

Overview of EPA's ENERGY STAR Portfolio Manager[®]: A Tool to Measure and Track Energy Consumption and Greenhouse Gas Emissions

Wednesday, December 11, 2013

Presented by:

Stephanie Plummer, National Program Manager, Retail, ENERGY STAR Commercial Buildings, U.S. EPA

Jenna Tatum, Mayor's Carbon Challenge Coordinator, NYC Mayor's Office of Long-Term Planning and Sustainability

Donna Hope, Policy Advisor, NYC Mayor's Office of Long-Term Planning and Sustainability

Christopher J. Morgan, P.E., Energy Senior Manager, RE Design & Development, JCPenney



Webinar Agenda

- Introduction and webinar logistics
- Guest Speakers:
 - Stephanie Plummer, National Program Manager, Retail, ENERGY STAR Commercial Buildings, U.S. EPA
 - Jenna Tatum, Mayor's Carbon Challenge Coordinator, NYC Mayor's Office of Long-Term Planning and Sustainability
 - Donna Hope, Policy Advisor, NYC Mayor's Office of Long-Term Planning and Sustainability
 - Christopher J. Morgan, P.E., Energy Senior Manager, RE Design & Development, JCPenney
- Q&A
- Post-webinar survey

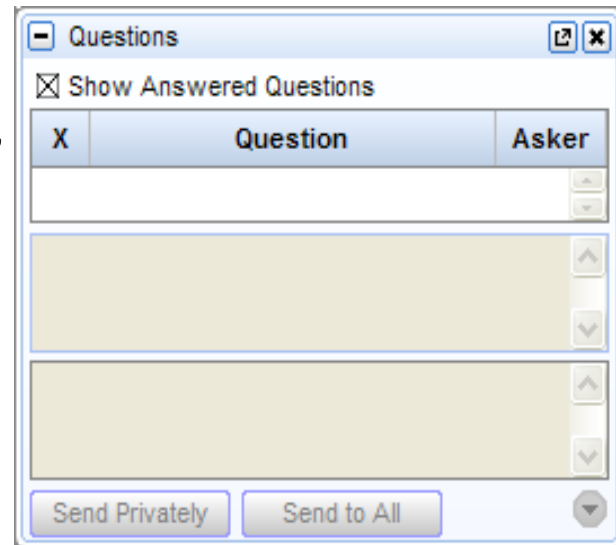


- EPA's ENERGY STAR Portfolio Manager is an online tool organizations can use to measure and track energy and water consumption, as well as GHG emissions. It can be used to benchmark the performance of one building or a whole portfolio of buildings, all in a secure online environment. Forty percent of commercial building space in the U.S., including 35% of the Fortune 500[®] are already benchmarking in Portfolio Manager.
- In this webinar, attendees will learn about the new, updated version of Portfolio Manager - what it is and how it can be used - as well as hear from guest speakers who have utilized the tool to help achieve their organizations' sustainability and carbon goals.

Webinar Logistics

- Attendees are muted to reduce background noise.
- Submit questions and comments in writing via the online control panel. →→ →
- To minimize or maximize the control panel, click on the button at the top left of the tool bar.
- Post-webinar survey on this webinar and topics for future webinars.
- Today's presentation will available at:

<http://www.epa.gov/climateleadership/events/>





About the Center

- A resource launched in 2012 to support organizations of all sizes in measuring and managing GHG emissions.
- Provide technical tools, ground-tested guidance, educational resources, and opportunities for information sharing (e.g., Webinars) and a platform for peer exchange.
- Promote practices and innovative approaches drawing upon the successes of Climate Leadership Award recipients and former Climate Leaders partners.
- Support the implementation of E.O. 13514.



ENERGY STAR Commercial Buildings Program

Stephanie Plummer
National Program Manager, Retail
ENERGY STAR Commercial Buildings
US EPA



Agenda

1. Introduction to ENERGY STAR
2. Introduction to Portfolio Manager
3. Benchmarking Mandates
4. Program Update – Multifamily Housing

ENERGY STAR

Commercial Buildings Program



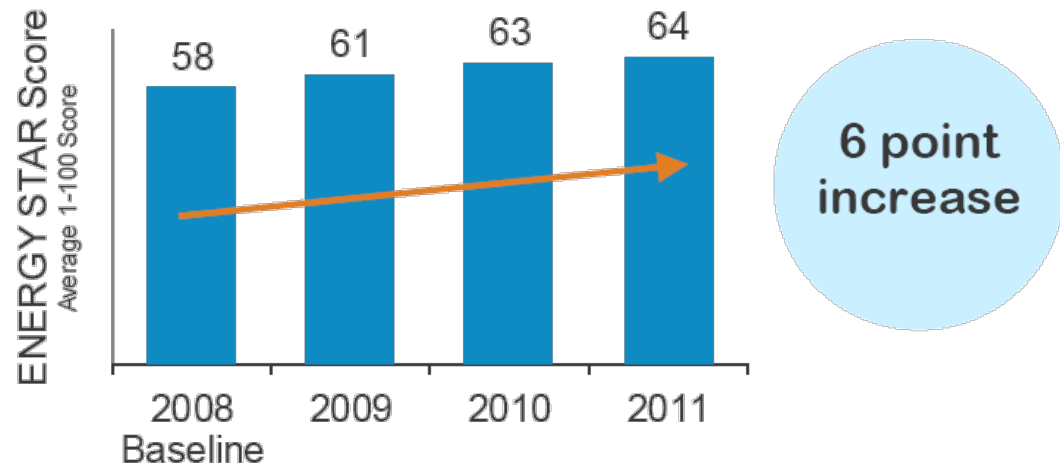
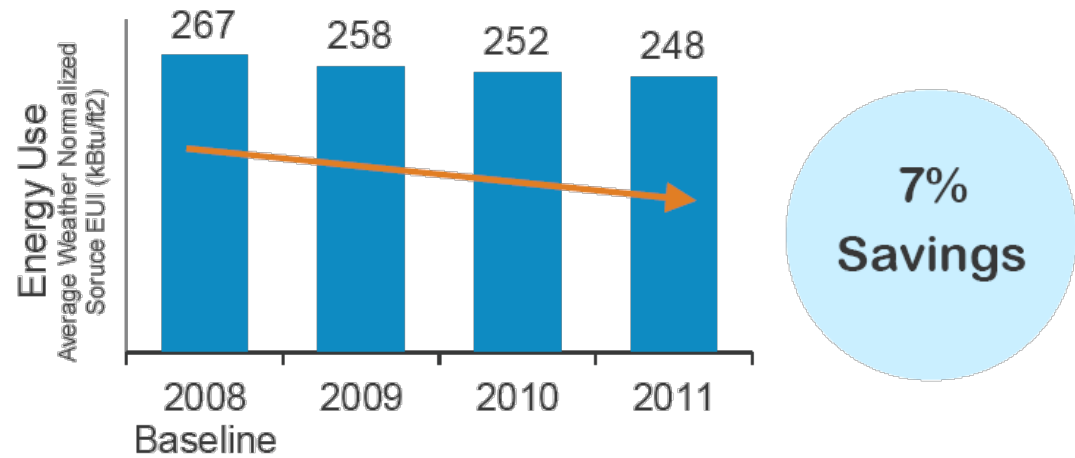
- Offers a strategic approach to energy management
- Enables building owners, managers, and tenants to save money & protect the environment
- Provides organizations with measurable information on energy savings and greenhouse gas emissions reductions from commercial buildings
- ENERGY STAR on a building = Superior Energy Performance

Value of Benchmarking



Consistent benchmarking in buildings results in energy savings and improved performance

Energy Savings in Portfolio Manager



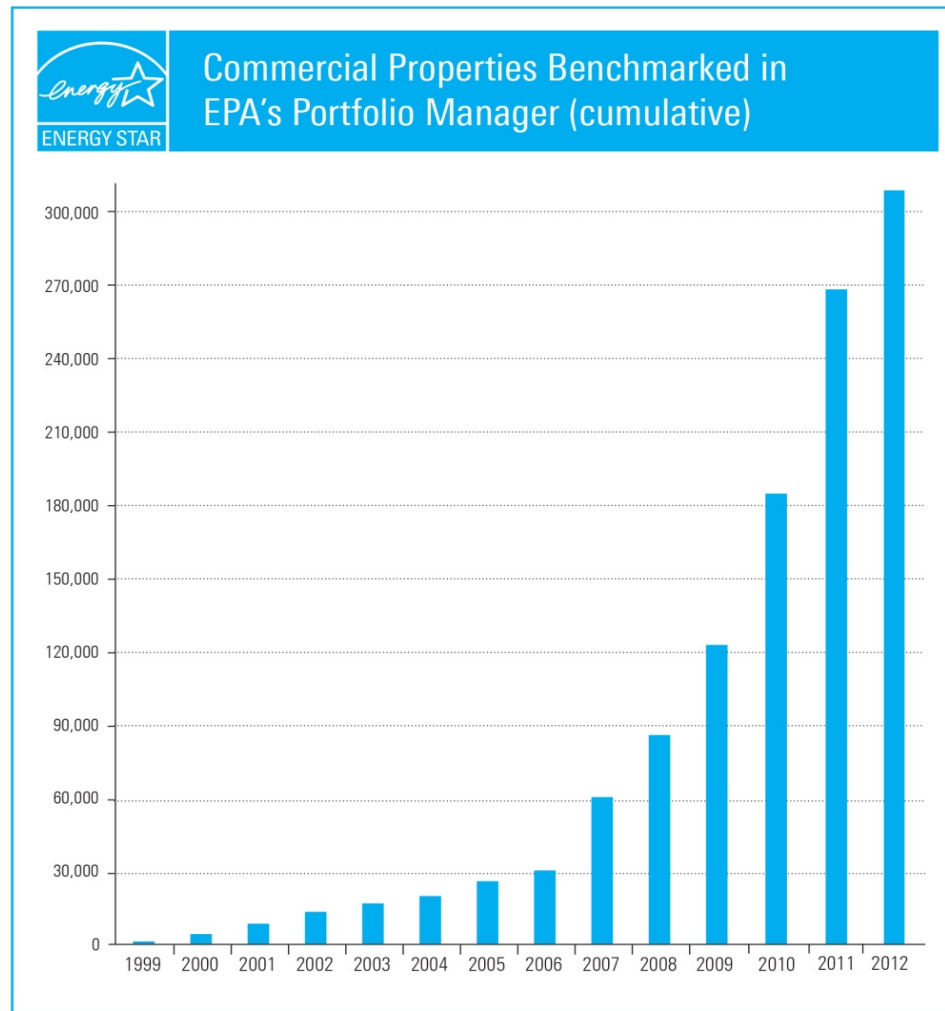
Source:
http://www.energystar.gov/ia/business/downloads/datatrends/DataTrends_Savings_20121002.pdf?8d81-8322



- Management Tool – Helps business and organizations by offering a platform to:
 - Assess whole building energy and water consumption
 - Track changes in energy, water, greenhouse gas emissions, and cost over time
 - Track green power purchase
 - Share/report data with others
 - Create custom reports
 - Apply for ENERGY STAR certification
- Metrics Calculator – Provides key performance metrics to integrate into a strategic management plan
 - Energy consumption (source, site, weather normalized)
 - Water consumption (indoor, outdoor)
 - Greenhouse gas emissions (indirect, direct, total, avoided)
 - ENERGY STAR 1-to-100 score (available for 15 building types)

www.energystar.gov/benchmark

Tremendous Growth in Benchmarking in Portfolio Manager






Understand Comparative Performance

- ALL buildings can be benchmarked
- Benchmarking through Portfolio Manager enables you to:
 - Compare one building against itself over time
 - Compare one building against a national sample of similar buildings
 - Compare all of your buildings of a similar type to each other
 - Set priorities and targets for the use of limited staff time and/or investment capital



Portfolio Level





Welcome | [Account Settings](#) | [Contacts](#) | [Help](#) | [Sign Out](#)
 Language: [English](#) | [Français](#)

MyPortfolio

Sharing

Planning

Reporting

Recognition

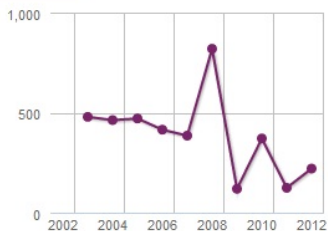
Properties (5)

Add a Property

Notifications (0)

You have no new notifications.

Source EUI Trend



My Properties (5) Add a Property

Filter by: View All Properties (5) Search Search

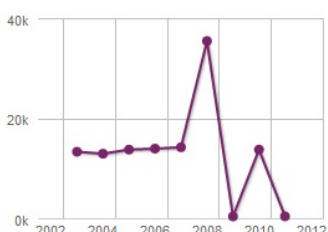
[Create Group](#) | [Manage Groups](#)

Name ↕	Action
Federal Building	I want to... ▼
Higher Campus	I want to... ▼
Hill Store	I want to... ▼
Insurance Office	I want to... ▼
Sunnyside Elementary	I want to... ▼

View 1 - 5 of 5

[Download Entire Portfolio](#)

Total GHG Emissions Trend



! If you're a pro, you may want to [upload and/or update multiple properties](#) at once using an Excel spreadsheet. This can be done to create new properties, add use details, create meters and add meter consumption data.



Property Level



ENERGY STAR® **PortfolioManager™**

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MyPortfolio | [Sharing](#) | [Planning](#) | [Reporting](#) | [Recognition](#)

Insurance Office

5201 Blue Lagoon Dr, Arlington, VA 20221 | [Map It](#) EXISTING
Portfolio Manager Property ID: 5000003 | Primarily: [Office](#)
Year Built: 1995 EXISTING

[Finish your application for ENERGY STAR Certification](#)

ENERGY STAR Score
Current Score: 94
Baseline Score: 83

[Summary](#) | [Details](#) | [Meters](#) | [Goals](#) | [Design](#)

Source EUI Trend

Year	Source EUI
2007	240
2008	235
2009	225
2010	220
2011	230
2012	210

Notifications

You have no new notifications.

Sharing this Property

Shared with: 1 [Contacts](#) ([ABS](#)) [Share](#)

Name	Permissions	Action
Miller, Clara	Full Access	I want to... <input type="text"/>

[Edit Multiple Permissions](#)



Easy to get data in



The screenshot shows the Energy Star Portfolio Manager interface. On the left, there are two line graphs: 'Source EUI Trend' and 'Total GHG Emissions Trend', both showing data from 2002 to 2012. The 'Total GHG Emissions Trend' graph has a red circle around the year 2008 data point. Below the graphs is a table titled 'My Properties (5)' with columns for Name and Action. The properties listed are Federal Building, Huber Campus, Hill Street, Insurance Office, and Summavale Elementary. A red circle highlights the text 'upload and/or update multiple properties' in the bottom left corner of the dashboard.



This screenshot shows the 'Upload and/or Update Multiple Properties' page. It features a section titled 'What do you want to upload?' with two bullet points: 'Add new properties to my account' and 'Edit/Upload my existing properties'. Below this is a 'Type of Upload:' dropdown menu and an 'Upload Template:' section with a 'Choose File' button and an 'Upload' button. A 'Create an Upload Template' button is also visible. The page includes instructions on how to use spreadsheets for uploading multiple properties and a note about file size limitations.

Share a property



ENERGY STAR® PortfolioManager™

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Language: [English](#) | [Français](#)

MyPortfolio **Sharing** Planning Reporting Recognition

My Shared Properties (1)
[Share a Property](#)

Sharing Notifications (0)
You have no new notifications.

My Shared Properties (1)
Sort by: [Share a Property](#)

Name	Permissions	Action
Insurance Office		
Miller, Clara	Full Access	<input type="text" value="I want to..."/>

Properties Shared with Me (2)

Name	Shared from	Permissions	Action
Higher Campus	Collins, James	Full Access	<input type="text" value="I want to..."/>
Building D	Collins, James	Full Access	<input type="text" value="I want to..."/>

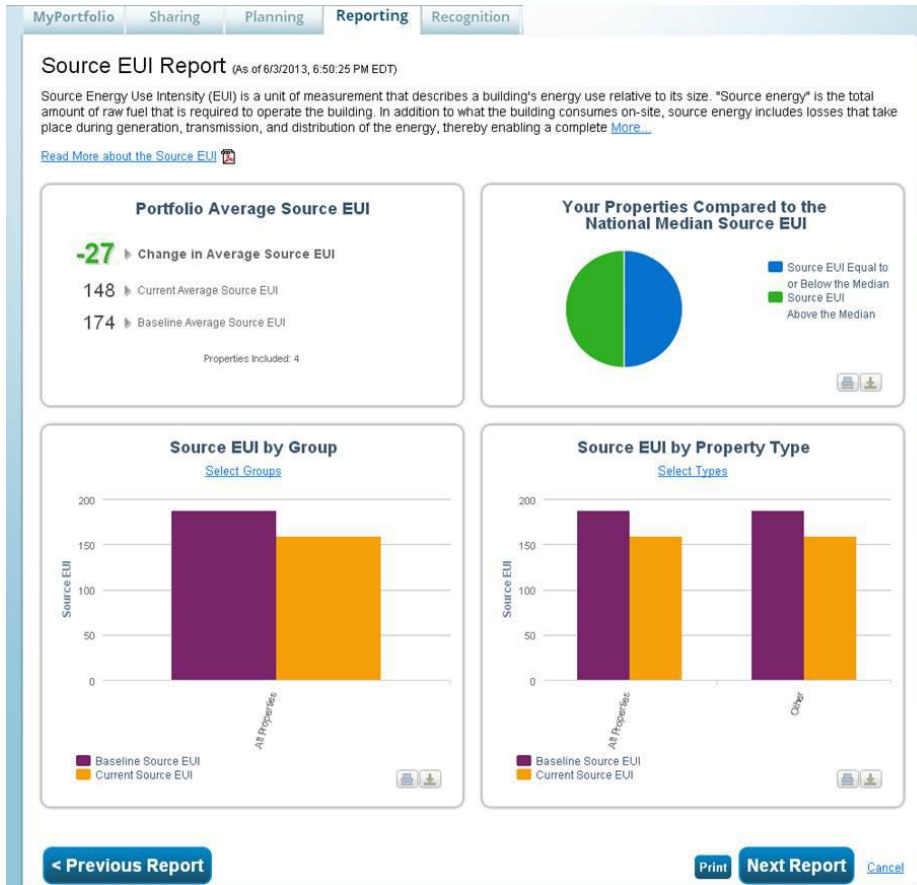
Exchanging Data
Did you know you can work with another organization to regularly upload your data into Portfolio Manager? You can authorize these companies to update your meters, manage building data, and retrieve metrics. To get started, [search for organizations that exchange data](#). Then connect with them and share your properties. [Learn more about exchanging data.](#)

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Charts & Graphs



- Each of the figures can be printed or downloaded for easy insertion into a presentation or document
- If you scroll down on the page, you can view and export the raw data for the charts & graphs

Create custom reports



MyPortfolio | Sharing | Planning | **Reporting** | Recognition

Charts & Graphs

Source EUI
What is the total energy footprint of my properties, including raw fuel associated with generation and transmission?

ENERGY STAR Performance Documents

- [Statement of Energy Performance \(SEP\)](#)
- [Statement of Energy Design Intent \(SEDI\)](#)
- [Data Verification Checklist](#)
- [Progress & Goals Report](#)
- [ENERGY STAR Score Card](#)

Templates & Reports (8)

[Create a New Template](#)

Name	Status	Action
Water Performance	No Report Generated	I want to...
Sustainable Buildings Checklist Report	No Report Generated	I want to...
Performance Highlights	No Report Generated	I want to...
Partner of the Year Report	No Report Generated	I want to...
Fuel Performance	No Report Generated	I want to...
ENERGY STAR Certification Status	No Report Generated	I want to...
Energy Performance	No Report Generated	I want to...
Emissions Performance	No Report Generated	I want to...

Choose from Pre-set Chart & Graph options

Download Performance Documents

Create and generate Templates & Reports

Portfolio Manager in State and Local Building Energy Policy



- State and local energy benchmarking and disclosure policies on the rise
- Purpose of these laws:
 - Increase transparency of building performance data for a better informed market (energy and water)
 - Incentivize improvements in public and private building
 - Grow clean energy job market
- All jurisdictions with benchmarking laws have specified the use of Portfolio Manager, EPA's ENERGY STAR measurement and tracking tool

State and Local Benchmarking Policies



Jurisdiction	Enacted	Public Buildings	Private Buildings	Disclosure	Utility Requirement
Connecticut	July 11	√			√
Michigan	April 05	√			
Ohio	Jan 07	√			
Hawaii	July 09	√			
Denver, CO	Oct 07	√			
California	Oct 07	√	√	Transactional	√
Washington	May 09	√	√	Transactional	√
D.C.	July 08	√	√	Annual	
New York, NY	Dec 09	√	√	Annual	
Seattle, WA	Jan 10	√	√	Transactional	√
Austin, TX	June 11	√	√	Transactional	
San Francisco, CA	Feb 11	√	√	Annual	
Connecticut	Pending	√	√	Annual	√
Philadelphia	Pending		√	Annual, Transactional	
Vermont	Pending	√	√	Transactional	

Developing a 1-100 ENERGY STAR Score for Multifamily Housing



We make home possible™



FannieMae



Development of 1-100 ENERGY STAR Score – Status and Next Steps



- Continued Analysis
 - Continue to review data using different analyses
 - Analyze more regression models to understand differences in the population
- Public Webinar (planned for December)
 - Coordinated with Fannie Mae
 - Present preliminary findings
 - Gather input
- Determination
 - Assess whether an ENERGY STAR score can be developed
 - Goal: make decision by the end of 2013
 - If it is possible to develop a score
 - Finalize score development and release in summer 2014
 - If it is not possible
 - Explore alternative benchmarks, such as national median values



Thank You!

- **For more information:**
 - Visit www.energystar.gov/buildings
 - Email buildings@energystar.gov

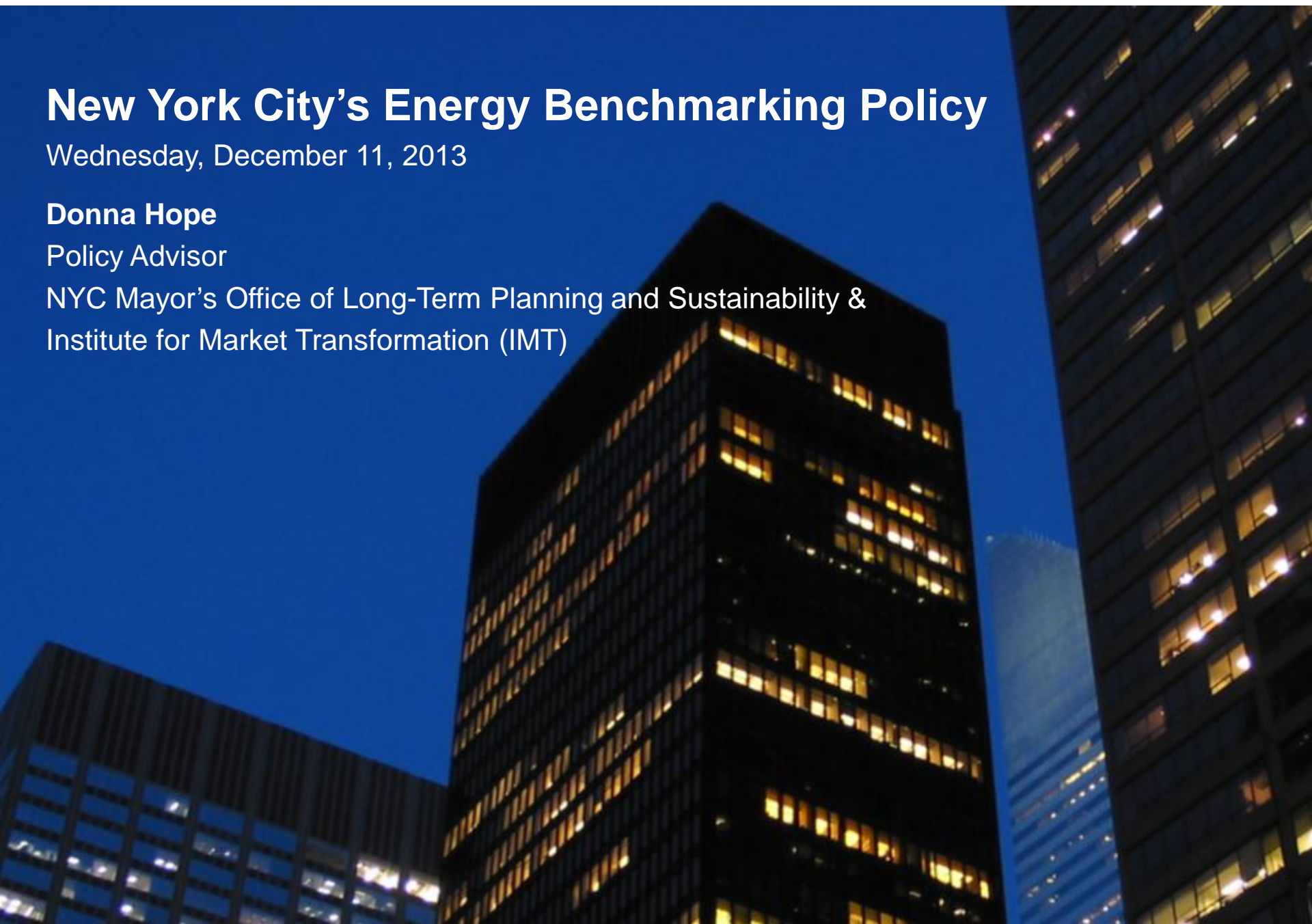
New York City's Energy Benchmarking Policy

Wednesday, December 11, 2013

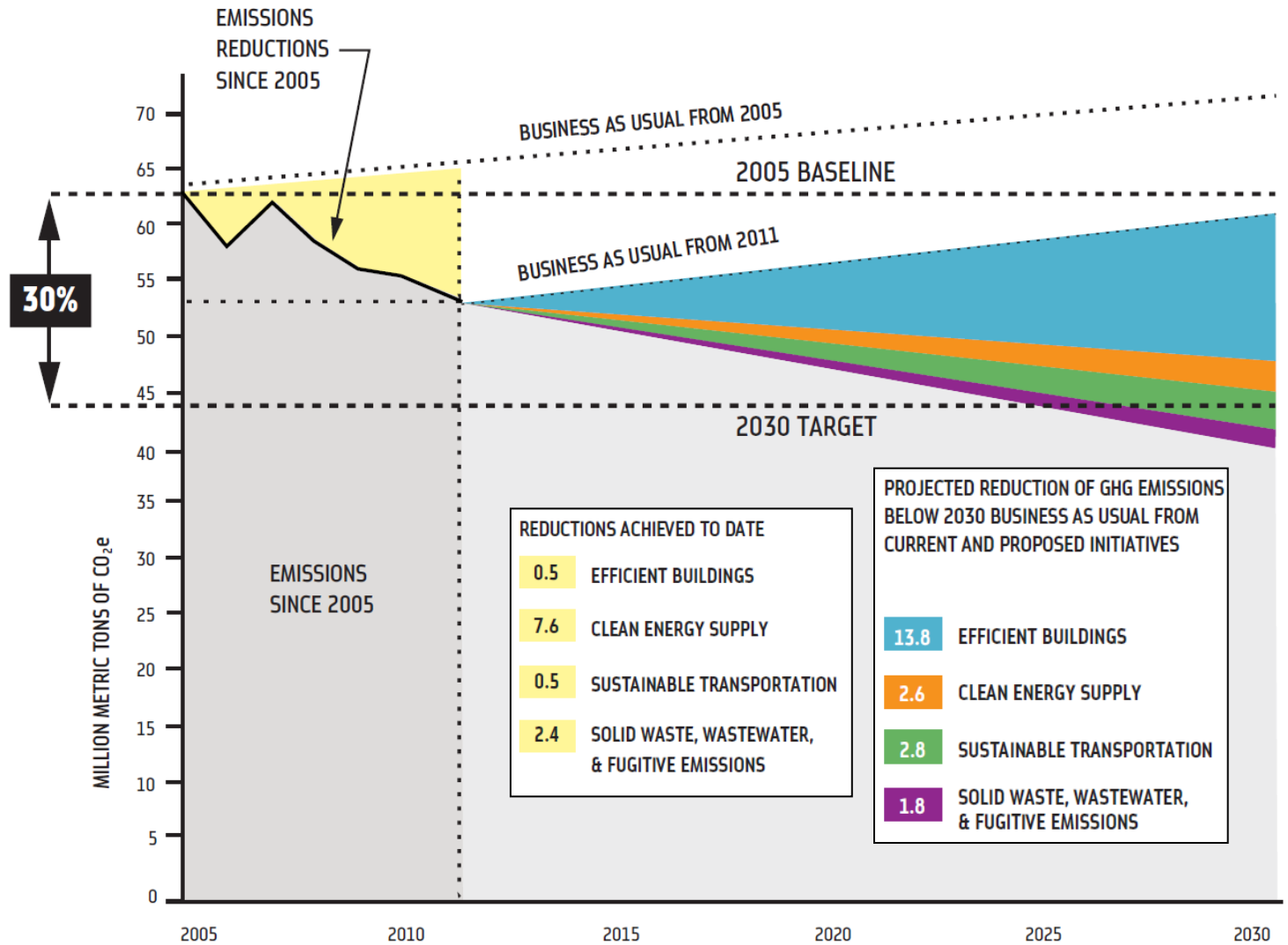
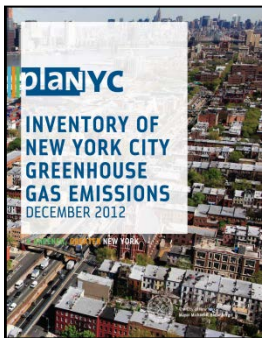
Donna Hope

Policy Advisor

NYC Mayor's Office of Long-Term Planning and Sustainability &
Institute for Market Transformation (IMT)



PlaNYC goal to reduce citywide GHG emissions by 30% by 2030



Buildings dominate New York City's GHG footprint

Total = 53.4 million metric tons

Buildings = 74%

Residential

Commercial

Industrial

Institutional

Transportation = 21%

On-road transportation

Transit

Wastewater, fugitive = 1%

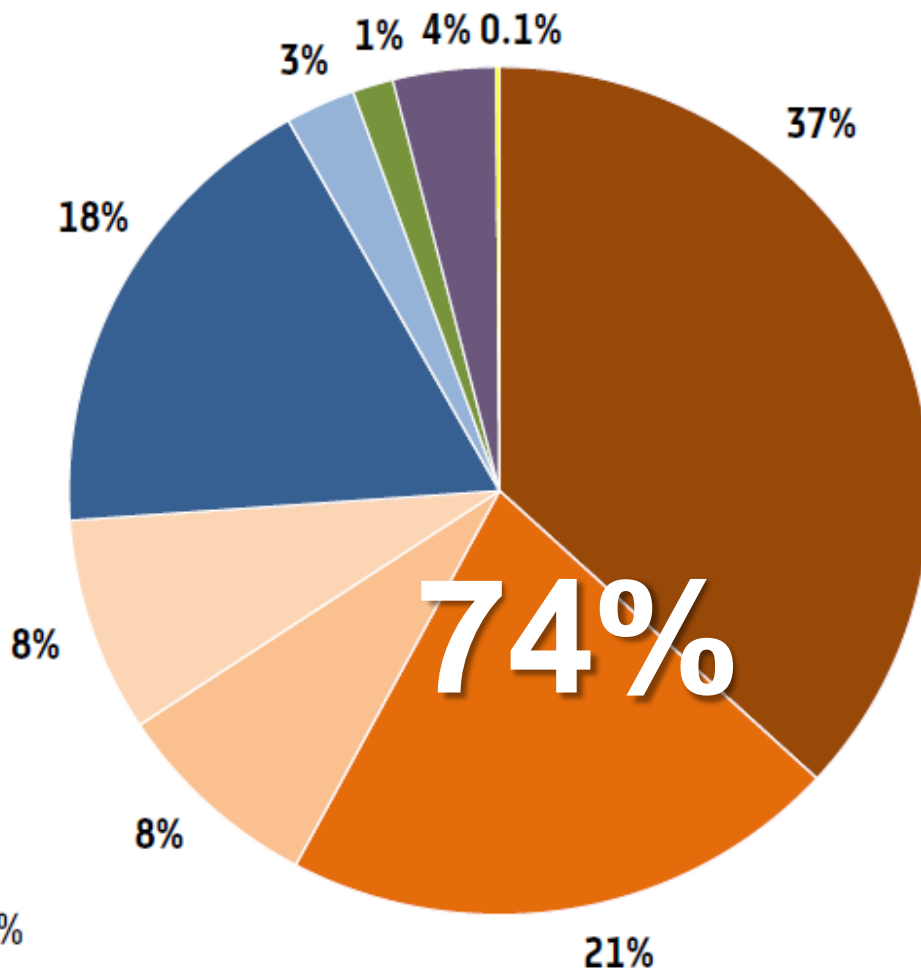
Wastewater, fugitive

Solid waste = 4%

Solid waste

Streetlights and traffic signals = 0.1%

Streetlights and traffic signals



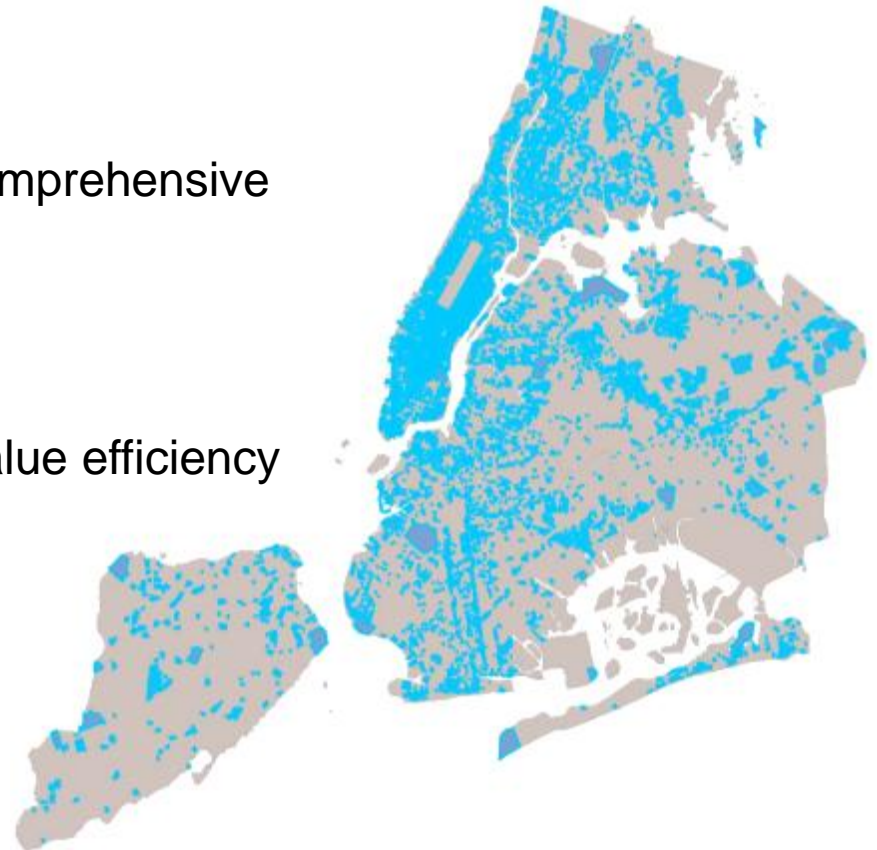
The 13,000 properties (BBLs) subject to the Benchmarking law account for only 2% of all properties but nearly half of all built floor area → 2 billion. sq ft

THE NEW YORK CITY
GREENER, GREATER
BUILDINGS PLAN

- New York City Energy Code
- Benchmarking
- Energy Audits and Retro commissioning
- Lighting Upgrades and Sub-metering

Benchmarking

- Mandatory benchmarking produces a comprehensive City-wide picture
- Transparency in building energy use
- Annual benchmarking provides tracking
- Public disclosure allows the market to value efficiency



Local Law 84: Energy & Water Input

- Register an account in Portfolio Manager
www.energystar.gov/benchmark
- Manually input energy data info for entire year
- Auto upload water data into Portfolio Manager
- Submit to City via Reporting Link on GGBP
www.nyc.gov/LL84



Welcome to Portfolio Manager

Helping you track and improve energy efficiency across your entire portfolio of properties.

Username: *

Password: *

[I forgot my password.](#)

[I forgot my username.](#)

Sign In

Create a New Account

Portfolio Manager reports – Useful way to track your property’s progress

PortfolioManager®

MyPortfolio | Sharing | Planning | Reporting | Recognition

Generate and Download Reports

Portfolio Manager offers several standard reports for properties that can be useful in communicating your offer detailed information about your property for a single time period and are presented in a PDF format.

- Select Report(s) to Download**
 - Statement of Energy Performance (SEP)
 - ENERGY STAR Data Verification Checklist
 - Score Card
 - Progress and Goals Report
 - Statement of Energy Design Intent (SEDI)
- Select Property for Report(s)**

Property: *

Select Property
- Select Timeframe for Report(s)**

Timeframe: *
- Select Contacts for Report(s)**

Select Property Contacts:

Primary Contact: [Add Contact](#)

Property Owner: [Add Organization](#)

Verifying Professional: [Add Contact](#)

Select Design Contacts:

Owner Contact: [Add Contact](#)

Project Architect: [Add Contact](#)

Verifying Professional: [Add Contact](#)

Generate & Download Report(s) [Cancel](#)

ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

74

ENERGY STAR® Score¹

Primary Property Function: Office
Gross Floor Area (ft²): 654,067
Built: 1916

For Year Ending: December 31, 2011
Date Generated: August 28, 2013

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information		
Property Address	Property Owner	Primary Contact
New York, New York 10001	() - ()	() - ()
Property ID: 2533749 Unique Building Identifier: 1013547		

Energy Consumption and Energy Use Intensity (EUI)			
Site EUI	Annual Energy by Fuel	National Median Comparison	
93.6 kBtu/ft ²	Fuel Oil (No. 4) (kBtu) 16,495,583 (27%)	National Median Site EUI (kBtu/ft ²)	122.3
	Natural Gas (kBtu) 1,232,061 (2%)	National Median Source EUI (kBtu/ft ²)	308.8
	Electric - Grid (kBtu) 43,503,768 (71%)	% Diff from National Median Source EUI	-23%
Source EUI		Annual Emissions	
236.3 kBtu/ft ²		Greenhouse Gas Emissions (MTCO _{2e} /year)	4,847

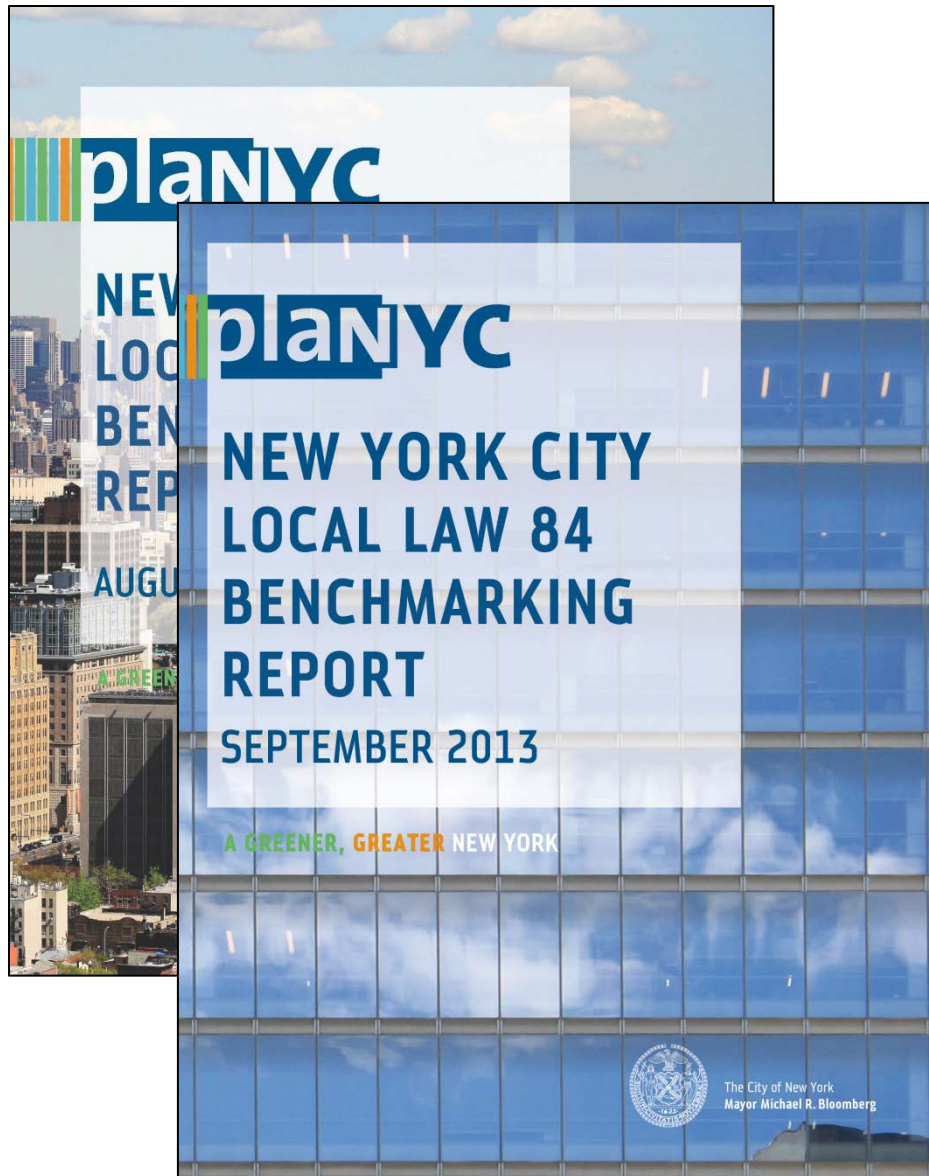
Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

New York City's 1st and 2nd Benchmarking Reports



- Released Year 2 report on CY 2011 data and Year 1 report on CY 2010 data
- Benchmarking data was merged with City records of building characteristics
- Included analysis conducted by New York University, University of Pennsylvania, and the NYC Mayor's Office
- First disclosure of multi-family benchmarking data in September 2013, based on third year data (CY 2012)

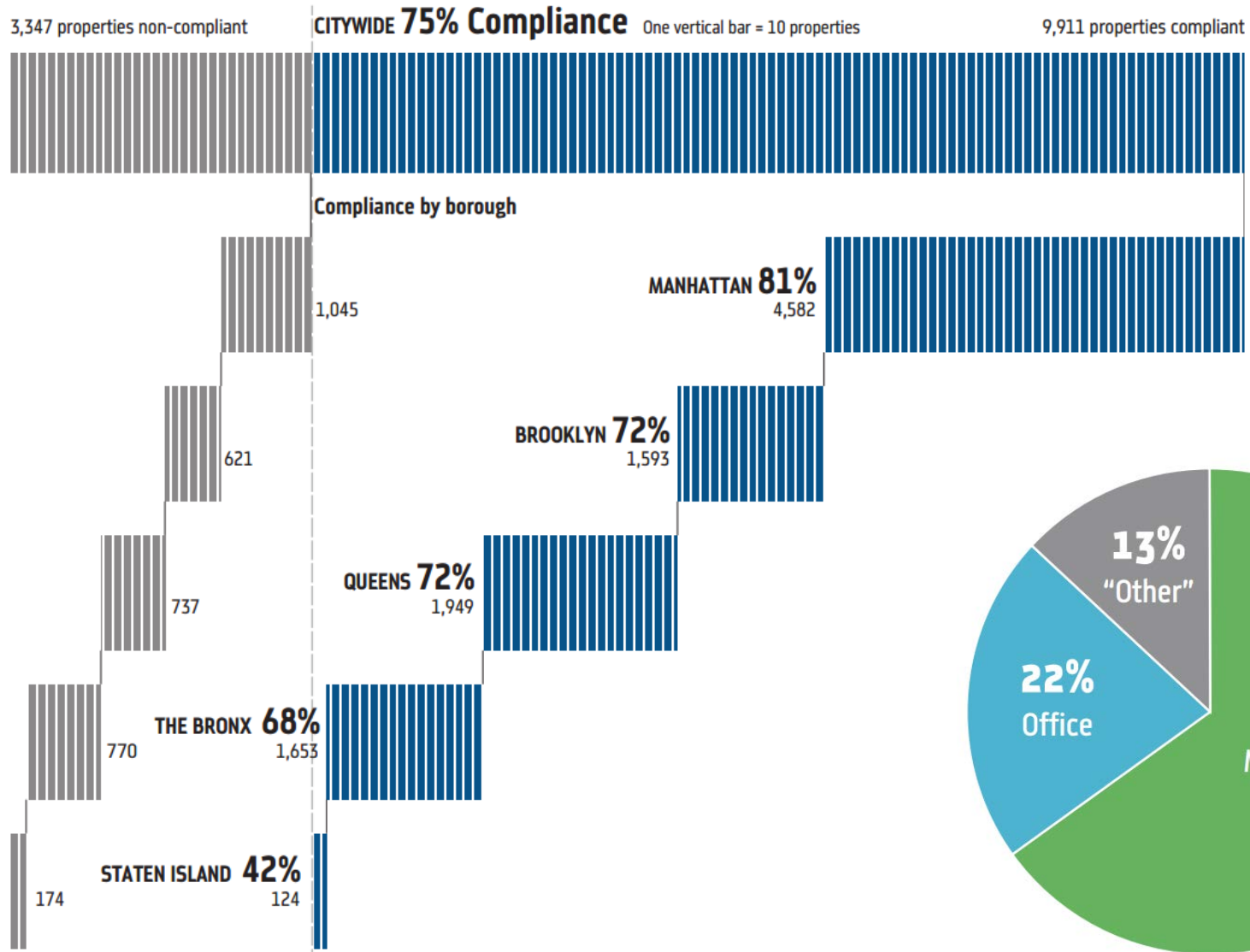


New York City's 1st and 2nd benchmarking disclosure reports

- Year 2 data (CY 2011) included all non-residential sectors (~2,200 BBLs)
- Year 3 data (CY 2012) included all covered buildings (~12,000 BBLs)
- Displayed Energy Intensity, Water Intensity, GHGe, and ENERGY STAR Score
- Allows for year-over-year comparisons of metrics

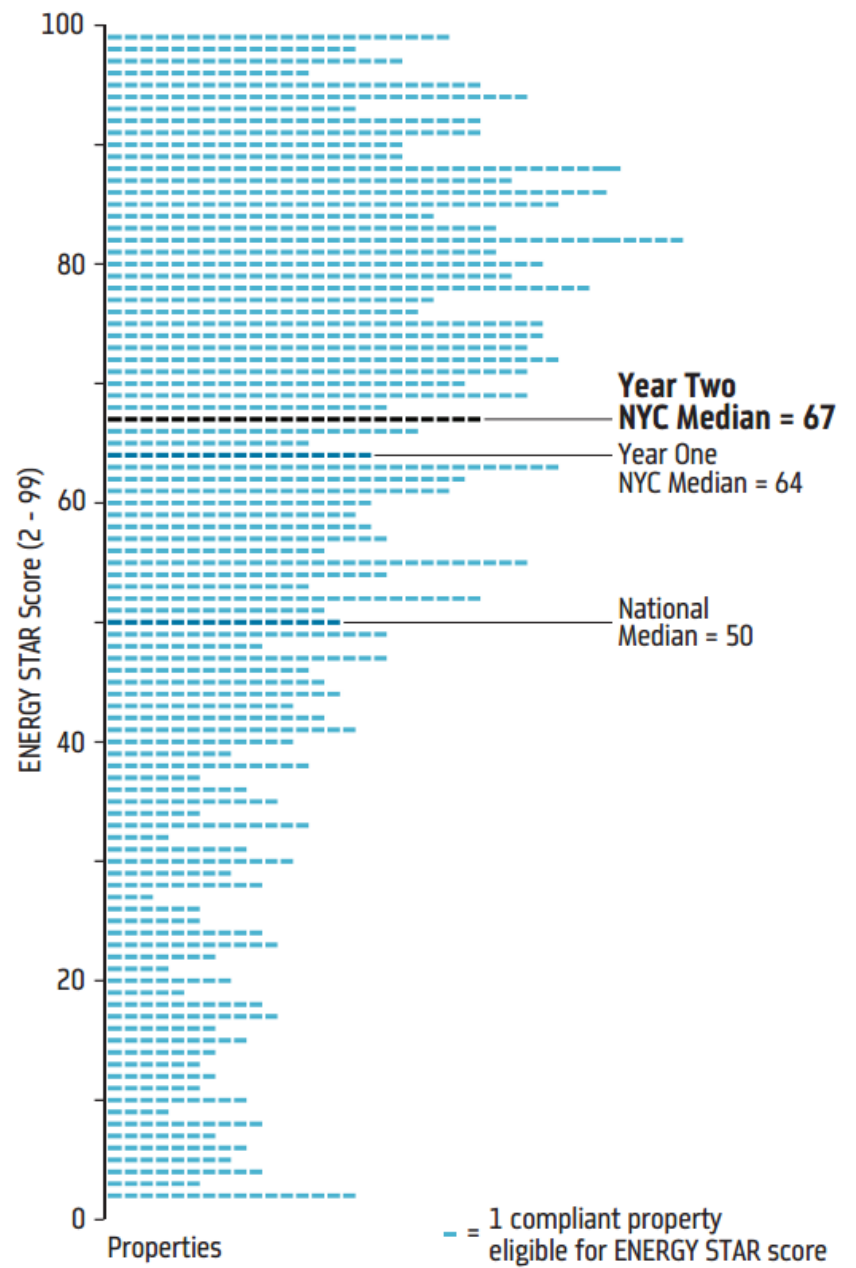
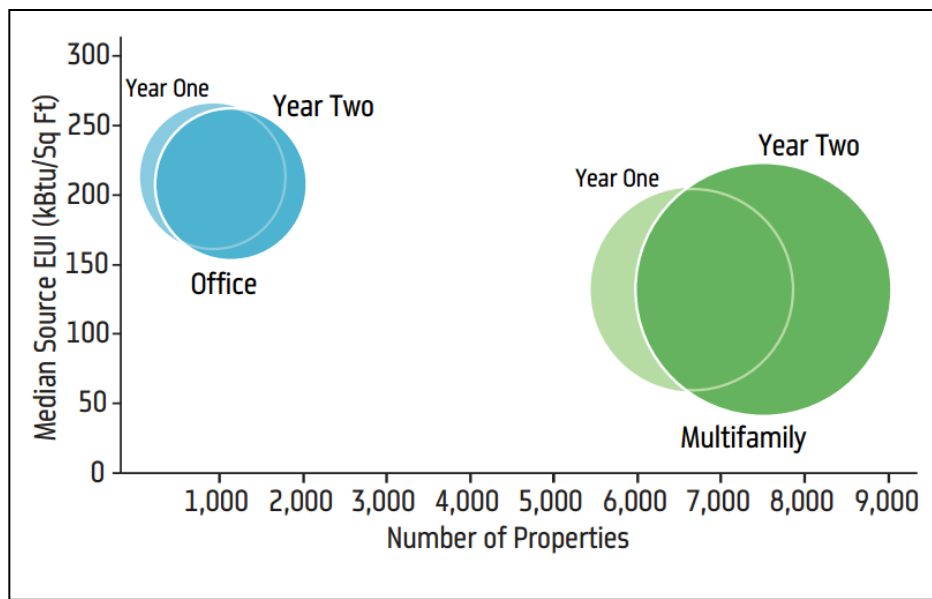
Borough	Zip	Benchmarking Submission	Entry Number	Site EUI (kBtu/ft ²)	Weather Normalized Source EUI (kBtu/ft ²)	Indoor Water Intensity (All Water Sources) (gal/ft ²)	Reported Water Method	ENERGY STAR Score	Total GHG Emissions (MtCO ₂ e)	Property Floor Area (Buildings and Parking) (ft ²)	Primary Property Type - Self Selected	Number of Buildings
MANHATTAN	10016	Yes	664	43.5	126.1	52.38	Manual	N/A	228.3	65112	Multifamily Housing	1
BRONX	10471	Yes	666	71.4	94.6	24.15	Manual	N/A	1086.65	189592	Multifamily Housing	1
QUEENS	11432	Yes	667	80.1	126.5	6.79	Manual	N/A	561.37	115000	Multifamily Housing	1
MANHATTAN	10001	Yes	668	72.8	104.8	27.97	Manual	N/A	369.96	62586	Multifamily Housing	1
MANHATTAN	10001	Yes	677	105.8	214.9	110.18	Manual	79	466.33	62829	Hotel	1
MANHATTAN	10003	Yes	707	104.9	273.7	13.43	Manual	N/A	2278.06	271596	Education	1
MANHATTAN	10069	Yes	711	71.7	141.4	0.00	Manual	N/A	3929.07	795215	Multifamily Housing	1
MANHATTAN	10069	Yes	712	77.8	156.2	0.00	Manual	N/A	2429.75	447049	Multifamily Housing	1
QUEENS	11361	Yes	714	209.2	334.2	51.62	Manual	10	3911.44	295126	Senior Care Facility	1
MANHATTAN	10034	Yes	721	94.7	123.7	69.06	ABS	N/A	581.29	106215	Multifamily Housing	1
MANHATTAN	10022	Yes	722	91.5	270.3	31.18	ABS	53	574.57	72000	Office	1
QUEENS	11102	Yes	726	111	200.5	0.00	Manual	74	1179.65	159572	Senior Care Facility	1
BROOKLYN	11235	Yes	727	109.7	241.6	29.18	ABS	19	2203.99	275000	Senior Care Facility	2
MANHATTAN	10022	Yes	729	99.1	229.6	35.79	Manual	61	2865.35	332608	Office	1
BRONX	10465	Yes	736	81.6	189.8	3.60	Manual	21	1399.45	230000	Warehouse (Unrefrigerated)	1
MANHATTAN	10018	Yes	737	28.3	85.3	16.47	Manual	N/A	1067.46	110900	Other	1
MANHATTAN	10038	Yes	738	97.1	162.4	89.23	ABS	N/A	1363.2	223674	Multifamily Housing	1

New York City's benchmarking reports – high rate of compliance

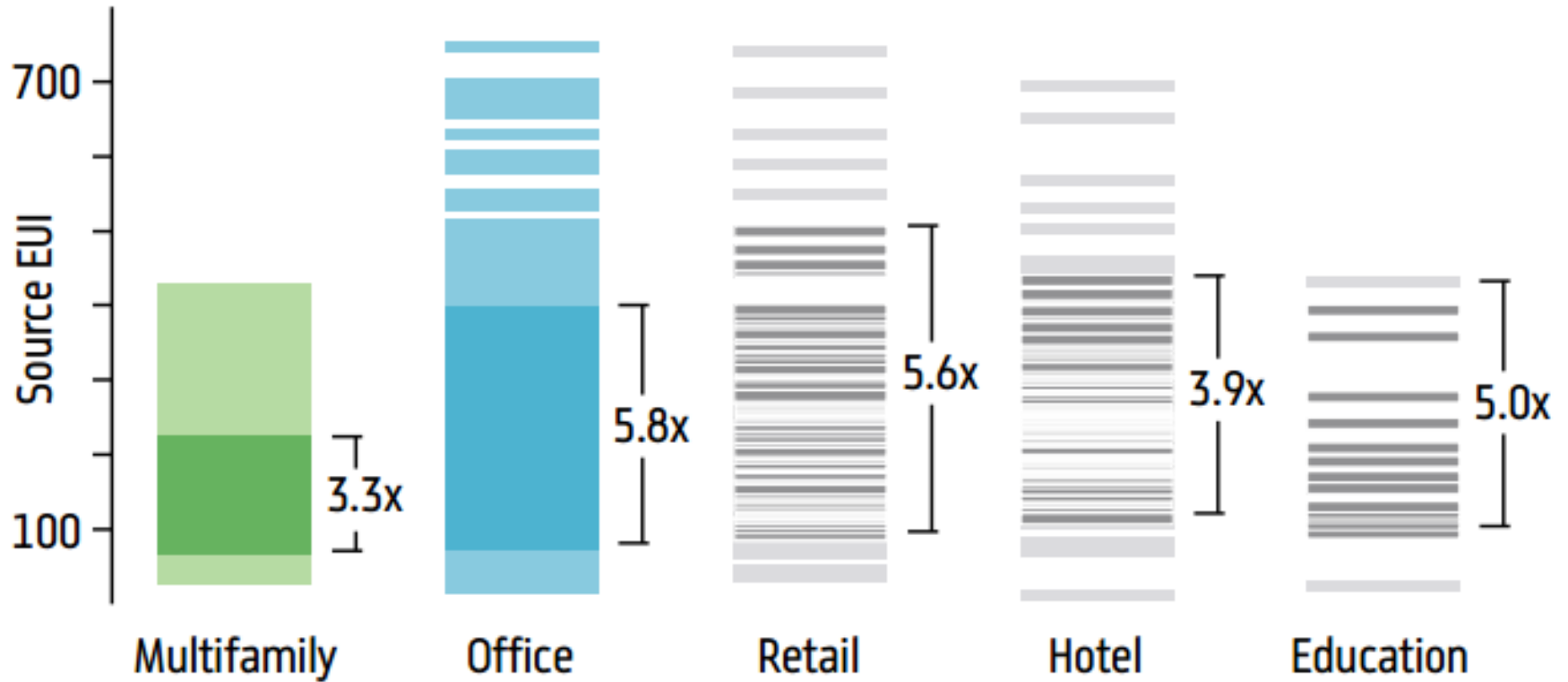


New York City's median ENERGY STAR score consistent with buildings in the Northeastern U.S.

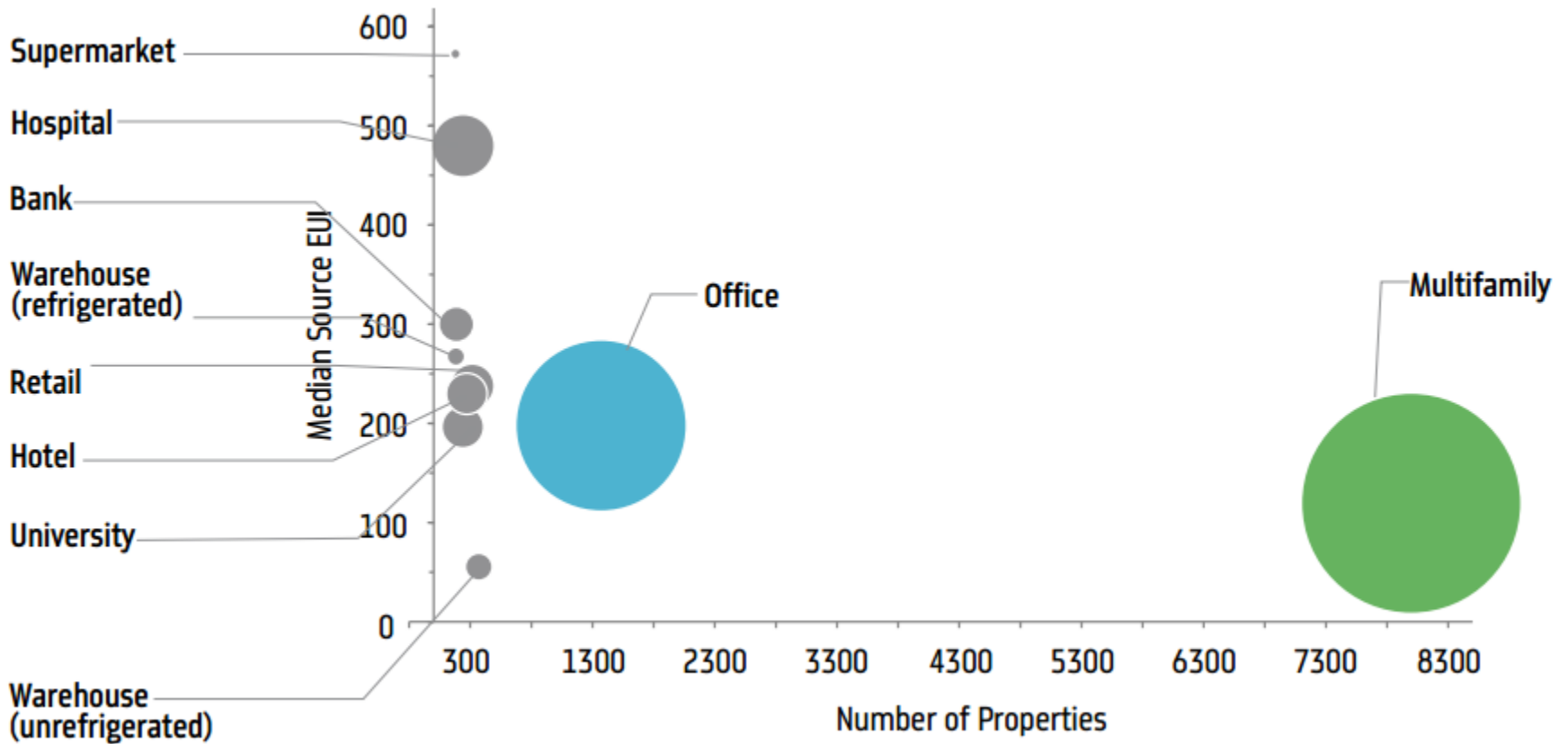
Year-over-year analysis of 2010 and 2011 data exhibit consistencies in reporting



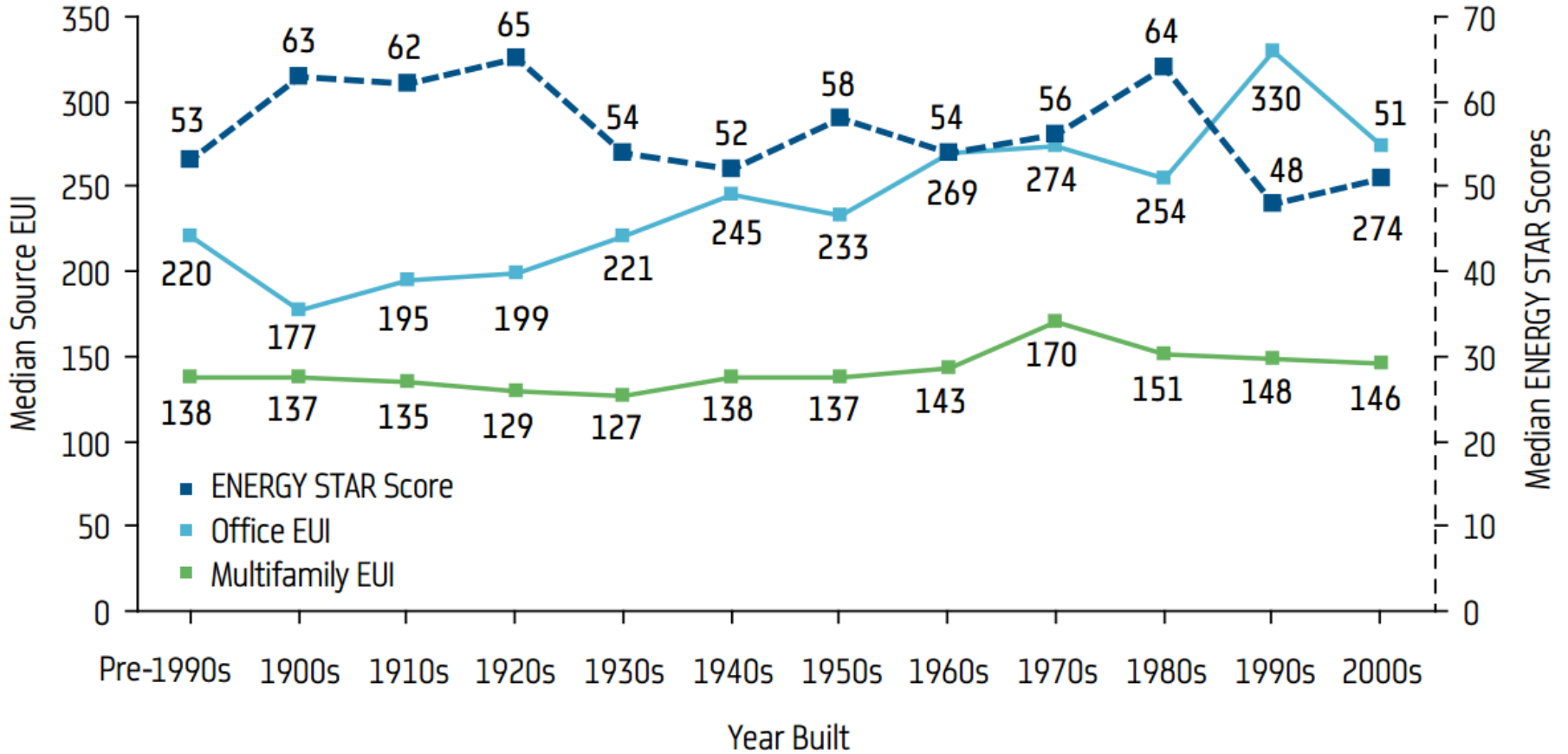
Sector variations in energy use are most prevalent in office and retail



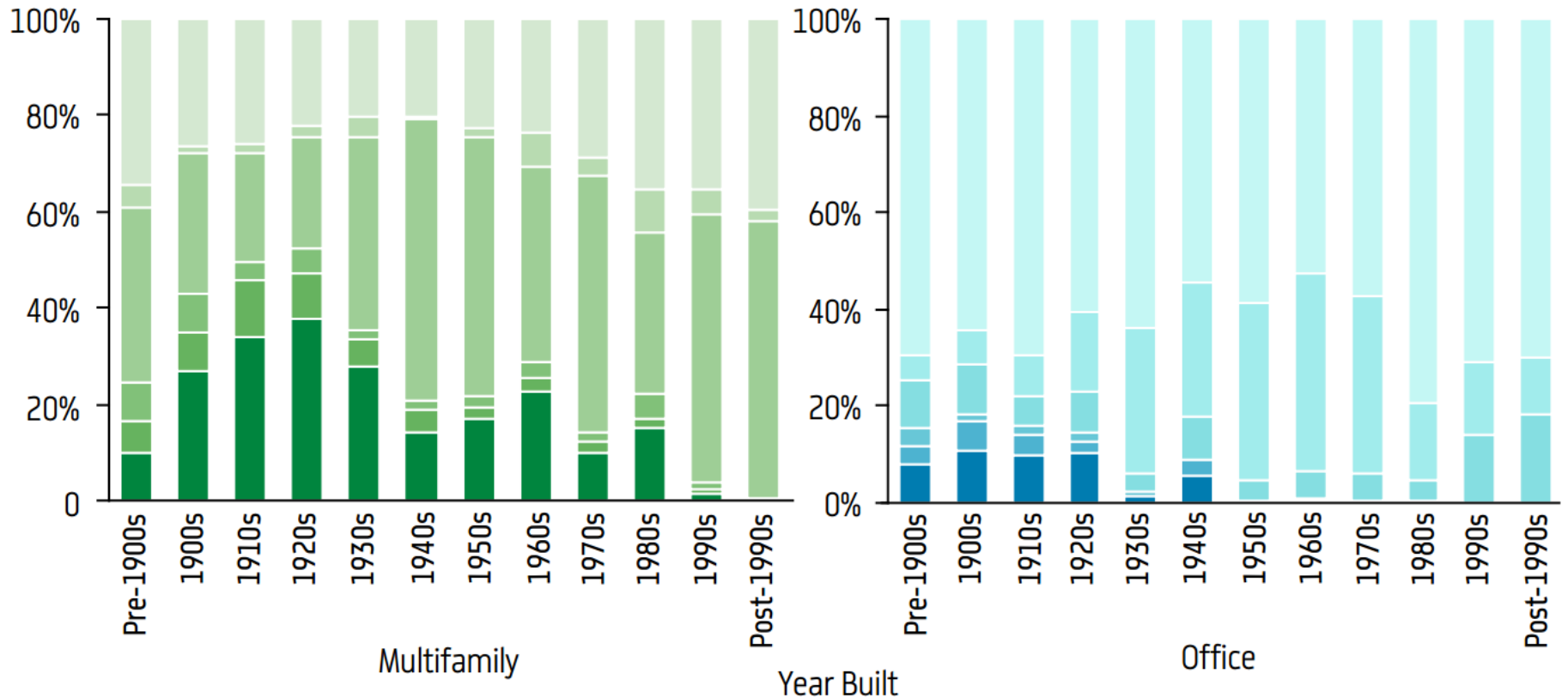
Energy use profile among NYC's most dominant sectors



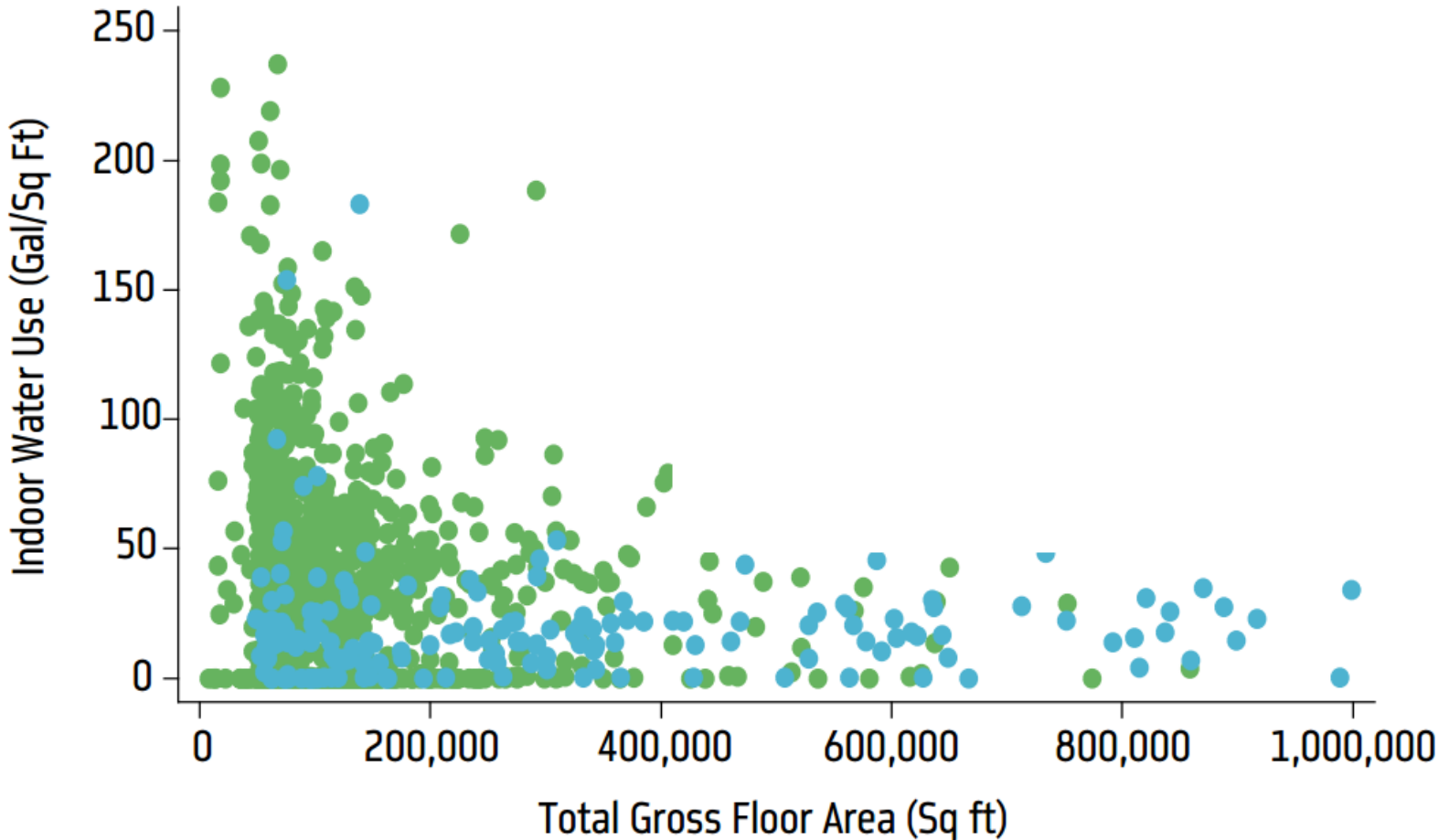
Energy use intensities relative to built era



Fuel use intensities relative to built era



New York City's water utility was the first in the U.S. to utilize the automatic upload feature in Portfolio Manager



New York City & Energy Efficient Policies and Programs around ESPM

Improving NYC's Benchmarking Policy:

- Continuous feedback with U.S. EPA about Portfolio Manager
- NYC Benchmark Help Center assistance and outreach
- Annual meeting with top NYC benchmarking service providers
- Consideration of possible benchmark certification program
- Outreach coordination with several key stakeholders (i.e. UGC, AEA, NYSERDA, etc.)

Partnerships with U.S. Department of Energy on several data sharing initiatives:

- **Building Performance Database (BPD)**
 - Online platform allowing for statistical comparisons of performance trends across peer groups of properties, utilizing anonymized LL84 datasets.
- **Standard Energy Efficiency Database (SEED)**
 - Developing a NYC specific instance of a secure data repository for building characteristics and energy consumption, utilizing LL84 and LL87 datasets.
- **Benchmarking and Disclosure Evaluation Handbook**
 - Developing an impact evaluation handbook on direct and indirect economic impacts of B&D, and create a toolkit of best practices for other jurisdictions developing their own B&D policies.
- **Better Buildings Energy Data Accelerator**
 - Direct engagement with local utilities and other Accelerator partners to improve access to whole-building energy aggregated data for multifamily and commercial sectors.

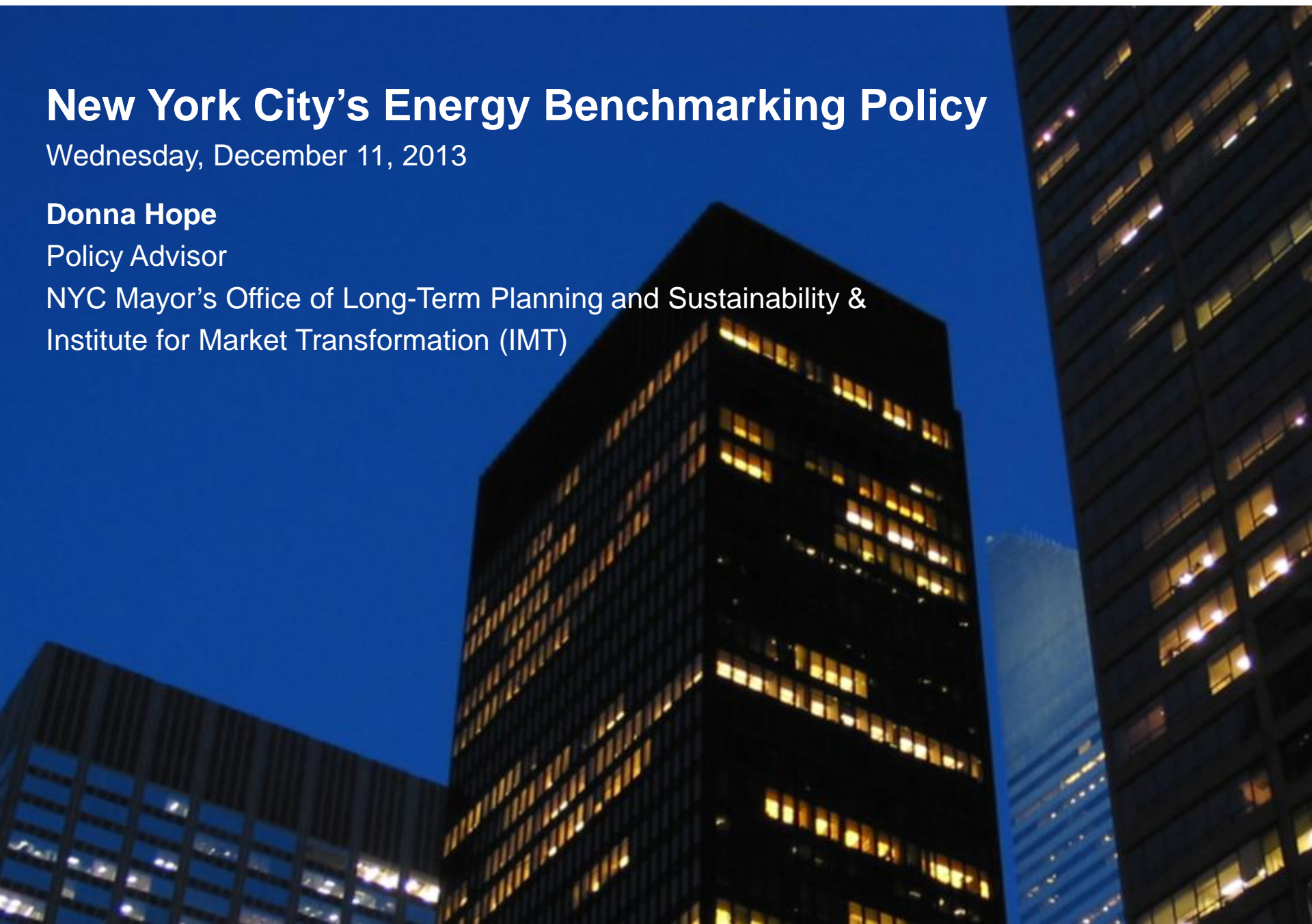
New York City's Energy Benchmarking Policy

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Institute for Market Transformation (IMT)





Supported by:



NYC Mayor's Carbon Challenge

Using Energy Use Benchmarking to
Drive Carbon Reductions

December 11, 2013

A stylized map of New York State in white, set against a dark blue background. The map shows the state's outline, including major water bodies like the Hudson River, the Erie Canal, and Long Island Sound. The map is positioned on the right side of the slide, partially overlapping the text.

A GREENER,
GREATER
NEW YORK

The NYC Mayor's Carbon Challenge

A voluntary program to match City government's goal to reduce GHG emissions by 30% in ten years

2007: 17 leading universities accepted the Challenge

2009: 11 largest hospital systems signed on

2013: 10 global corporations joined



Together, these participants make up 140 million square feet and 4% of citywide GHG emissions.

Universities

- Barnard College
- Berkeley College
- City University of New York
- Columbia University
- The Cooper Union
- Fashion Institute of Technology
- Fordham University
- The New School
- NY School of Interior Design
- New York University
- Pace University
- Polytechnic Institute of NYU
- Pratt Institute
- The Rockefeller University
- School of Visual Arts
- St. John's University
- Weill Cornell Medical College

Hospitals

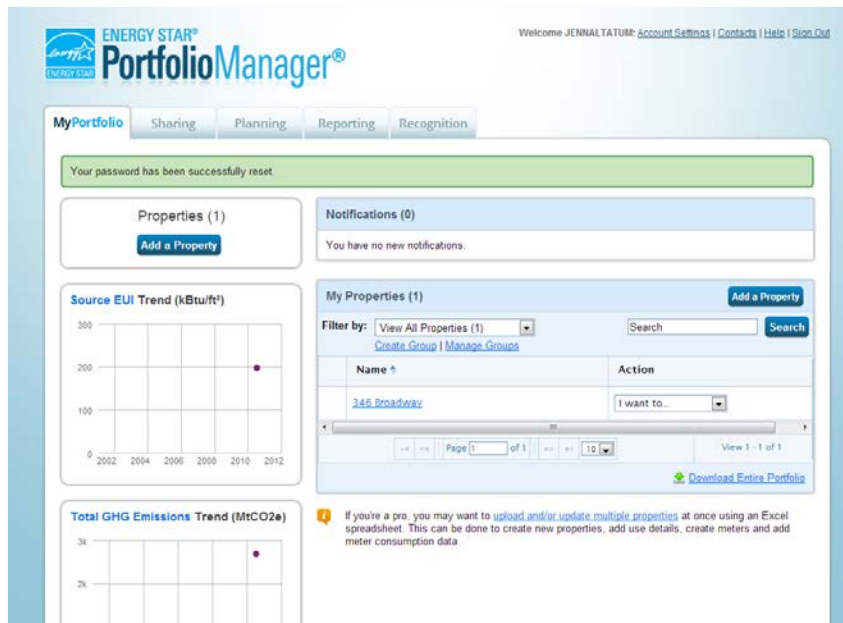
- Continuum Health Partners
- New York City Health and Hospitals Corporation
- Lutheran Medical Center
- Maimonides Medical Center
- Memorial Sloan-Kettering Cancer Center
- Montefiore Medical Center
- Mount Sinai Medical Center
- New York Hospital Medical Center Queens
- New York Presbyterian Medical Center
- North Shore – Long Island Jewish Health System
- NYU Langone Medical Center

Commercial Offices


- American International Group
- BlackRock
- Bloomberg LP
- Credit Suisse
- Deutsche Bank
- Google
- Goldman Sachs
- JetBlue
- JP Morgan Chase
- PVH Corp.

Tracking Emissions for the Challenge

- Each participant reports energy use and emissions annually to track progress toward the goal
- Beginning in 2010, all participants started using Portfolio Manager to benchmark under NYC Local Law 84—although many began using the tool before the law
- Portfolio Manager allows participants to aggregate the information they need to report emissions in the Carbon Challenge Inventory



Mayor's Carbon Challenge - Universities
 Carbon Emissions Inventory



Name of Institution
 Submission Year
 Base Year
 Submission Year - Carbon Intensity
 Base Year - Carbon Intensity (lbs CO₂eq/sq.ft.)
 30% Reduction Goal (lbs CO₂eq/sq.ft.)
 Business As Usual 2017-18 (CO₂eq/sq.ft.)

2000

Fuel Type	Fuel Consumed	Units	CO ₂ e Coefficient	MMBtu Coefficient	MMBTUs	CO ₂ e (Mtons)
Electricity		kWh	0.000422704	0.009546	-	-
Natural Gas		Therms	0.0053956	0.000000	-	-
Distillate Fuel Oil (#2)		US Gallons	0.00264026	0.138000	-	-
Distillate Fuel Oil (#4)		US Gallons	0.01016722	0.146000	-	-
Residual Fuel Oil (#6)		US Gallons	0.0132795	0.150000	-	-
Propane		US Gallons	0.01243804	0.090000	-	-
Steam		Mbz	0.08944831	1.330950	-	-
TOTAL					-	-

Square Footage
 MMBTU / sq.ft.
 Carbon Intensity (lbs CO₂eq/sq.ft.)

Progress

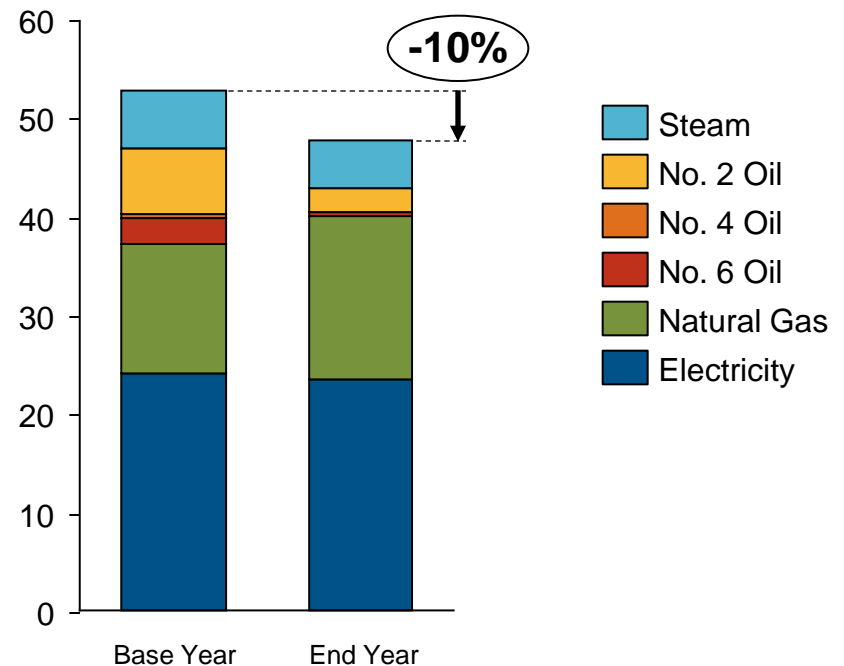
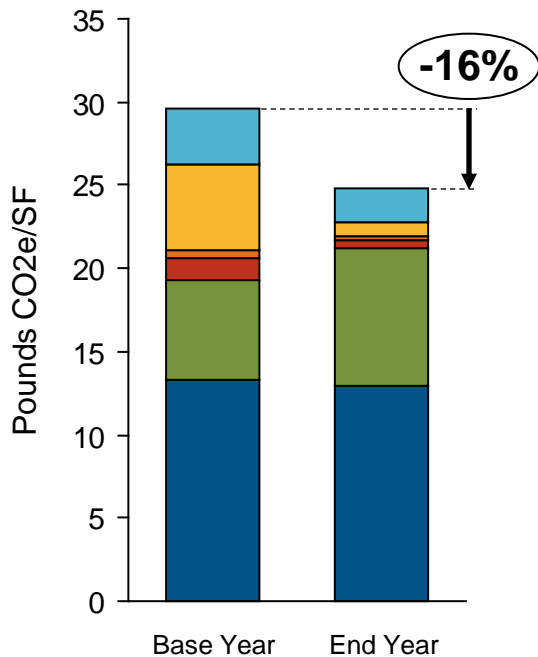
All together, universities and hospitals have reduced emissions intensity per square foot by 13% since the beginning of the Challenge.

Universities

- Reduced emissions by 16% in 5 years, or ~90,000 metric tons per year
- Electricity and natural gas became 85% of the fuel mix
- All together saving at least \$20 million in reduced energy costs

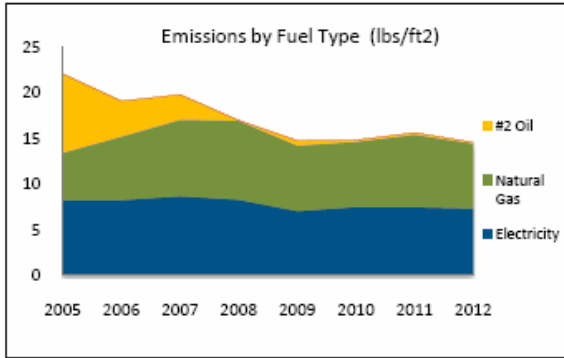
Hospitals

- Reduced emissions 10% in 3 years, or ~35,000 metric tons per year
- Electricity and natural gas became 84% of the fuel mix
- All together saving at least \$10 million in reduced energy costs

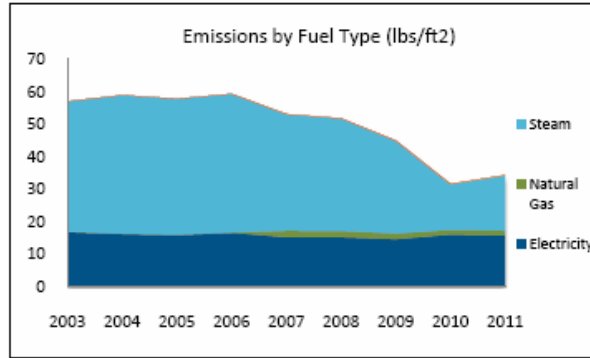


The Six Early Achievers: There are many pathways to 30%

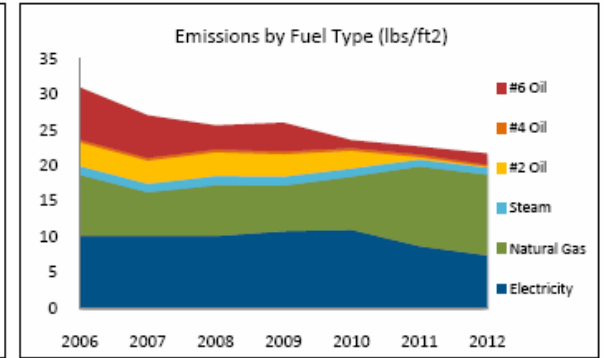
Barnard College: -34.1%



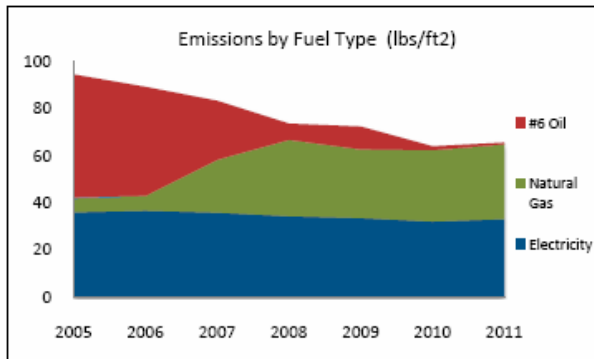
Fashion Institute of Technology: -40.0%



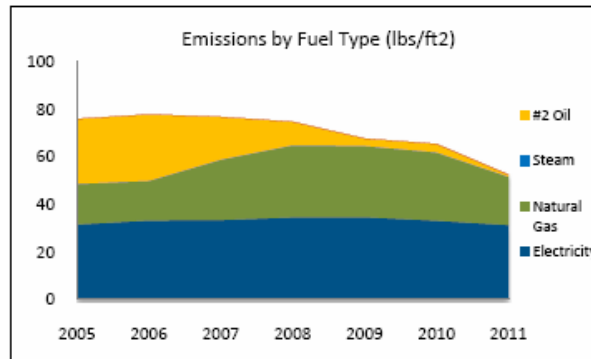
New York University: -30.0%



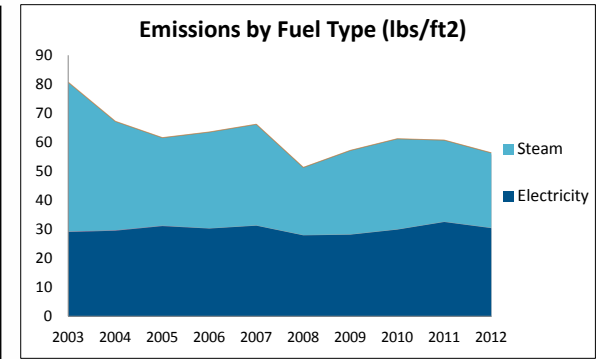
The Rockefeller University: -30.6%



New York Hospital Queens: -30.9%



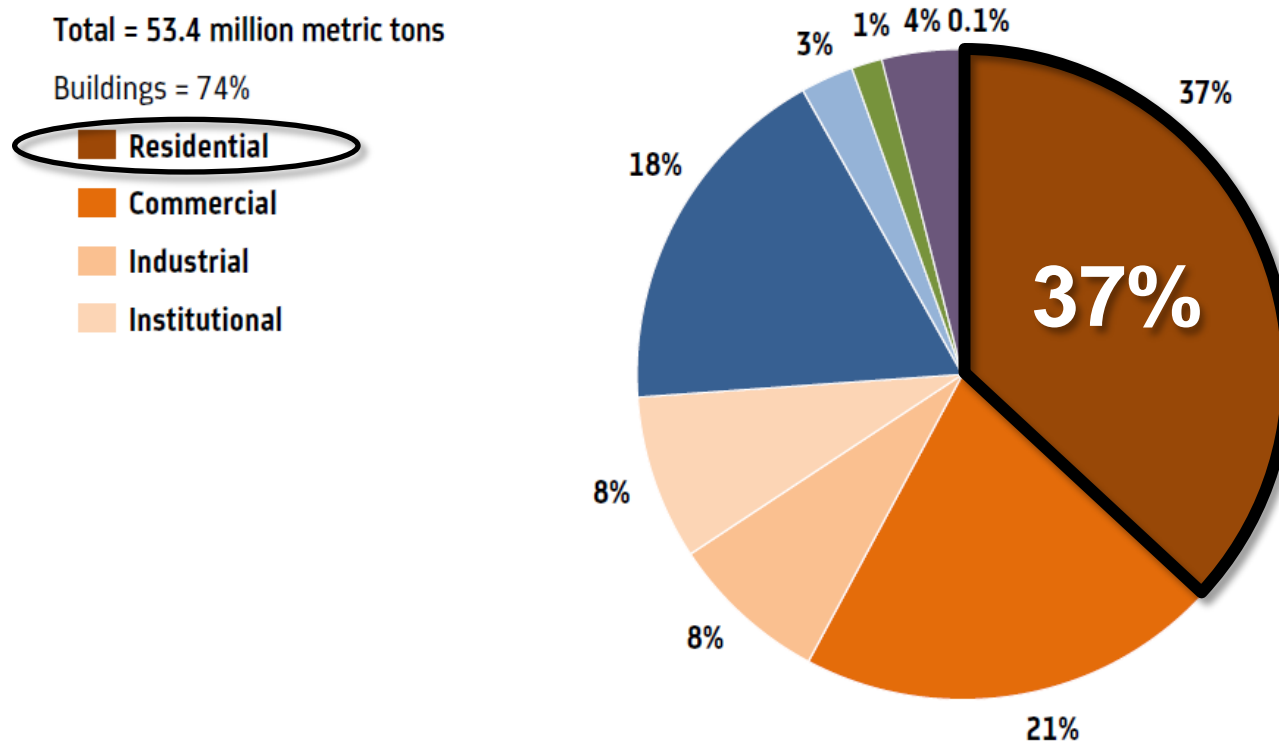
Weill Cornell Medical College: -30.1%



Expanding the Challenge: Multifamily Buildings

1. Residential buildings account for 37% of citywide emissions
2. Complexity of upgrades and fragmented decision-making has been a barrier to energy efficiency in the multifamily sector
3. Mandatory benchmarking through Portfolio Manager overcame a significant reporting hurdle

Citywide Share of Emissions from Residential Buildings





Supported by:



Jenna Tatum

Mayor's Carbon Challenge Coordinator
NYC Mayor's Office

jtatum@cityhall.nyc.gov

CarbonChallenge@cityhall.nyc.gov

www.nyc.gov/carbonchallenges

The logo for "A GREENER, GREATER NEW YORK" is located in the bottom right corner. It consists of three stacked rectangular boxes. The top box is green and contains the text "A GREENER," in white. The middle box is orange and contains the text "GREATER" in white. The bottom box is blue and contains the text "NEW YORK" in white. The background of the entire slide is a stylized map of New York City in shades of blue and green, with a large tree silhouette in the foreground.

JCPenney

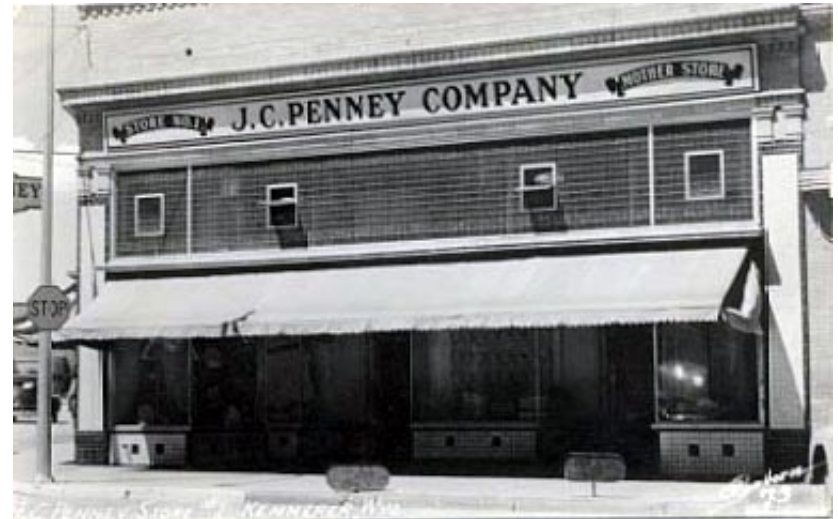


Chris Morgan
JCPenney
Energy Senior Manager
December 11, 2013

JCPenney



JCPenney is one of the nation's largest apparel & home furnishing retailers.



- Founded in 1902
- Over 1000 stores
- 49 states and Puerto Rico
- 116,000 Associates
- \$12.99B Annual Revenue



JCPenney and



.....

Partner of the Year in Energy Management:

2007 & 2008

Sustained Excellence in Energy Management:

2009, 2010, 2011, 2012 & 2013

First to earn the **ENERGY STAR label** for a retail store after the release of EPA's energy performance rating for retail in 2007.

JCPenney

JCPenney and

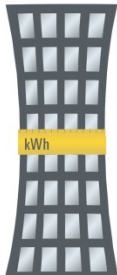


.....

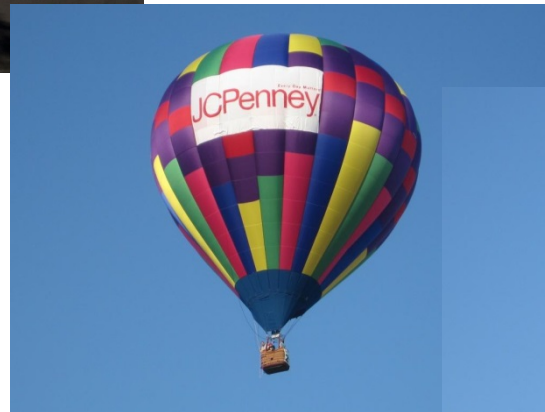


DESIGNED TO EARN THE ENERGY STAR

The estimated energy performance for this design meets US EPA criteria. The building will be eligible for ENERGY STAR after maintaining superior performance for one year.



EPA presents
The National BUILDING COMPETITION
Working off the Waste with ENERGY STAR®



JCPenney



JCPenney and  ENERGY STAR® **PortfolioManager**®

- 1. Certifications**
- 2. Communication**
- 3. Reporting**
- 4. Compliance**

JCPenney

Certifications



JCPenney ENERGY STAR certified buildings (through November 2013):

- 512 Stores
- 1 Office – JCPenney Home Office in Plano, TX
- 1 Warehouse – Logistics Center in Reno, NV

JCPenney

Certifications



Maplewood, MN (1 of 512 certified stores)



Plano, TX Home Office



Reno, NV Logistics Center

JCPenney

Certifications



- Establish list of stores for certification using Portfolio Manager
- Generate Statement of Energy Performance (SEP's) in Portfolio Manager
- Contract Professional Engineers for independent third party verification
- Receive verified/stamped SEP's and submit for certification

ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

81

ENERGY STAR® Score¹

AUBURN, ME-1985

Primary Property File #
Gross Floor Area (ft²)
Built: 1979

JCPenney

For Year Ending: Sep
Date Generated: Nov

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency relative to other buildings of similar size and business activity.

company news

JCPenney Earns ENERGY STAR Certification at Over 500 Locations

PLANO, TX - (Oct. 31, 2013) - JCPenney (NYSE: JCP) announced today that it has secured ENERGY STAR certifications at over 500 stores, one supply chain facility and its Home Office, far surpassing the Company's initial goal of having 400 locations certified by the end of 2013. The Environmental Protection Agency (EPA) awards ENERGY STAR certifications to buildings that rank within the top 25 percent of similar commercial buildings nationwide by meeting strict energy performance levels set by the EPA.



JCPenney Communication

A navigation bar with a blue and white striped background. On the left, a grey box contains the text "EnergyCenter®" in green. On the right, the "JCPenney" logo is displayed in red. Below the main bar is a secondary navigation bar with several menu items: "Home" (Welcome), "People" (Involved), "Leaderboard" (Performance), "Program" (Descriptions), "Energy" (Training), "Contact Us" (Inquiries), "Energy Bulletins" (Monthly), "AEM" (Energy Issues), and "Login" (Here). The "Login" item is circled in red.

EnergyCenter®

JCPenney

Home Welcome

People Involved

Leaderboard Performance

Program Descriptions

Energy Training

Contact Us Inquiries

Energy Bulletins Monthly

AEM Energy Issues

Login Here

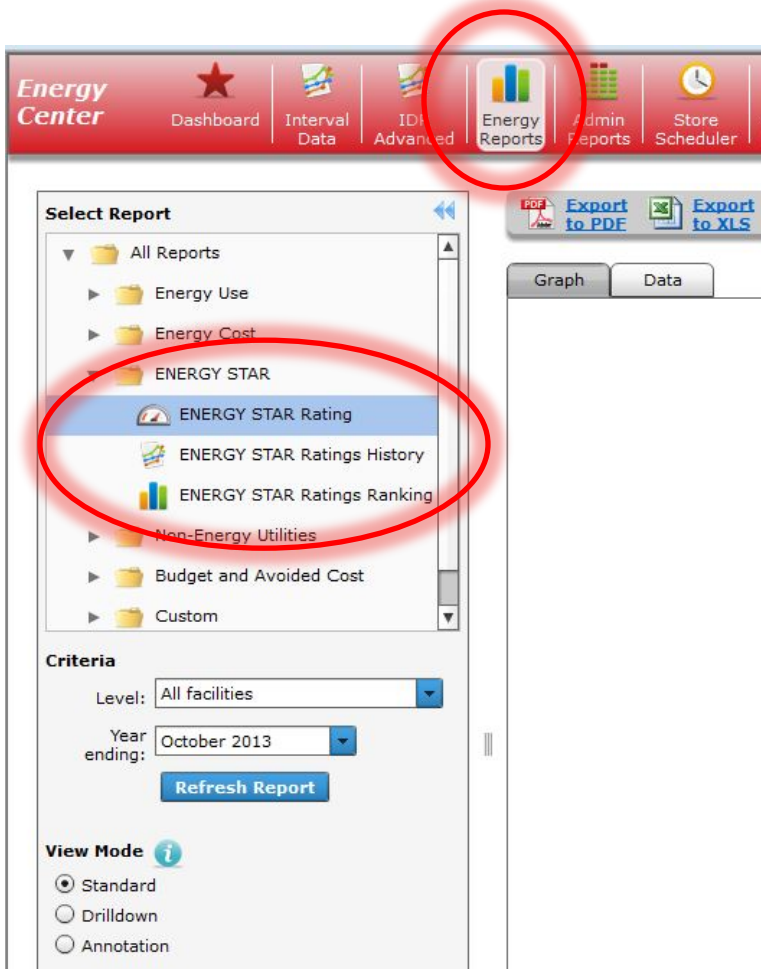
A promotional banner for JCPenney. On the left, the "jcp" logo is shown in a red square, with the text "November emap" below it. The central image shows a JCPenney store at night with people lined up outside. On the right, the text "Leave the High Energy to the Shoppers!" is written in red. At the bottom center, there are two small colored circles, one blue and one green.

jcp

November emap

JCPenney

Leave the High Energy to the Shoppers!



Energy Center

Dashboard Interval Data ID Advanced Energy Reports Admin Reports Store Scheduler

Select Report

- All Reports
 - Energy Use
 - Energy Cost
 - ENERGY STAR
 - ENERGY STAR Rating**
 - ENERGY STAR Ratings History
 - ENERGY STAR Ratings Ranking
 - Non-Energy Utilities
 - Budget and Avoided Cost
 - Custom

Export to PDF Export to XLS

Graph Data

Criteria

Level: All facilities

Year ending: October 2013

Refresh Report

View Mode *i*

- Standard
- Drilldown
- Annotation

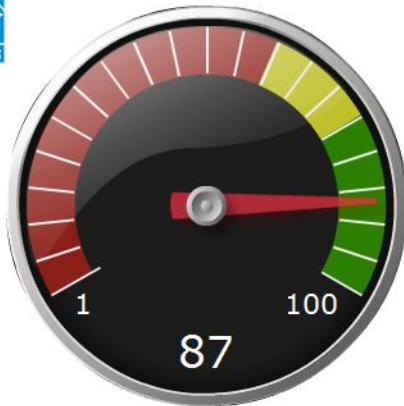
- ENERGY STAR Ratings
- ENERGY STAR Ratings History
- ENERGY STAR Ranking
 - By Store
 - By District
 - By Region
 - By other groups

JCPenney

Communication - ratings

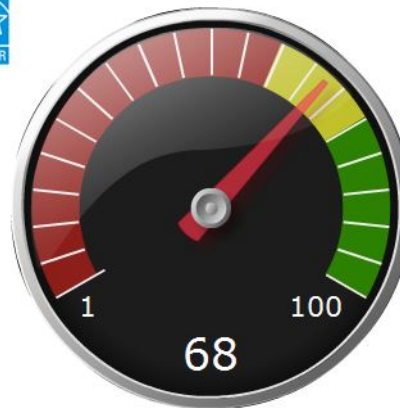


ENERGY STAR Rating for 0116-Salem,NH
September, 2013



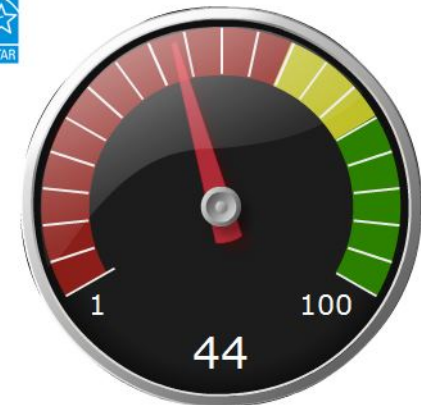
This building qualifies for ENERGY STAR. It is running in the top 25% when compared to other equivalent buildings.

ENERGY STAR Rating for 0203-Media,PA
September, 2013



This building is close to qualifying for ENERGY STAR. Refer to the energy-saving tips and perform an energy audit using the checklists available to help identify possible savings.

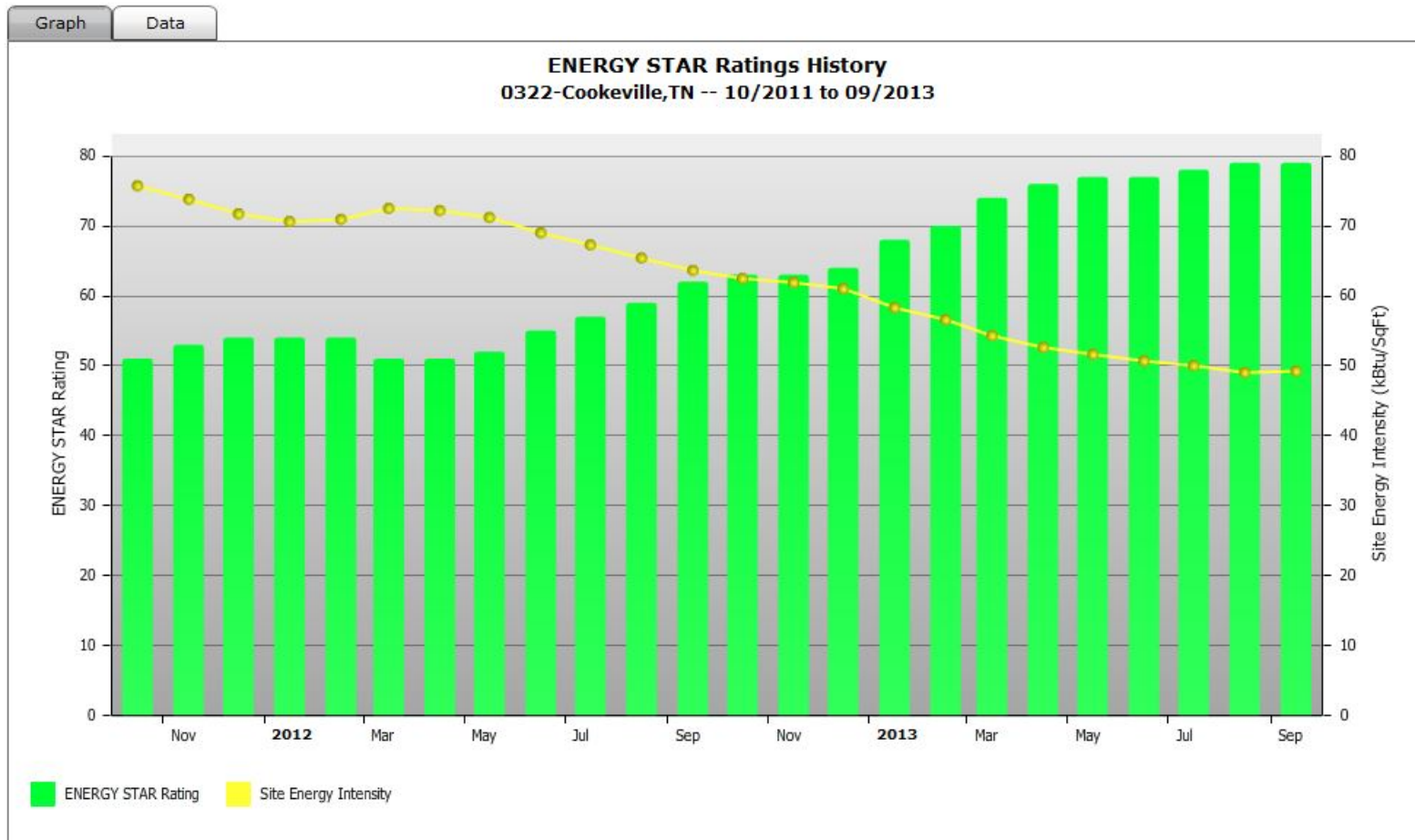
ENERGY STAR Rating for 0058-Ponce,PR
September, 2013



This building does not qualify for ENERGY STAR. However, practicing energy saving tips, performing energy audits, and using the checklists available can still result in significant savings.

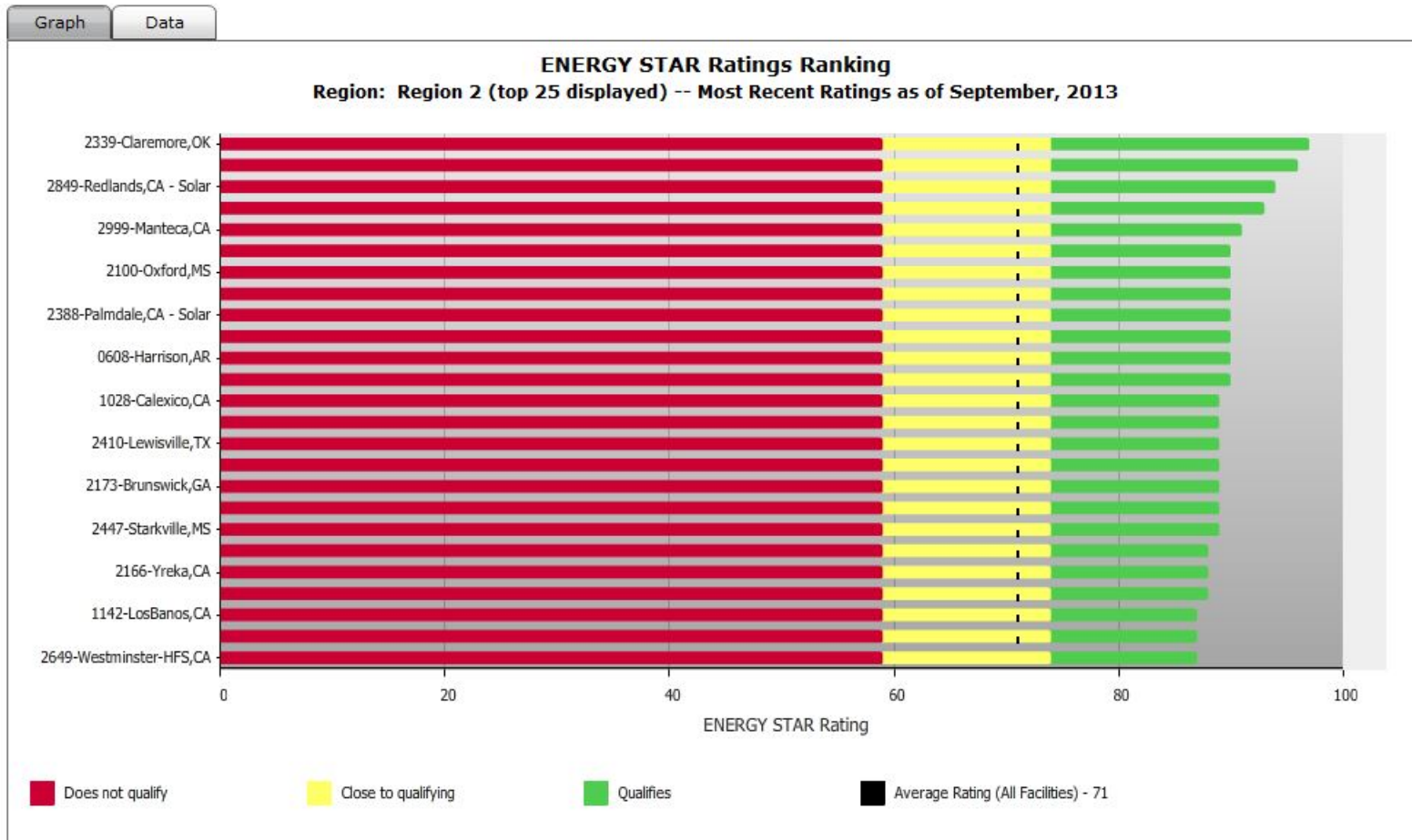
JCPenney

Communication - history



JCPenney

Communication - rankings



JCPenney

Reporting



- Monthly Bulletins
 - Store Leaders
 - District Leaders
 - Region Leaders

March emap is Here!



March emap checklist:

"Store Energy Conservation During Construction."

District 8229 – Energy Bulletin

District 8229: Energy Performance Report

Report Period: January - December, 2012



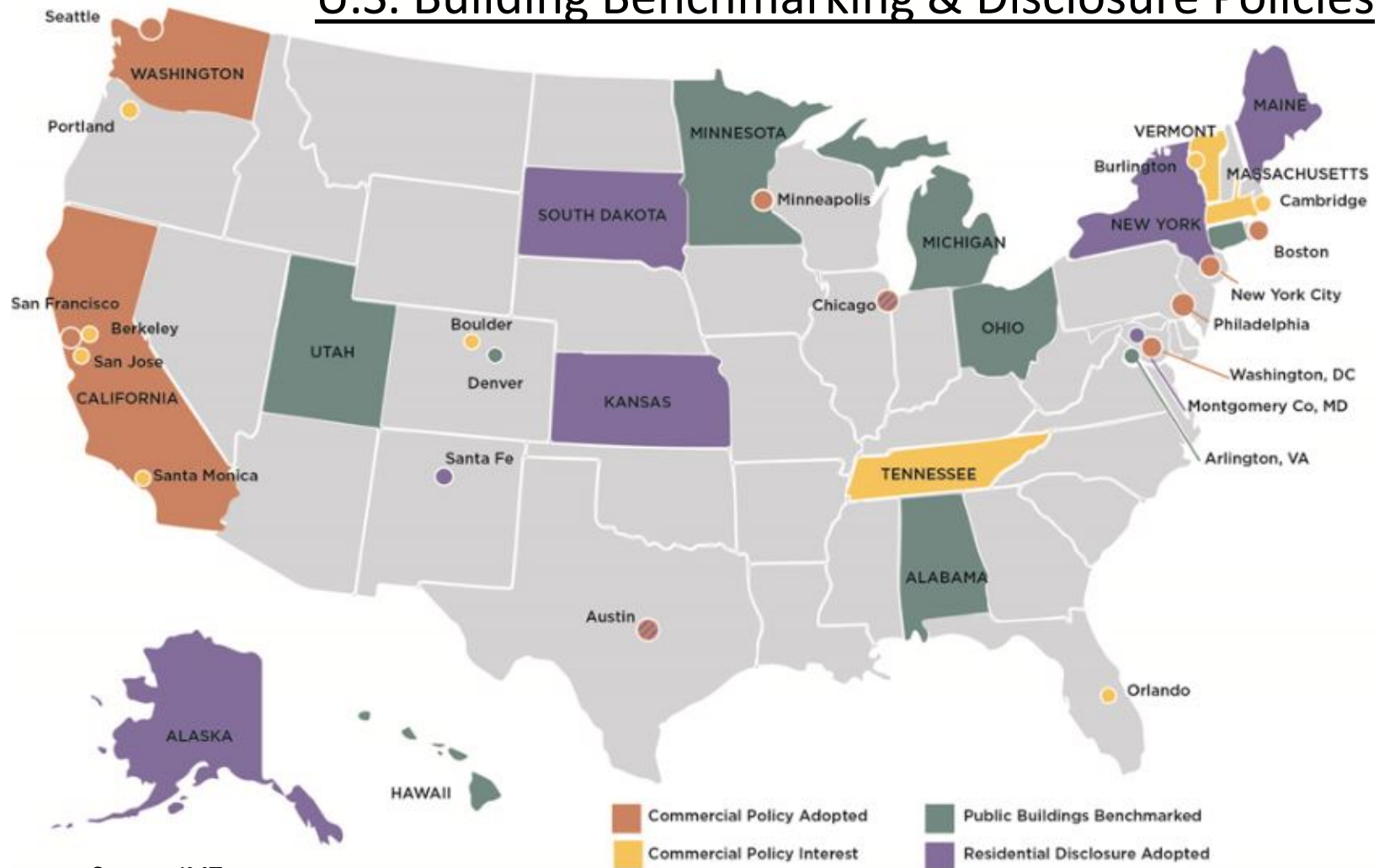
GHG Reduction Equivalents

Store #	Savings % Reduction Overall *	Homes Heated ①	Cars Off Road ②	Trees Planted ③	ENERGY STAR Ratings **
2969-Sherman,TX	29%	38	50	6,602	74
0304-Longview,TX	26%	53	68	9,101	64
2949-Waxahachie,TX	26%	32	41	5,518	75
2946-Rockwall,TX	26%	41	53	7,074	74
2055-Plano,TX	24%	56	73	9,745	78
1348-Paris,TX	23%	8	11	1,431	76
2105-Greenville,TX	21%	12	16	2,100	66
2926-Shreveport,LA	18%	41	53	7,028	60
2123-Bossier City,LA	16%	34	45	5,950	63
2338-Mesquite,TX	12%	34	44	5,792	75
2982-Fairview, TX	10%	14	18	2,428	79
2826-Cedar Hill,TX	8%	13	17	2,281	58
2795-Frisco,TX	5%	11	14	1,858	64
2728-Athens,TX	4%	1	1	139	73
2746-Dallas,TX	2%	4	5	615	67
1749-Texarkana,TX	1%	-1	-1	-119	50
0179-Dallas,TX	0%	–	–	–	79
1208-Nacogdoches,TX	-0%	0	0	-41	60
1155-Marshall,TX	-2%	-1	-1	-191	85
0055-Lufkin,TX	-2%	-2	-2	-312	52
2020-Palestine,TX	-4%	-2	-2	-293	60
0996-Tyler,TX	-8%	-14	-18	-2,353	65

JCPenney Compliance



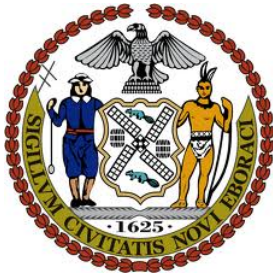
U.S. Building Benchmarking & Disclosure Policies



Source: IMT

JCPenney

Compliance



New York City

Local Law 84

Annual
>50K ft²

Custom Report in Portfolio Manager



Seattle, WA

CB 116731

Annual
>20K ft²

Automated by Portfolio Manager

JCPenney

Compliance



Austin, TX

Energy Conservation & Disclosure Ordinance

Annual

>10k ft²

Report generated from Portfolio Manager



California

AB 1103

Upon Sale or Lease

>5k ft²



Washington (state)

Efficiency First SB 5854

Upon Sale or Lease

>10k ft²

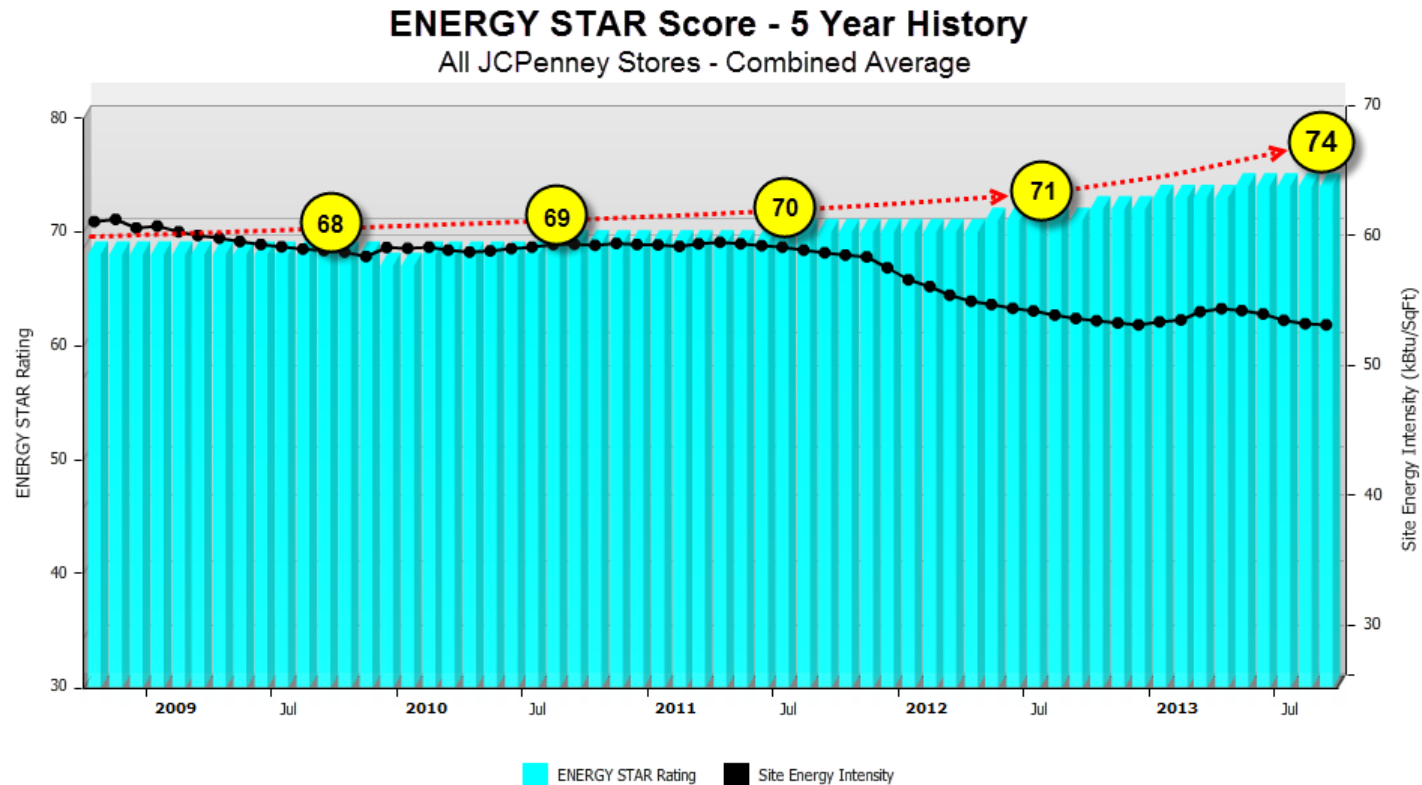
In Conclusion

1. **Certifications** – ENERGY STAR certified buildings
2. **Communication** – Ongoing through JCPenney EnergyCenter®
3. **Reporting** – Monthly Energy Bulletins to track and report progress
4. **Compliance** - Benchmarking & Disclosure Policies throughout the U.S.

In Conclusion (cont.)

- Common “unit of measure” for all Associates (ENERGY STAR score)
- Identify/prioritize energy projects
- Track progress over time
- Verify and document results of energy projects
- Method to communicate:
 - Successes
 - Progress
 - Opportunities
- Provide a “scorecard,” that all Associates can understand

The Results.....



The Results (cont.)

Energy efficiency at JCPenney facilities, 2008-2012

(data is in kBtu per square foot)



16.5%
REDUCTION ACHIEVED
SINCE 2008

Greenhouse gas emissions from JCPenney facilities, 2008-2012

(data is in metric tons of carbon dioxide equivalent)



JCPenney



Thank You!



Q&A



Contact Us

Melissa Klein

Communications Director

Center for Corporate Climate Leadership, U.S. EPA

(202) 343-9207

klein.melissa@epa.gov

For more information, visit www.epa.gov/climateleadership

Follow us on Twitter: @EPAClimateCTR