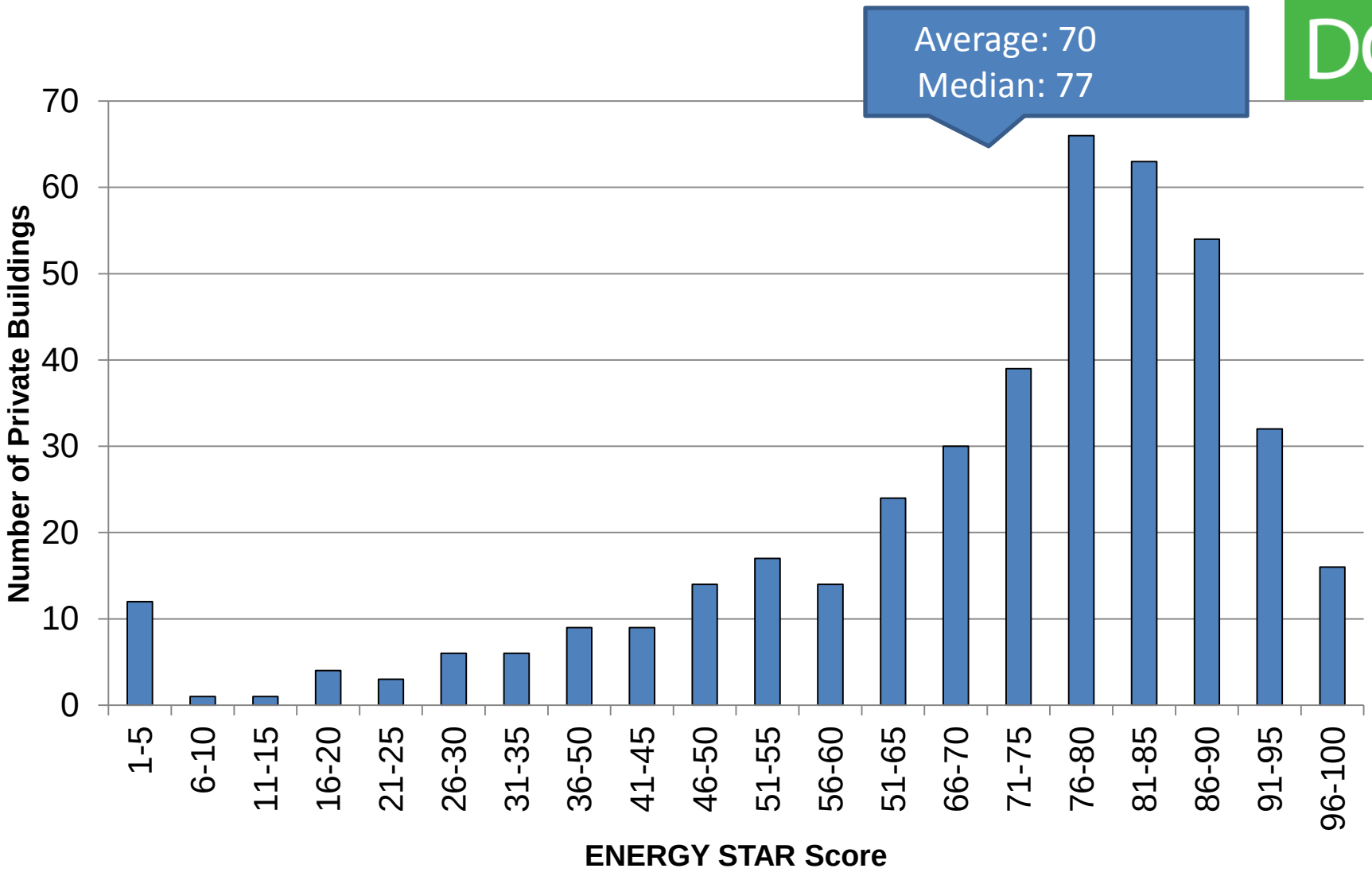
730 million gross square feet

Findings

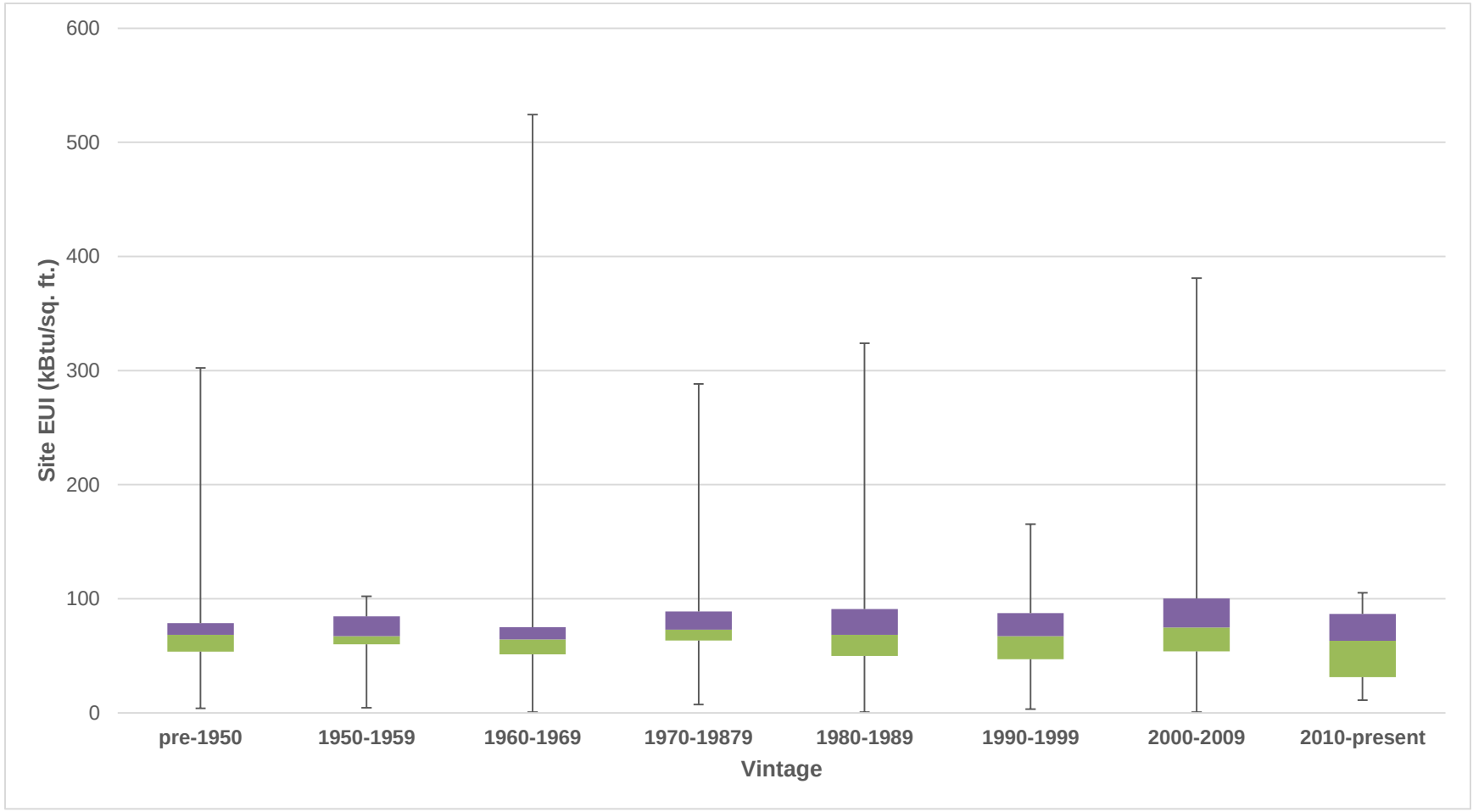
Compliance Rate: 83%



ENERGY STAR Scores (2012)



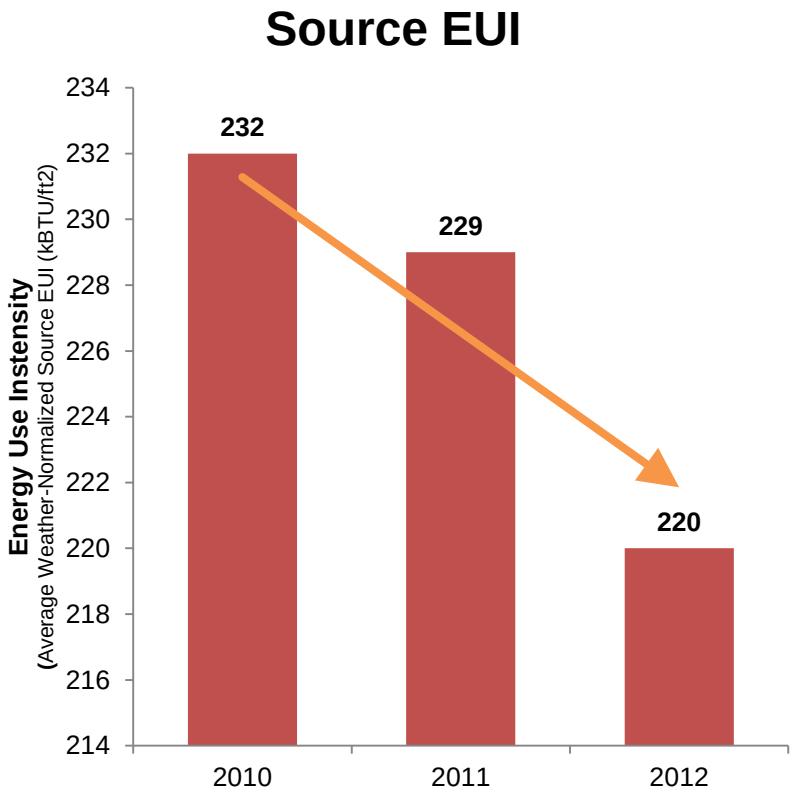
Age Doesn't Matter!

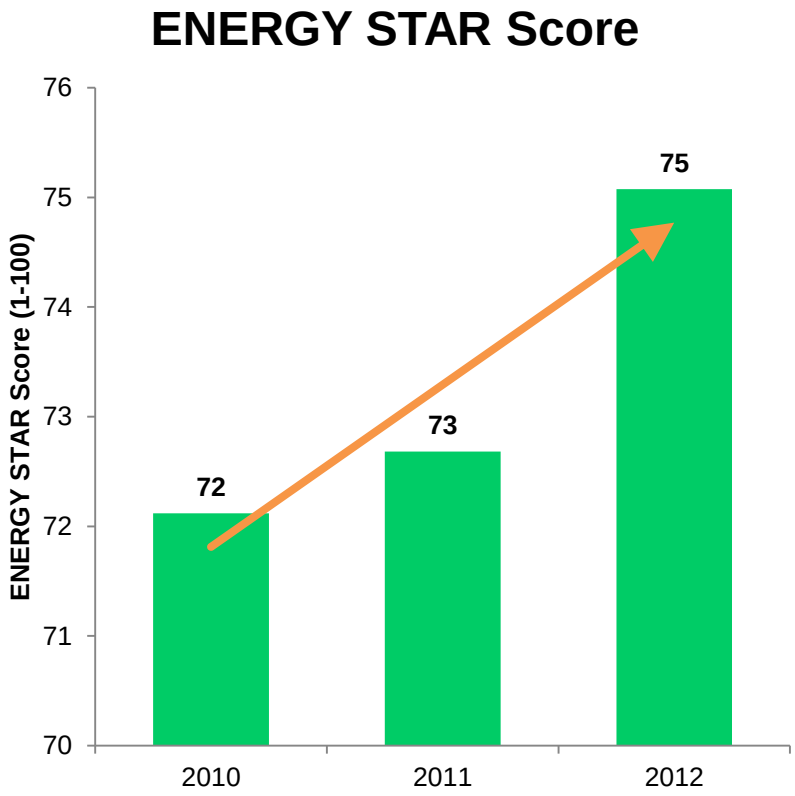


Energy Savings

DGS, 2010-2012: 6% Energy Savings

Private Buildings, 2010-2012: 6% Energy Savings!

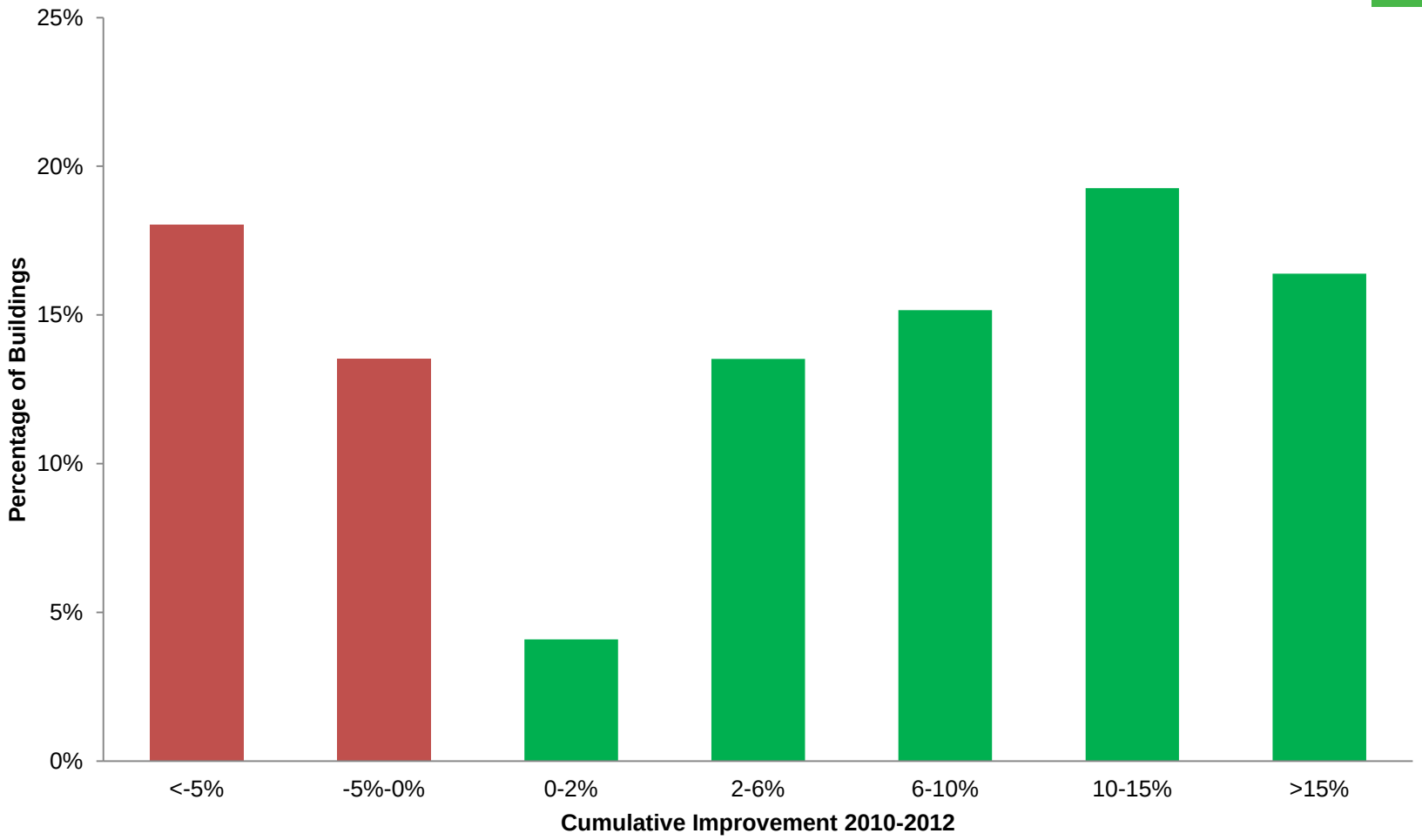




Consistent with EPA Findings in DataTrends series!

Source: Rated buildings with 3 years of data

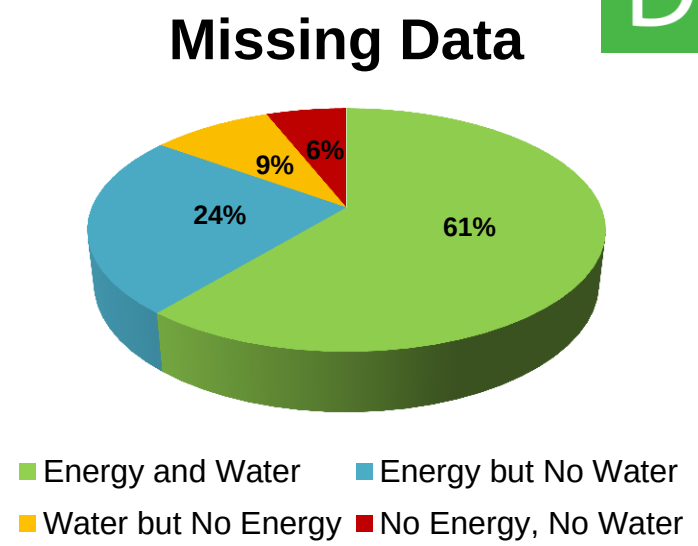
Your Energy Savings May Vary

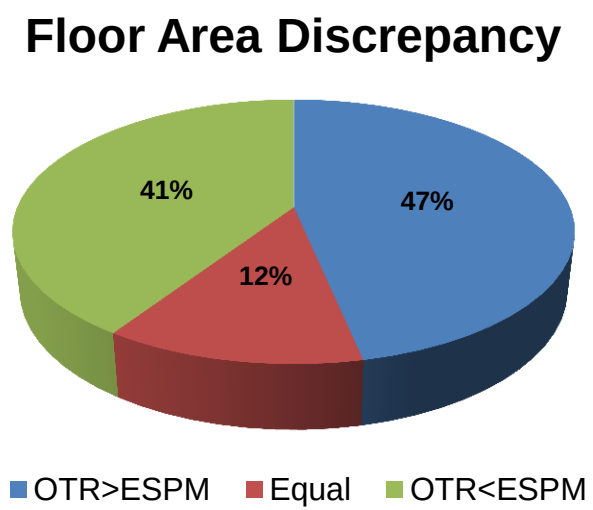


Putting the Data to Work

Areas for Improvement

1. Aggregate Data can hide errors
2. Manual entry
3. Yearly entry
4. Incomplete Reporting
5. Gas and Water Data
6. Quality Assurance
7. Continuity at Sale





Challenge of Tenant Utility Data

- Owners often can't access tenant data
- For benchmarking, DDOE requires owners to ask non-residential tenants for space, energy, and water data, and ***requires non-residential tenants to provide data within 30 days***
- Would be better to avoid when possible
- Doesn't cover residential units
- **Cooperation between owners, DDOE, and Pepco has unlocked a better option…**

Improving Data Collection

- ***Solution: Aggregated whole-building consumption data + direct upload to Portfolio Manager***
- Available now from Pepco for 5+ meters
- Optional in 2013; Whole-Building required in 2014
- Pepco expects automated upload by 2014 Q2
- US DOE Energy Data Accelerator

Sustainable DC II Legislation

Aggregate Benchmarking Data Access Amendment Act of 2013

- Utilities provide aggregate data for 5+ meters
- Requires direct monthly automated upload to ENERGY STAR Portfolio Manager

Benchmarking Data Transfer Improvement Amendment Act of 2013

- Seller of building covered by benchmarking law must provide buyer with all data needed for benchmarking; buyer benchmarks for that year

Improving Performance

DC Sustainable Energy Utility (DC SEU)

- Energy efficiency 'utility' under contract to DDOE

DC SEU Benchmarking Help Center: FREE Technical assistance via email, phone, & in-person training:

- benchmarking@dcseu.com | 202-525-7036
- Assisted 70% of buildings that reported in 2013

DC SEU is using data to:

- Proactively engage with customers
- Identify sector-specific needs
- Target limited resources effectively

Public Disclosure

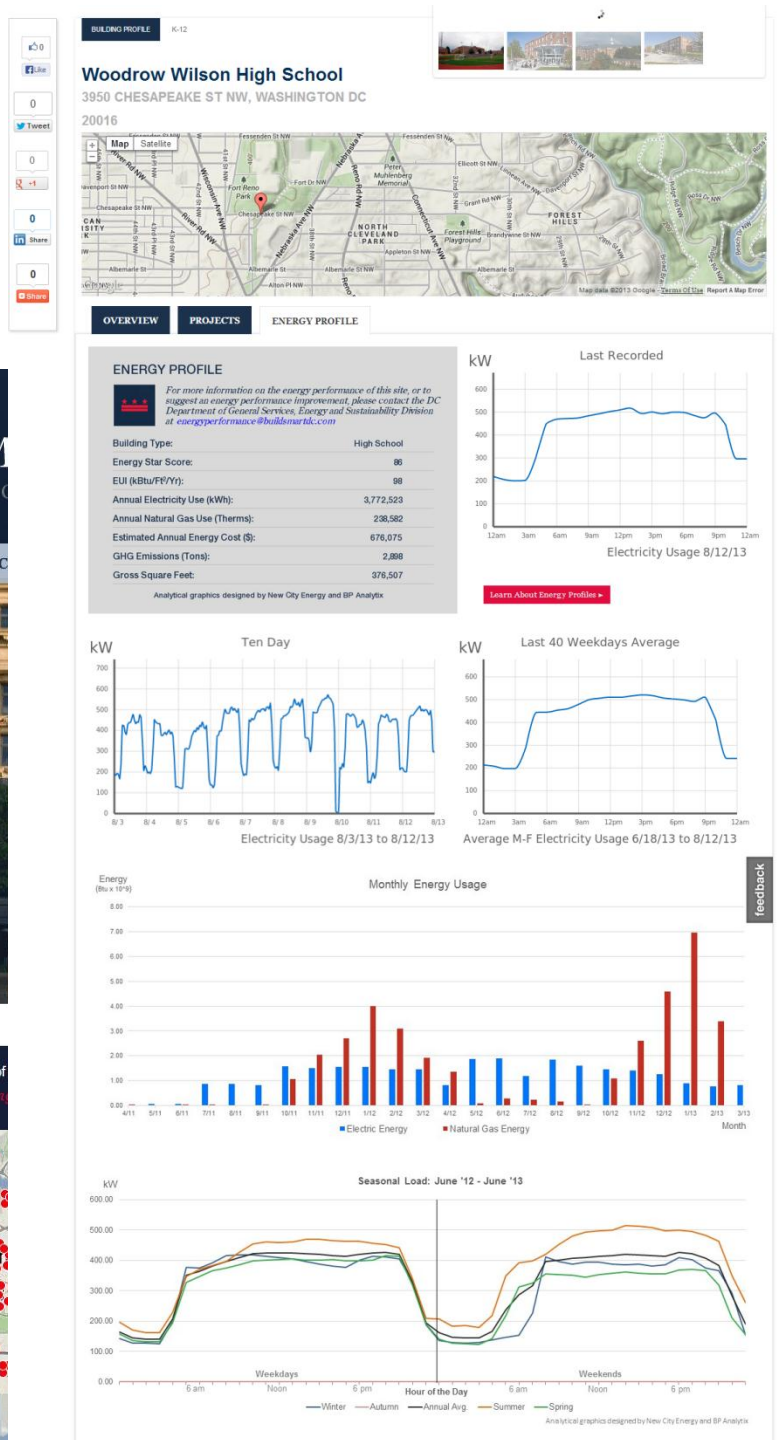
Private Building Disclosure

- Benchmark results will be made public online
  - Beginning with 2nd year of data for a building
- 466 buildings in initial release set
- Data fields in public database:

Address	Year Built
Space Type(s)	Gross Building Area
Energy Performance Rating (1-100)	Energy Use Intensity (EUI)
Electricity Use	Natural Gas Use
Water Use	Other Fuel Use
Optional Narrative Information	CO_2 Emissions

Visibility

- District government benchmarked close to 400 buildings
- ***BuildSmartDC.com***
- ENERGY STAR Score for 125+ buildings
- Interval Data for select facilities
- **Private building data to be in BuildSmartDC too**



Thank You!

SUSTAIN ABILITY DC

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DISTRICT DEPARTMENT OF THE ENVIRONMENT

green forward