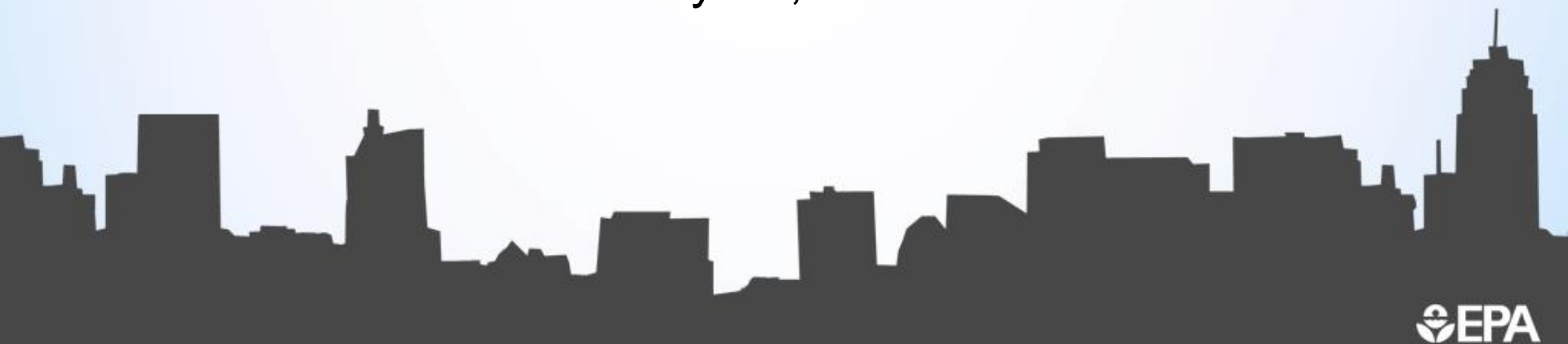


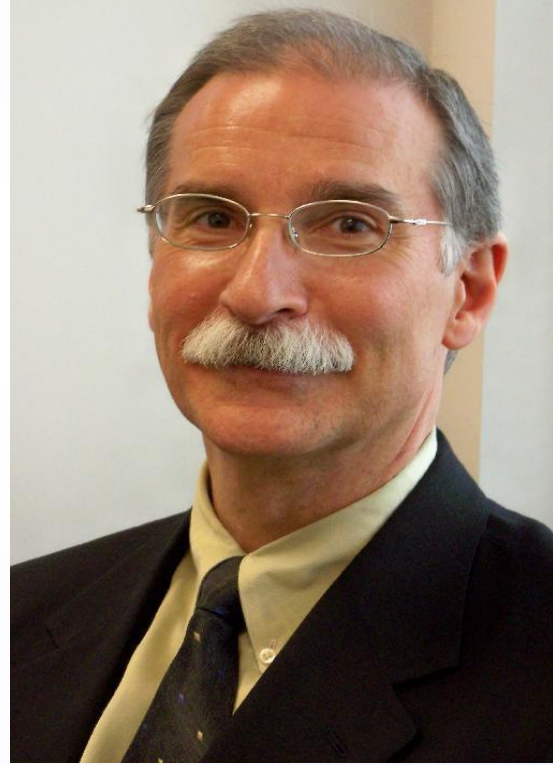


ENERGY STAR for Advance Areas

May 10, 2017



Our Speakers – Katy Hatcher and Jerry Lawson



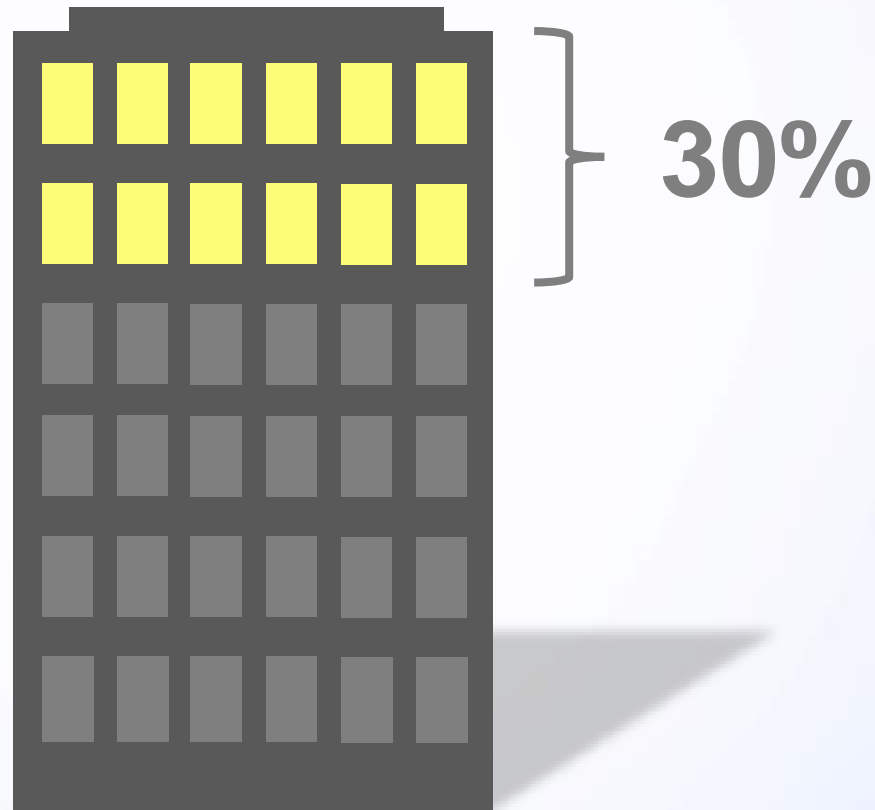


ENERGY STAR for Buildings and Plants



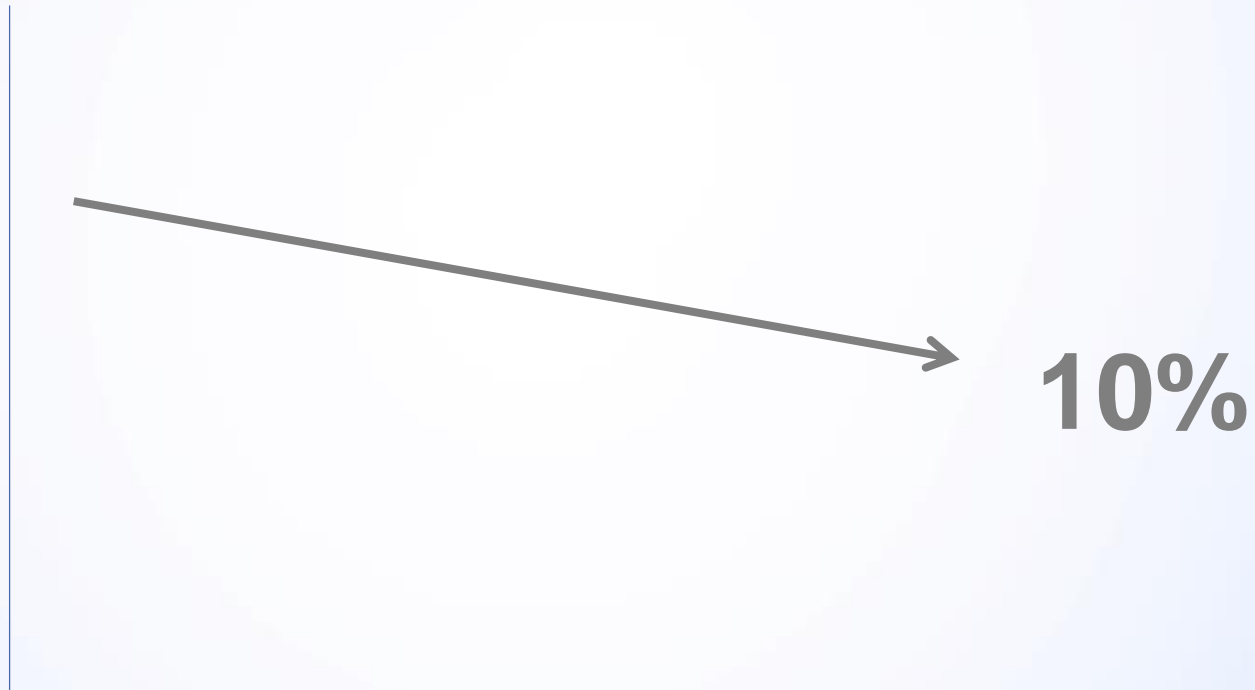
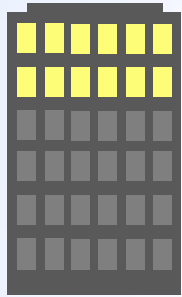
Why focus on buildings and plants?

Energy waste in commercial buildings



Why focus on buildings and plants?

Low- to no-cost reduction potential

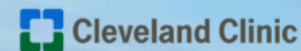




About ENERGY STAR



TRANSWESTERN®
The Performance Advantage in Real Estate

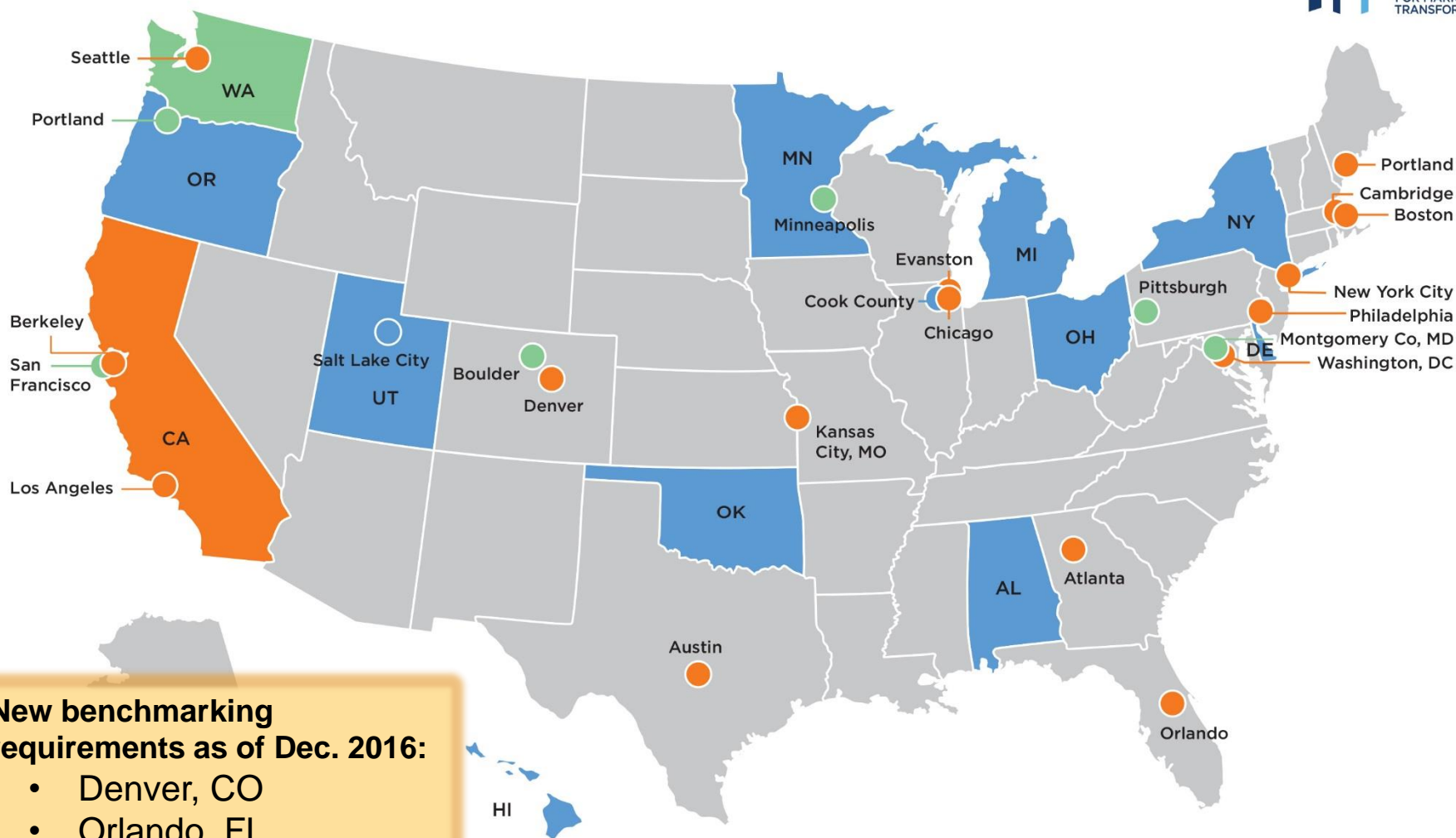


**35% of the FORTUNE
500 partner with
ENERGY STAR for
Buildings & Plants**

energystar.gov/join



U.S. Building Benchmarking and Transparency Policies

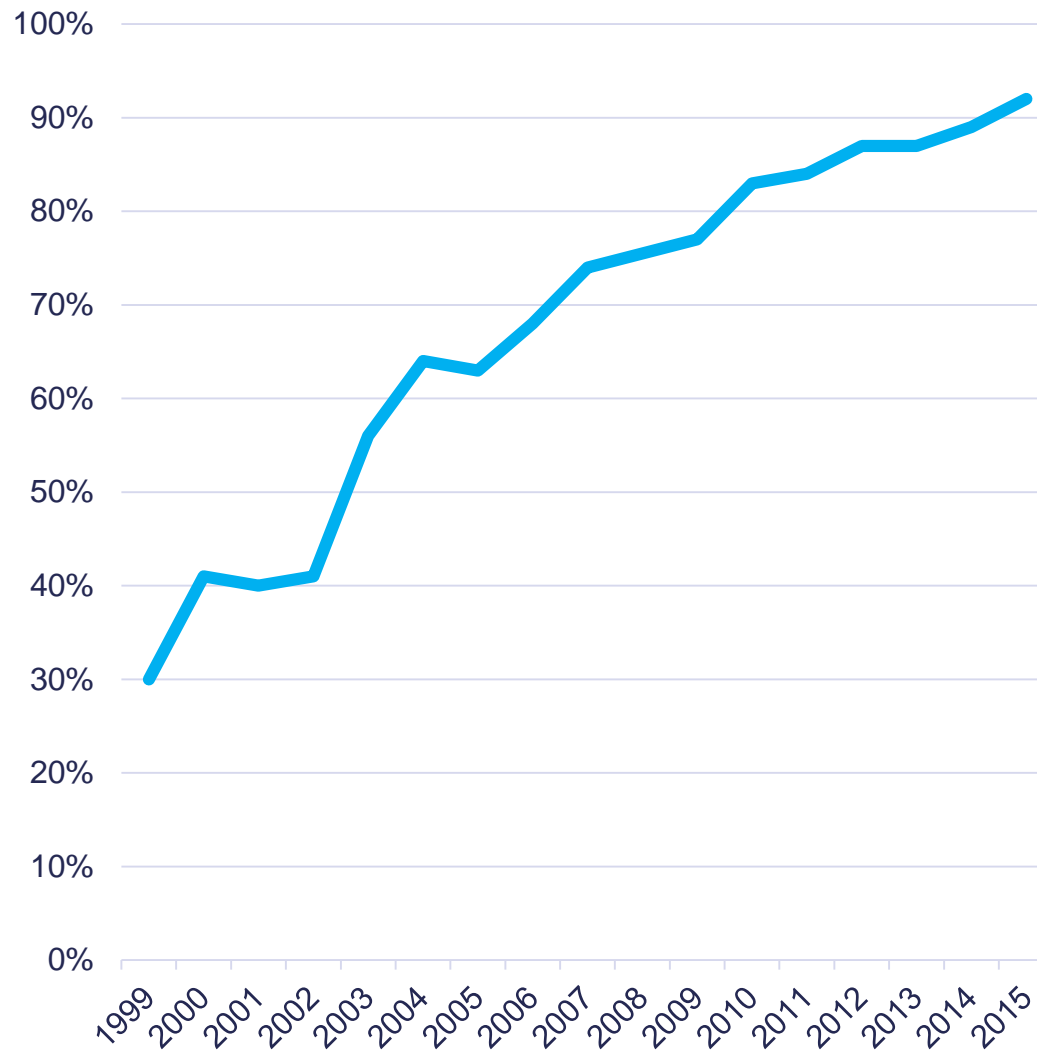


New benchmarking requirements as of Dec. 2016:

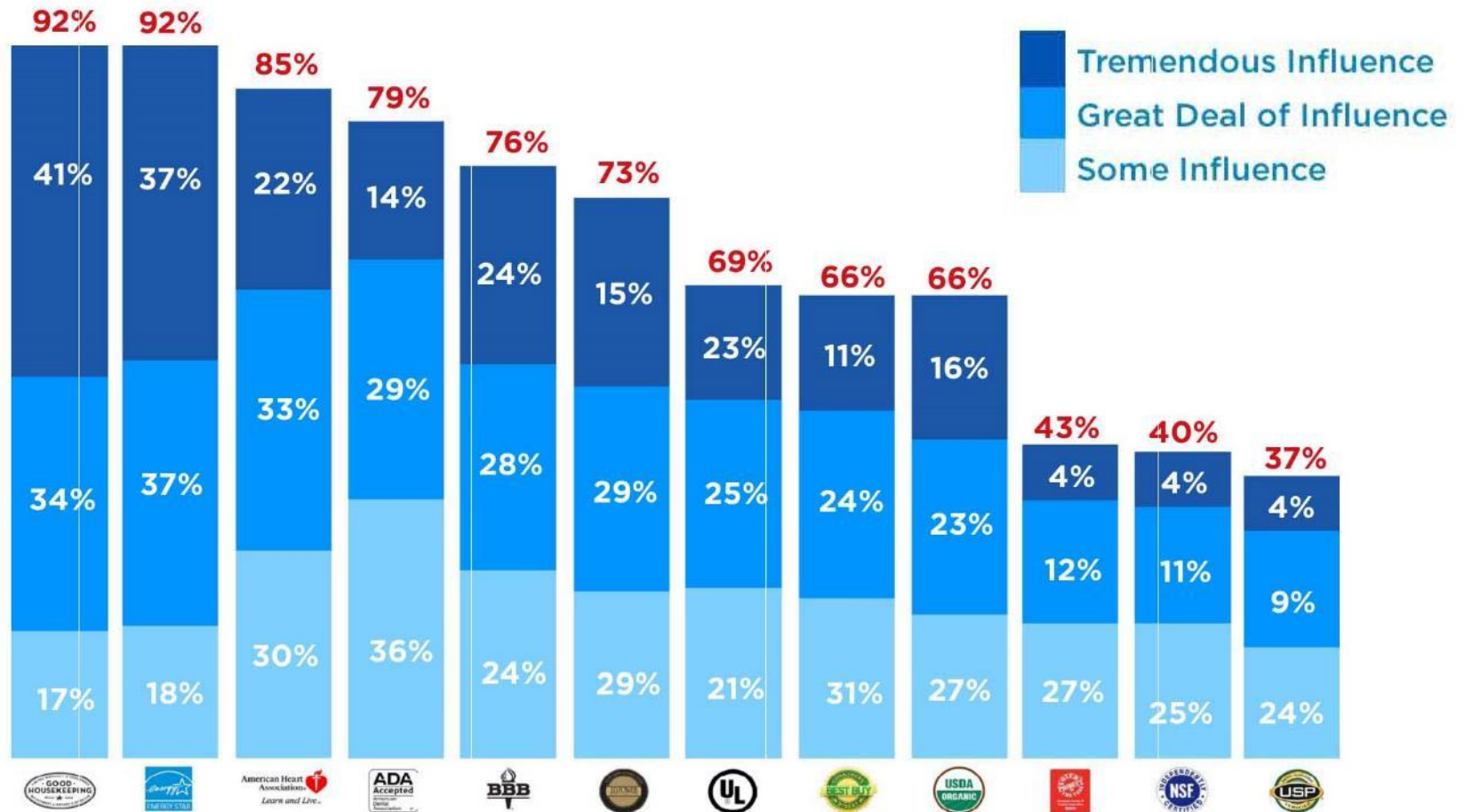
- Denver, CO
- Orlando, FL
- Los Angeles, CA
- Evanston, IL

- Public, commercial, and multifamily building benchmarking policy adopted
- Public and commercial building benchmarking policy adopted
- Public buildings benchmarked

Recognized by
more than **90%**
of Americans



Brand trust among consumers



Source: Fairfield Research, July 2011 Survey of Good Housekeeping readers



The biggest little label in energy efficiency



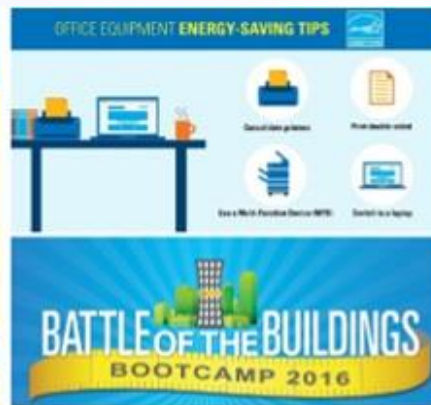
5.5 billion
products

30,000
buildings

130
industrial
plants

1.7 million
homes

And it's more than just a label...



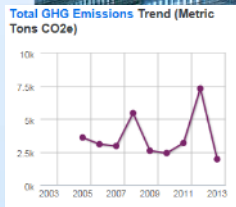
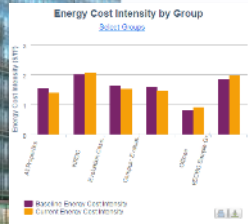
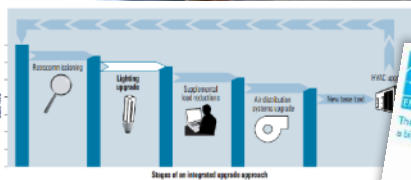
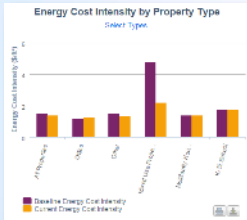
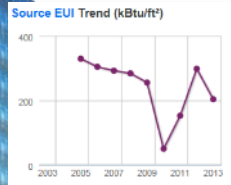
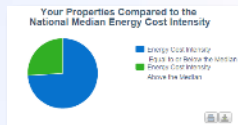
A photograph of a modern building with a glass facade, partially obscured by lush green trees. The building has a complex, angular design with many windows reflecting the sky.

ENERGY STAR for Buildings and Plants



ENERGY STAR for Buildings and Plants

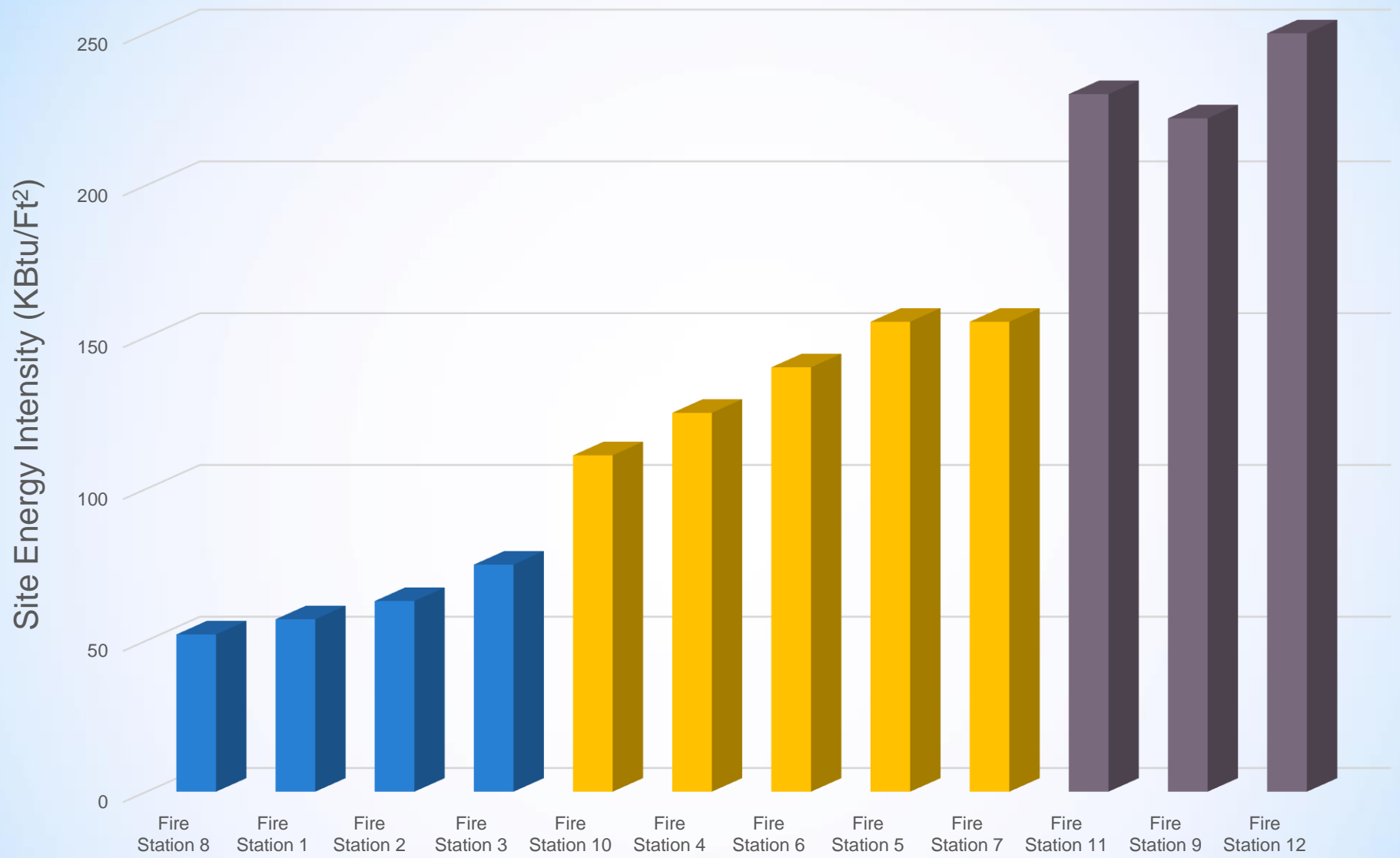
Voluntary EPA program that delivers environmental benefits and financial value through superior energy efficiency.



A photograph of several modern skyscrapers with glass facades, viewed from a low angle looking up. A semi-transparent red rectangular overlay covers the middle portion of the image, serving as a background for the title text.

Benchmarking in Portfolio Manager and the 1-100 ENERGY STAR score





Benchmarking allows you to:



Compare your building to a **national sample** of similar buildings



Compare your buildings of a similar type to **each other**



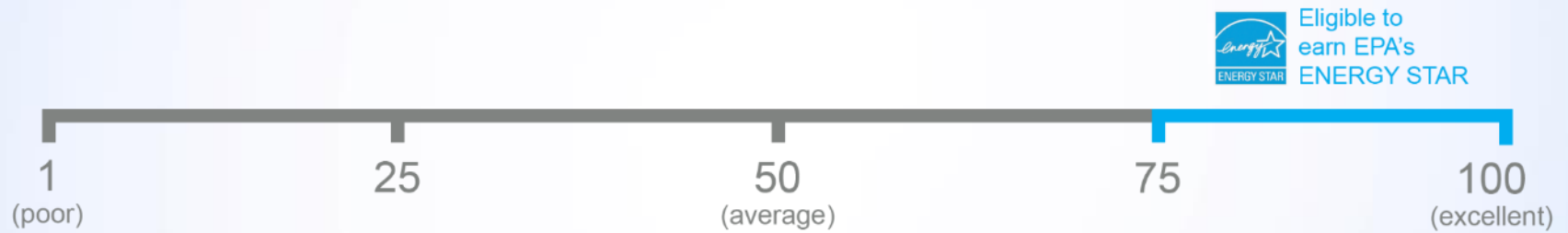
Identify underperformers in your portfolio and set priorities for the use of limited staff time and/or investment capital

ANY building can be benchmarked.

Benchmarking allows you to:

- Evaluate portfolio-wide performance
- Understand individual building performance
- Compare energy performance to national median
- Identify and address potential problems by looking at monthly trends
- Track the impact of energy, water, waste management strategies

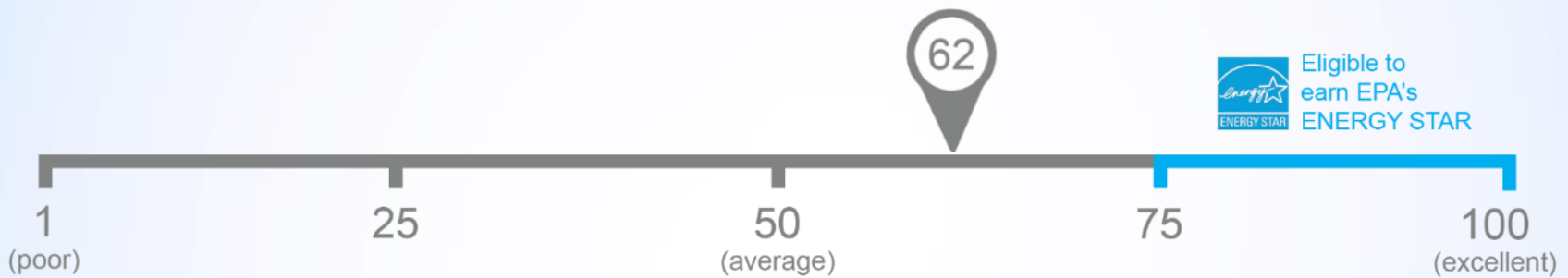
The 1-100 ENERGY STAR Score



The 1-100 ENERGY STAR Score

Percent cooled Number of staffed hospital beds Cooking facilities
Occupancy
Number of residential living units Energy usage data Percent heated
Weekly operating hours Heating degree days
Gross floor area Cooling degree days
Number of MRI machines Number of workers on main shift
Number of walk-in refrigerators Number of computers
Number of commercial washing machines Maximum resident capacity
Number of cash registers

The 1-100 ENERGY STAR Score

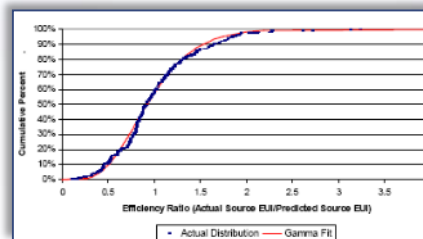


One simple number
understood by ALL stakeholders.

Developing a 1 – 100 ENERGY STAR Score



Nationally
representative
survey



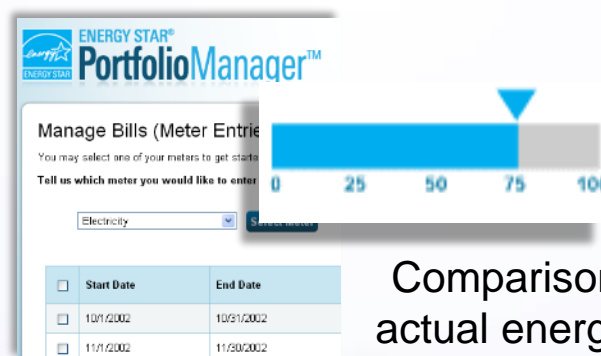
Data analysis

Descriptive Statistics for Variables in Final Regression Model				
Variable	Full Name	Mean	Minimum	Maximum
SrcEUI	Source Energy per Square Foot	198.4	19.62	1133
LNsqFt	Natural Log of Square foot	9.535	8.517	13.82
PCDen	Number of Computers per 1000 ft2	2.231	0.0273	11.11
LNWkHrs	Natural Log of Weekly Operating Hours	3.972	3.611	5.124
LNWkrDen	Natural Log of Number of Workers per 1000 ft2	0.5616	-3.882	2.651
HDDxPH	Heating Degree Days x Percent Heated	4411	0.0000	9277
CDDxPC	Cooling Degree Days x Percent Cooled	1157	0.0000	5204

Note:

- Statistics are computed over the filtered data set (n=498 observations).
- Values are weighted by the CBECs variable ADJWTS.
- The mean values are used to center variables for the regression.

Statistical modeling



Comparison between
actual energy data and
the modeled estimate

Property types with 1-100 ENERGY STAR scores



Bank Branch



Barracks*



Courthouses



Data Centers



Distribution Centers



Financial Offices



Hospitals



Hotels



K-12 Schools



Office Buildings



Medical Offices*



Multifamily Housing



Residence Hall/Dormitory*



Retail Stores



Senior Care Communities



Supermarkets



Warehouses



Wastewater Treatment Plants*



Wholesale club/ Supercenters



Worship Facilities



ENERGY STAR® PortfolioManager®

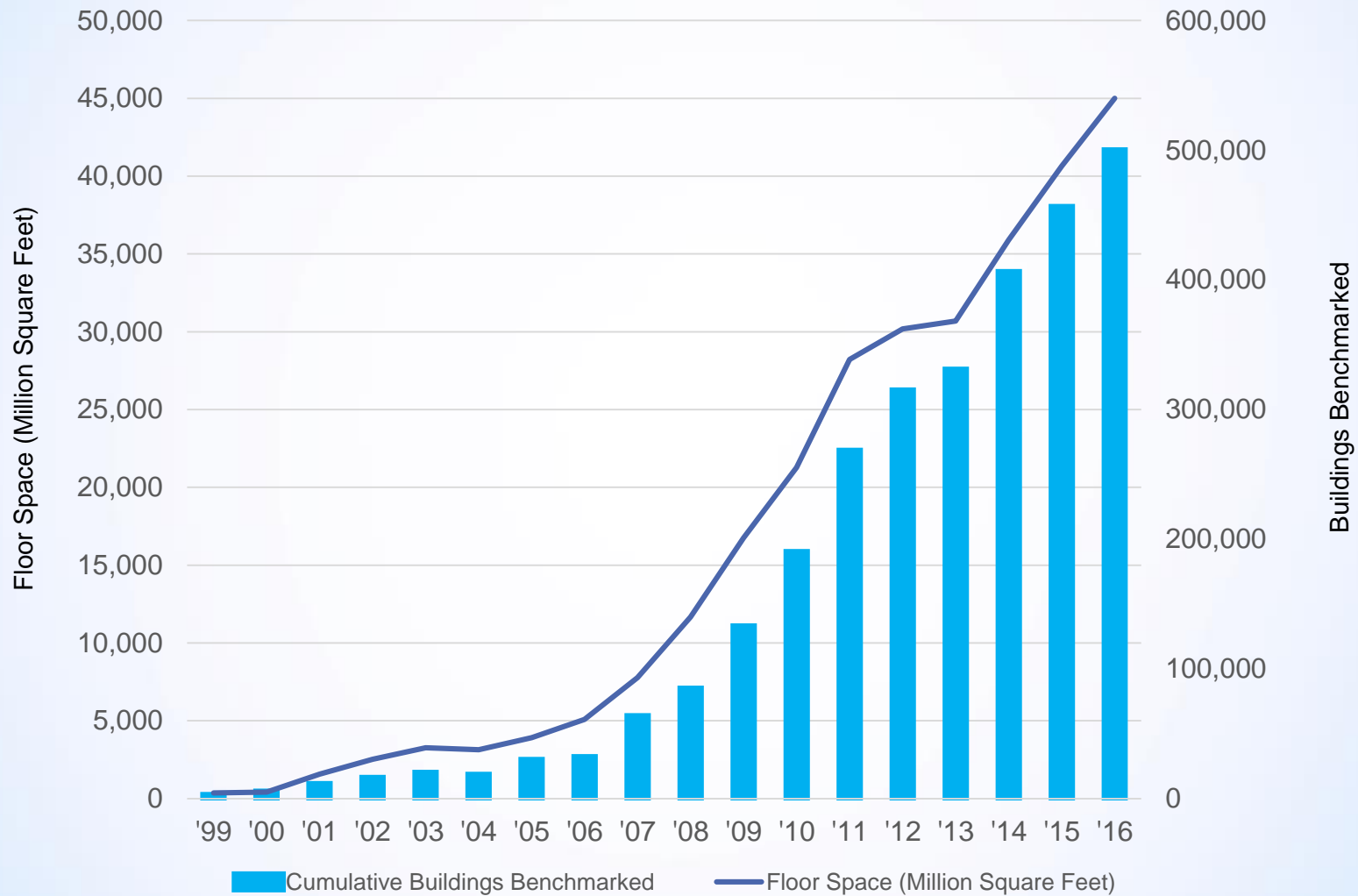




- 50% of the U.S. commercial building market
- Nearly 500,000 buildings
- Nearly 45 billion square feet



ENERGY STAR® PortfolioManager®





ENERGY STAR® PortfolioManager®

Management Tool



Assess whole building energy and water consumption



Track changes in energy, water, greenhouse gas emissions, and cost over time



Track green power purchase



Create custom reports



Share/report data with others



Apply for ENERGY STAR certification



ENERGY STAR® PortfolioManager®

Metrics Calculator



Energy consumption
(source, site, weather
normalized)



Greenhouse gas
emissions (indirect, direct,
total, avoided)



Water consumption
(municipally supplied
potable and reclaimed,
alternative)



ENERGY STAR 1-to-100
score (available for many
building types)

**MyPortfolio**

Sharing

Planning

Reporting

Recognition

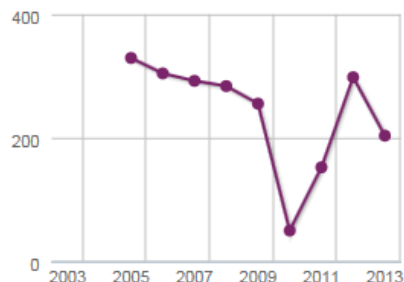
Admin

Processing

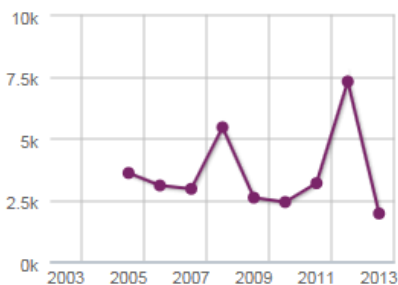
Properties (21)

[Add a Property](#)

Source EUI Trend (kBtu/ft²)



Total GHG Emissions Trend (Metric Tons CO2e)



Notifications (0)

You have accepted a connection request from Karen Schneider. The connection has been made and will now show in your [Contacts list](#). If needed, you may now share property information with this contact.

You have no new notifications.

Properties (21)

[Add a Property](#)Filter by: [Create Group](#) | [Manage Groups](#)

Name ↕	Action
AES - Federal Office (Test)	<input data-bbox="1323 778 1526 806" type="text" value="I want to..."/>
Federal Test DOH Office 25	<input data-bbox="1323 835 1526 863" type="text" value="I want to..."/>
Mike Sample Hospital	<input data-bbox="1323 892 1526 921" type="text" value="I want to..."/>
Mike's London Property	<input data-bbox="1323 949 1526 978" type="text" value="I want to..."/>
Mike's Sample Bldg.	<input data-bbox="1323 1006 1526 1035" type="text" value="I want to..."/>
Mike's Test DEES Project	<input data-bbox="1323 1063 1526 1092" type="text" value="I want to..."/>
Mike's Test Design	<input data-bbox="1323 1120 1526 1149" type="text" value="I want to..."/>
Mike's Test HOW	<input data-bbox="1323 1178 1526 1206" type="text" value="I want to..."/>
Mike's Test International Property	<input data-bbox="1323 1235 1526 1263" type="text" value="I want to..."/>



ENERGY STAR® PortfolioManager®



A street-level photograph of a city, likely New York City, showing tall buildings and a clear sky. A semi-transparent dark overlay is placed over the center of the image, containing white text. The text lists statistics related to energy and water benchmarking in commercial buildings.

500,000 properties benchmarking energy use

50% of U.S. commercial building space

110,000+ properties benchmark water use

200,000+ properties benchmark energy/water using web services

30,000 ENERGY STAR certified properties

Understand energy cost trends

Portfolio Average Energy Cost Intensity

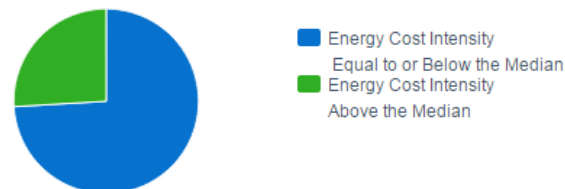
-0.15 ▶ Change in Average Energy Cost Intensity

1.39 ▶ Current Average Energy Cost Intensity

1.54 ▶ Baseline Average Energy Cost Intensity

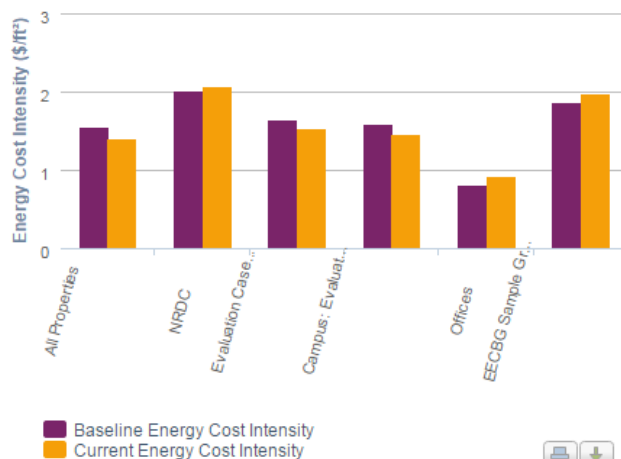
Properties Included: 27

Your Properties Compared to the National Median Energy Cost Intensity



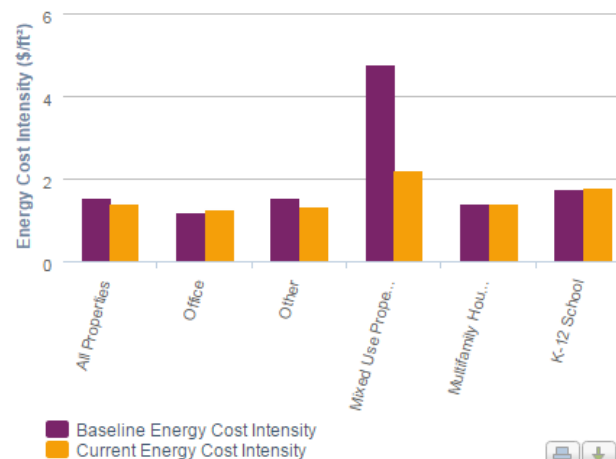
Energy Cost Intensity by Group

[Select Groups](#)



Energy Cost Intensity by Property Type

[Select Types](#)



Translate simple information into dozens of performance indicators

Energy Metrics (Site and Source)

- Total Energy Use (kBtu)
- Energy Use Intensity (EUI) (kBtu/Sq. Ft.)
- Weather Normalized EUI (kBtu/Sq. Ft.)
- National Median EUI (kBtu/Sq. Ft.)
- % Difference from National Median EUI (%)

Comparisons

- Total Energy Use (kBtu)
- Energy Use Intensity (kBtu/Sq. Ft.)
- Adjusted Energy Use (%)
- GHG Emissions (MtCO₂e)
- Available against baseline or between any two periods.

Financial

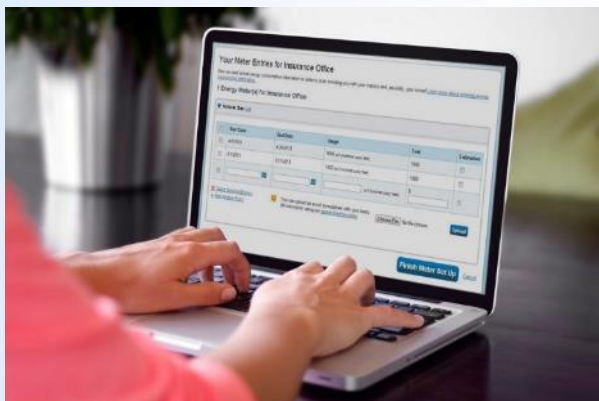
- Annual Energy Cost
- Total Energy Cost per Sq. Ft.
- Cumulative Investment in Facility Upgrades
- Cumulative Investment per Sq. Ft.

Renewable Energy

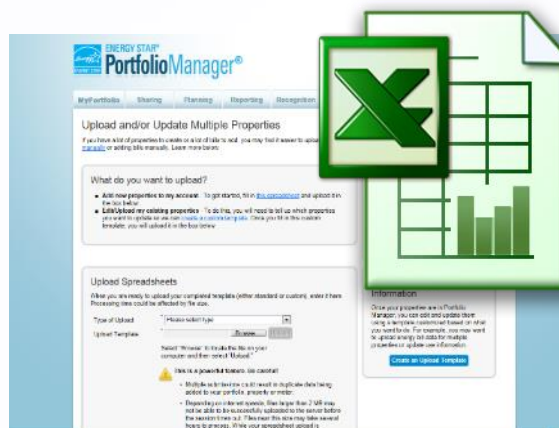
- Total On-Site Electric Generation (kWh)
- Percent of Electricity from On-Site Renewable (%)
- Total Renewable Energy Certificates Purchased and Sold
- Total Avoided Greenhouse Gas Emissions from RECs (MtCO₂e)

Choose the best data management method

Manual entry




Spreadsheet upload



Web services



Find Utilities that Provide Energy Data for Benchmarking

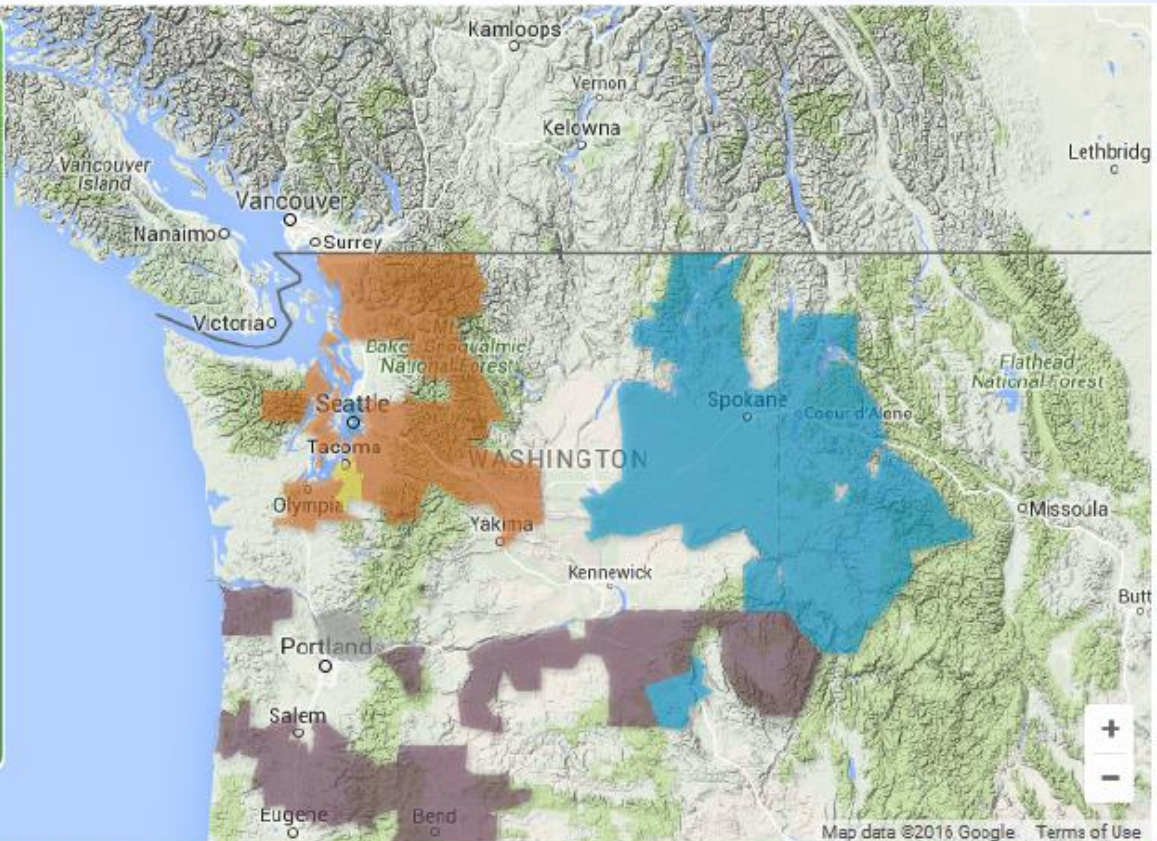
**FIND UTILITIES THAT PROVIDE ENERGY DATA FOR BENCHMARKING**

Click on the map or search to quickly determine if your utility provides the energy data you need to benchmark in ENERGY STAR® Portfolio Manager®

Please enter your zip code below to show coverage in your area:

Utility Name: Puget Sound Energy
Fuel Type: Electric, Gas
Data Type ⓘ: Web Services
Aggregate Whole-Building Data ⓘ: Yes(5)
Multifamily Included ⓘ: Yes
Contact Info:
Email: MyData@pse.com
Web Address: Click [here](#) for more information.

Utility Name: Seattle City Light
Fuel Type: Electric
Data Type ⓘ: Web Services
Aggregate Whole-Building Data ⓘ: Yes(2)
Multifamily Included ⓘ: Yes
Contact Info:
Email: scf_portfolio_manager@seattle.gov
Web Address: Click [here](#) for more information.



Utilities Providing Energy Data for Benchmarking in ENERGY STAR® Portfolio Manager®

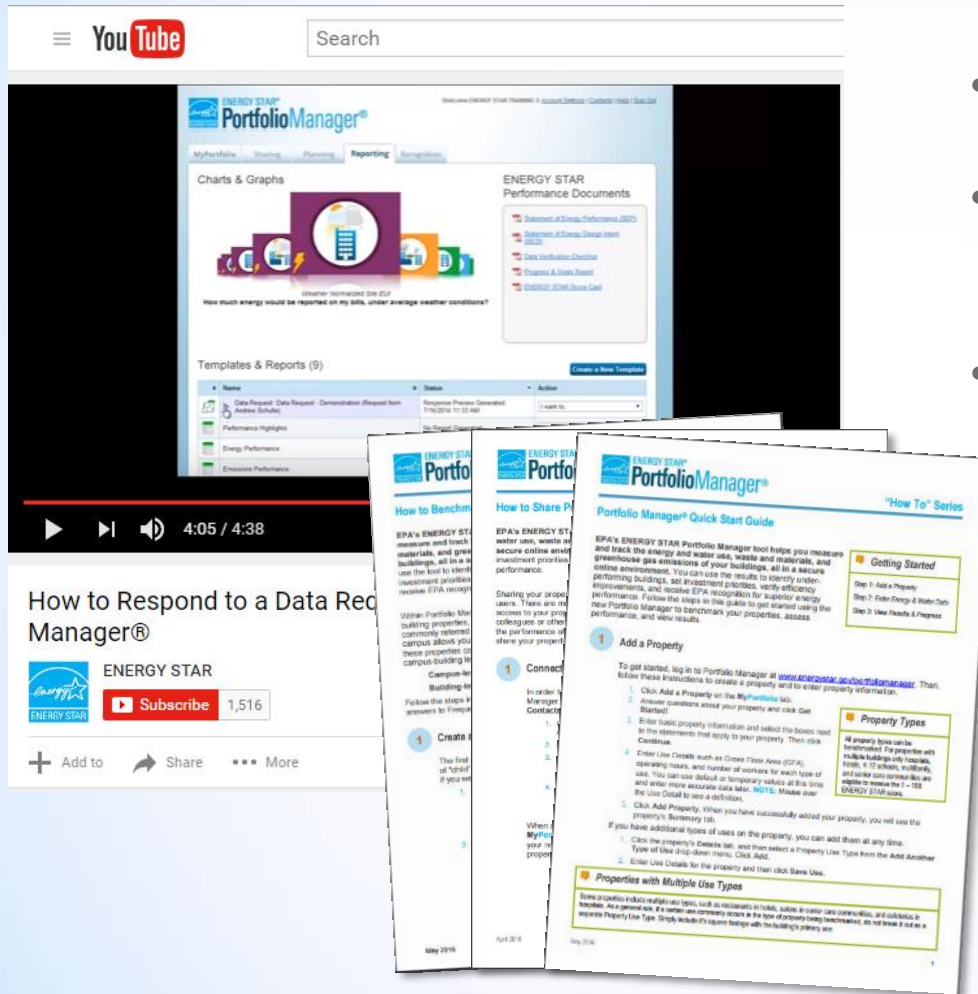
www.energystar.gov/utilitydata

36

200+ Providers Exchange Data with Portfolio Manager



Portfolio Manager Training



- Weekly live webinars
- 3-7 minute training videos on YouTube
- Step-by-step training guides, FAQs, and technical reference documents

ENERGY STAR Help Desk

The screenshot shows the ENERGY STAR Portfolio Manager Help Desk interface. At the top, there's a navigation bar with the ENERGY STAR logo and the text "PortfolioManager™". Below this, there are tabs for "MyPortfolio", "Sharing", "Planning", "Reporting", and "Recognition". The main content area is titled "Portfolio Manager Help" and contains several links and icons for user assistance. On the right, there's a "Technical References" section with links to various documents. At the bottom, there are social media links and a "Follow Us" section.

ENERGY STAR PortfolioManager™

Help | Login
Language: English | Français

MyPortfolio | Sharing | Planning | Reporting | Recognition

Portfolio Manager Help

- [Learn More about Portfolio Manager](#)
Get fact sheets, quick reference guides and other information about how the tools works.
- [Take or View a Training](#)
Sign up for a session or view a recording on a wide variety of topics.
- [Search the Knowledge Base](#)
Browse or search our Frequently Asked Questions.
- [Ask a Question](#)
Send a question or comment to our staff.
- [Check the Glossary](#)
Look up terms used throughout Portfolio Manager.
- [Web Service Documentation](#)
If you exchange data via web services, check out the documentation or get email updates.

Don't forget, we're out there with you! Network with us and other folks who are using Portfolio Manager.

[Like us on Facebook](#) [Follow Us on Twitter](#) [View Our YouTube Channel](#)

Technical References

Are you into the math of it all? Learn more about how Portfolio Manager calculates metrics.

- [Source Energy](#)
- [Greenhouse Gas Emissions](#)
- [ENERGY STAR Scale](#)
- For more information on specific property types, like office and school, visit the [ENERGY STAR website](#). These are available in English only.
- [National Median Values](#)
- [Accounting for Climate & Weather](#)
- [Thermal Conversion Factors](#)

[Get more documentation on the ENERGY STAR website.](#)

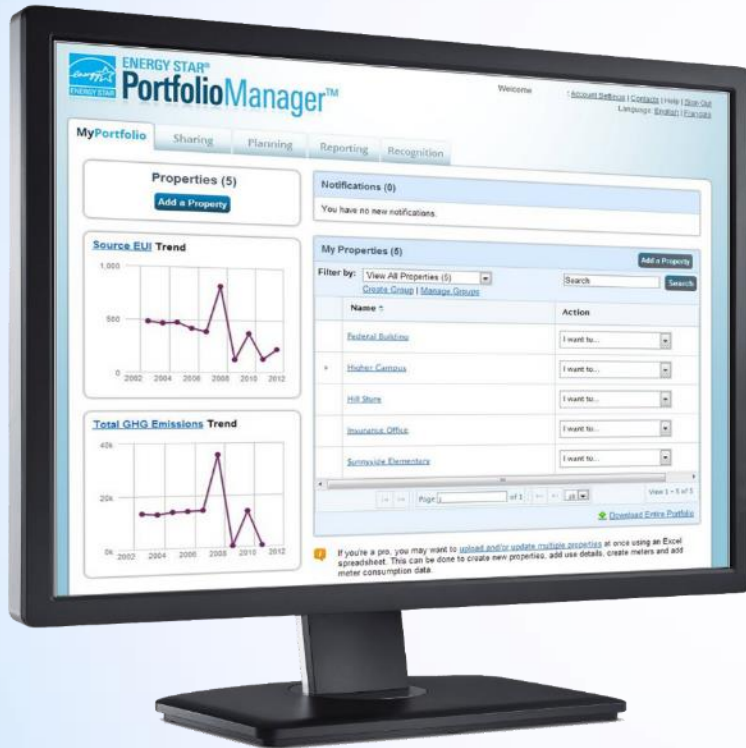
Follow Us

[Contact Us](#) | [Privacy Policy](#) | [Browser Requirements](#) | [ENERGY STAR Buildings & Plants Website](#)

On-demand user support at energystar.gov/buildingshelp



ENERGY STAR® PortfolioManager®



Free. Online. Secure.

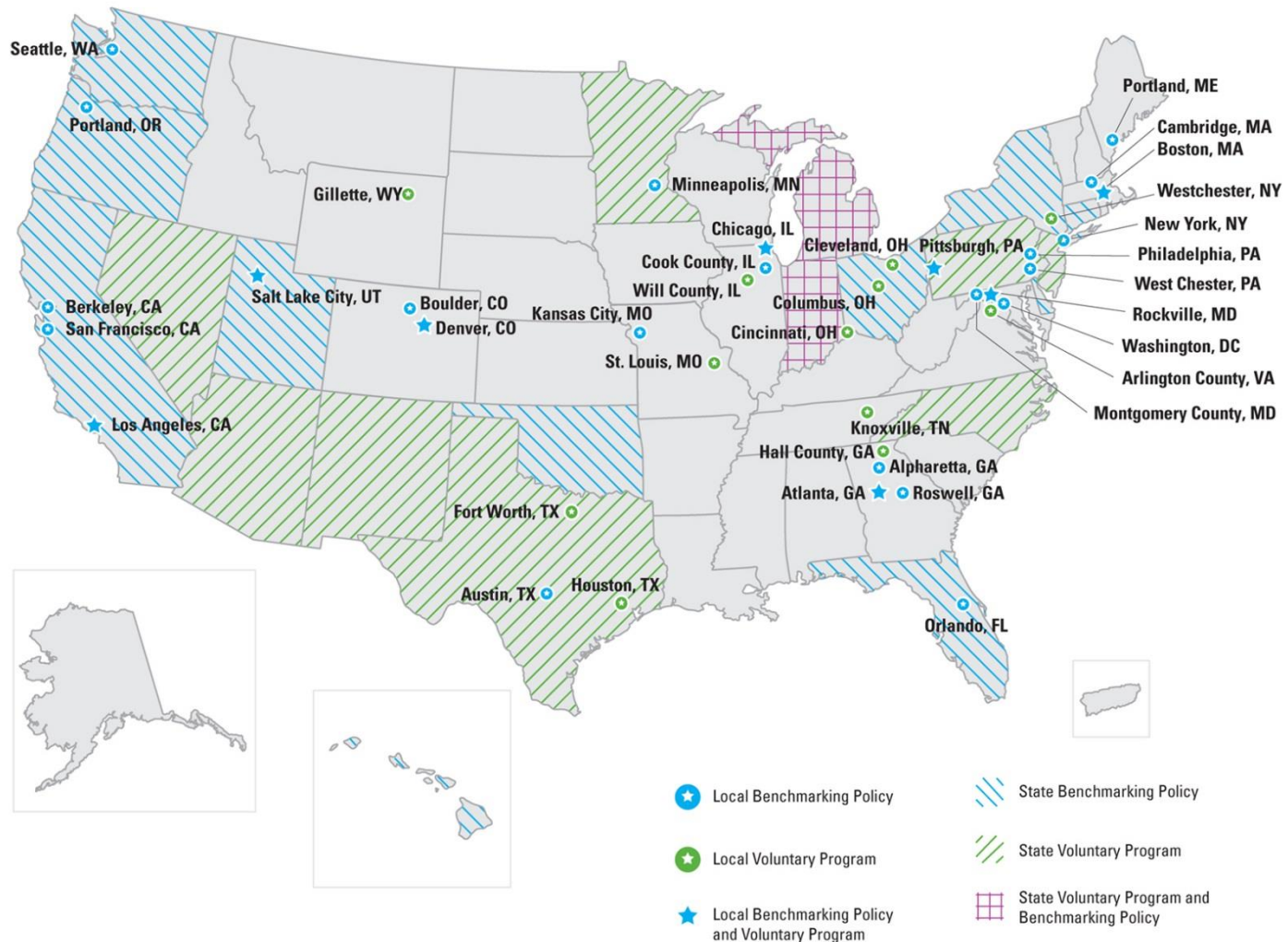
energystar.gov/benchmark



A low-angle, upward-looking perspective of several modern skyscrapers with glass facades. The buildings are framed by a grid of window panes, which reflect the bright blue sky and white clouds. The perspective creates a sense of height and architectural scale. A solid green horizontal band is superimposed across the middle of the image, serving as a background for the title text.

State and Local Policies

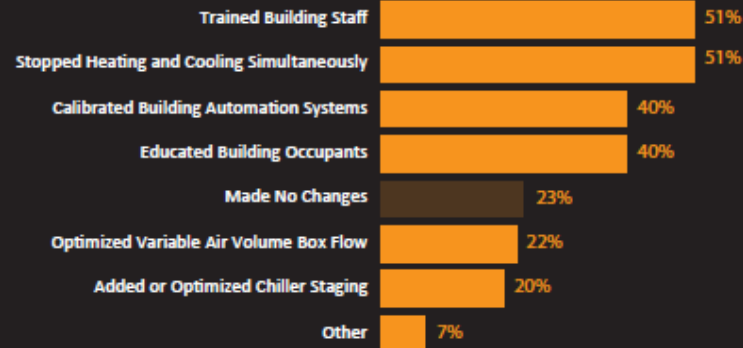
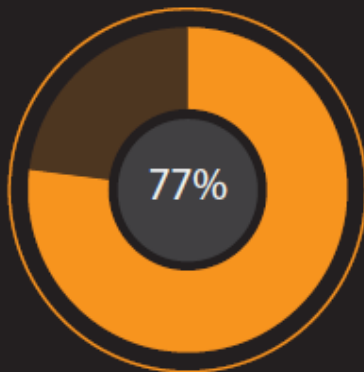
State and Local Programs Leveraging Portfolio Manager



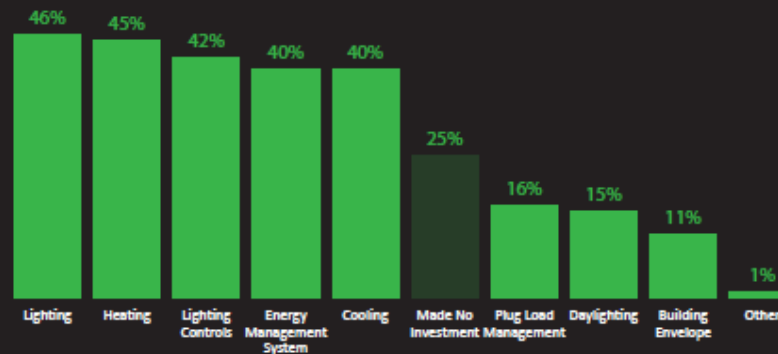
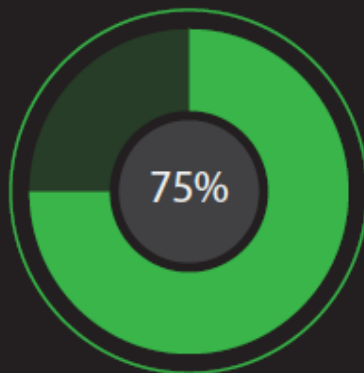
NYC Benchmarking Policy Motivates Behavior Change and Energy Efficiency Investment

As a result of NYC's benchmarking and transparency ordinance:

Made Operational Changes



Invested in New Equipment

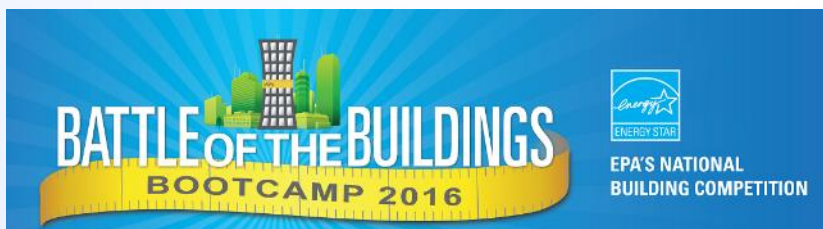


These results are from a survey conducted March 16–April 26, 2016 of 151 New York City facility managers conducted by NEMA/Business Information Services with panel support from Bizpinion and Research Now on behalf of the National Electrical Manufacturers Association (NEMA).

The background image is a photograph of a modern glass skyscraper. The glass panels of the building are highly reflective, mirroring the surrounding environment. In the reflection, a historic European-style building with ornate architectural details, including a balcony with decorative balustrades and a tiled roof, is visible. The sky is a clear, vibrant blue. A semi-transparent yellow horizontal band is positioned across the middle of the image, serving as a backdrop for the text.

Recognition Opportunities

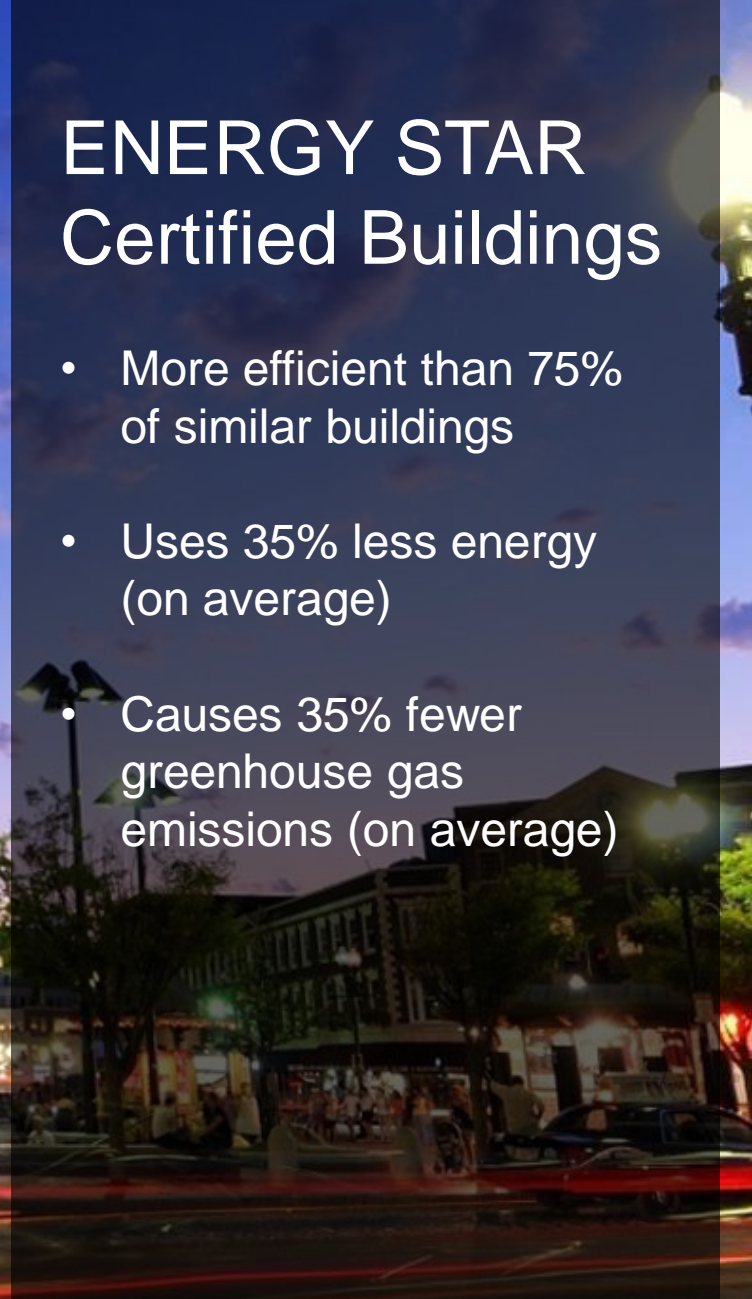
ENERGY STAR Recognition



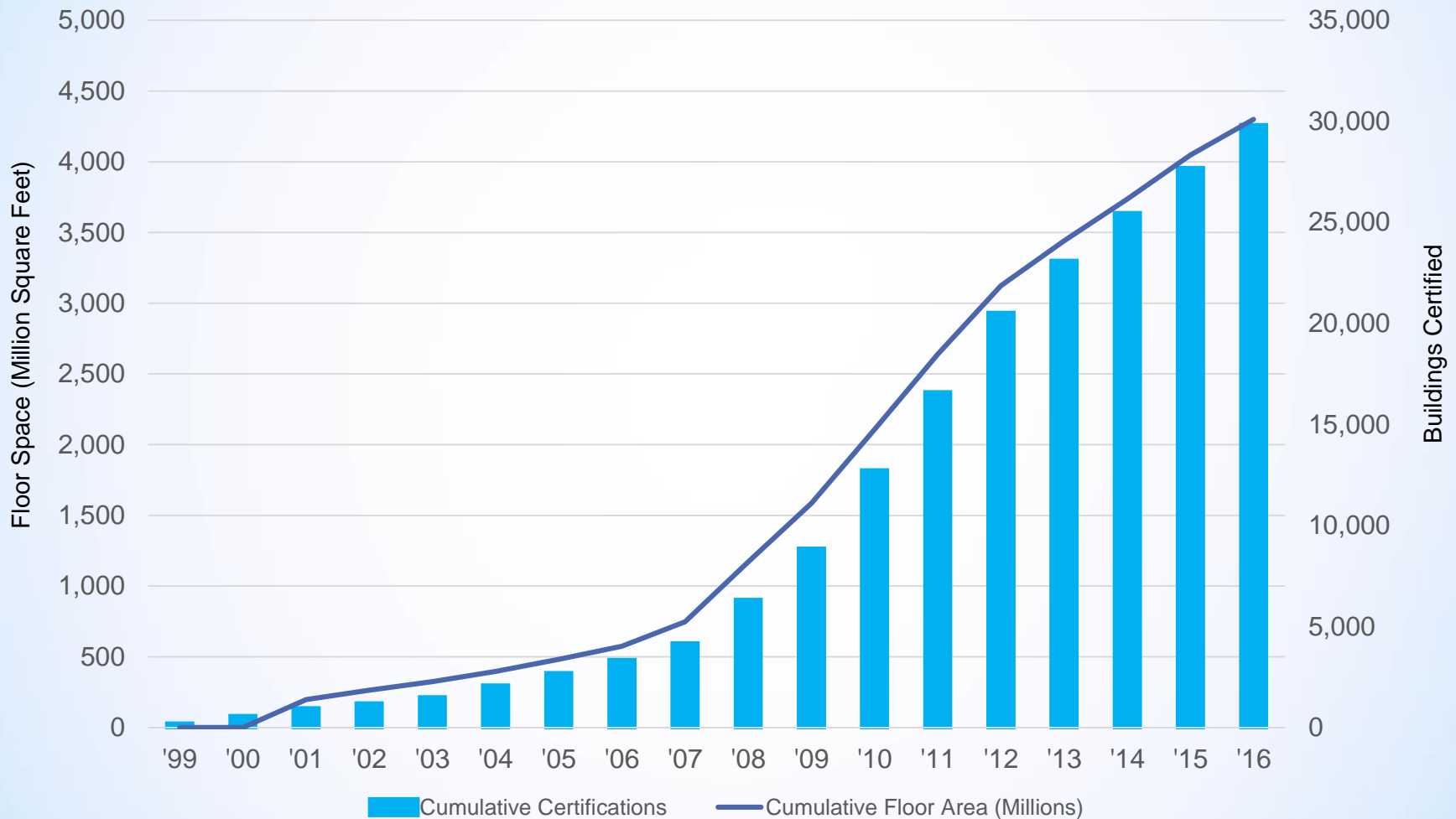


ENERGY STAR Certified Buildings

- More efficient than 75% of similar buildings
- Uses 35% less energy (on average)
- Causes 35% fewer greenhouse gas emissions (on average)



ENERGY STAR Certified Buildings





2016 ENERGY STAR
CERTIFIED BUILDING

New decal highlights recertification



49

Evergreen Public Schools

- Located in Vancouver, Washington
- Across the district's 35 schools:
 - 48% reduction in electricity consumption
 - \$9.4 million in avoided energy costs
 - Average portfolio-wide ENERGY STAR score of 91

Figures cumulative since 2008

ENERGY STAR Recognition

- Partner of the Year (2010, 2011)
- Sustained Excellence (2012, 2013, 2014, 2015, 2016, 2017)

“Energy Matters”



Fairfax County Public Schools

- Located in Fairfax, Virginia
- Across the district's 220 facilities:
 - 22% reduction in site energy use
 - \$10.5 million in avoided costs
 - 153 ENERGY STAR certified buildings

Figures cumulative since 2014

ENERGY STAR Recognition

- Partner of the Year (2017)

“Innovative student solutions for energy conservation.”



Kentucky School Boards Association

- Located in Frankfort, Kentucky
- Across the Association's 173 districts:
 - 387 million kWh electricity saved
 - \$123 million in avoided costs
 - 371 ENERGY STAR certified K-12 schools

Figures cumulative since 2009

ENERGY STAR Recognition

- Partner of the Year (2014, 2015)
- Sustained Excellence (2016, 2017)



"Prepare Kentucky students for next-generation learning, work, and citizenship."



Other Resources



Get expert help from experienced ENERGY STAR partners!

ENERGY STAR Service and Product Provider (SPP) partners

- Businesses and organizations that use ENERGY STAR tools and resources to help customers:
 - Benchmark their buildings
 - Achieve energy performance improvements
 - Earn ENERGY STAR recognition
- Experienced with ENERGY STAR
- Searchable on the ENERGY STAR website
- For more information on ENERGY STAR SPPs, visit energystar.gov/ExpertHelp

Show off your partnership – get creative (and have fun)



Guidelines for Energy Management

energystar.gov/guidelines



ENERGY STAR®

Cash Flow Opportunity Calculator

Know when to finance energy efficiency projects

Go toe-to-toe with your CFO

- Addresses the “we don’t have the money” objection
- Translates energy savings into “financial speak”

Answers three questions:

1. How much new energy efficiency equipment can be purchased from the anticipated savings?
2. Should it be financed now, or is it better to wait and use cash from a future budget?
3. Will we lose money by waiting for a lower interest rate?

energystar.gov/buildings/FinancialEvaluation

ENERGY STAR®

Building Upgrade Value Calculator

Know the financial impact for owners and tenants

- Evaluates costs and benefits of efficiency investments, for owner and each tenant
- Quantifies expected changes in expense reimbursements under common commercial lease structures
- Directly addresses “split incentive” barrier (who pays/who benefits) of efficiency investment in commercial real estate
- Potentially opens dialogue for landlords and tenants to share savings from capital investments
- Included in BOMA Energy Efficiency Program (BEEP) Course 5, *Building the Business Case*

energystar.gov/buildings/FinancialEvaluation

ENERGY STAR®

Financial Value Calculator

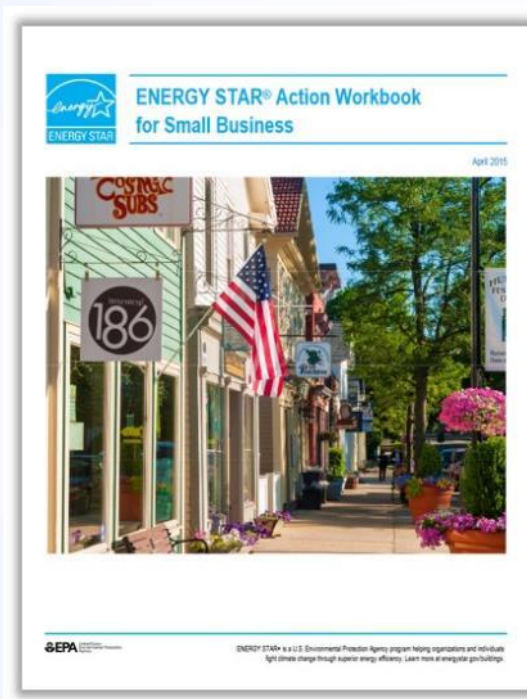
Show how efficiency boosts corporate market value

- Quantifies the value of improvements in energy efficiency to your organization.
- Uses the prevailing price/earnings ratio to estimate the market value of increased earnings that can result from increased energy efficiency.

energystar.gov/buildings/FinancialEvaluation

Action Workbooks for Congregations and Small Businesses

Planning guides for increasing energy efficiency in small businesses and worship facilities.

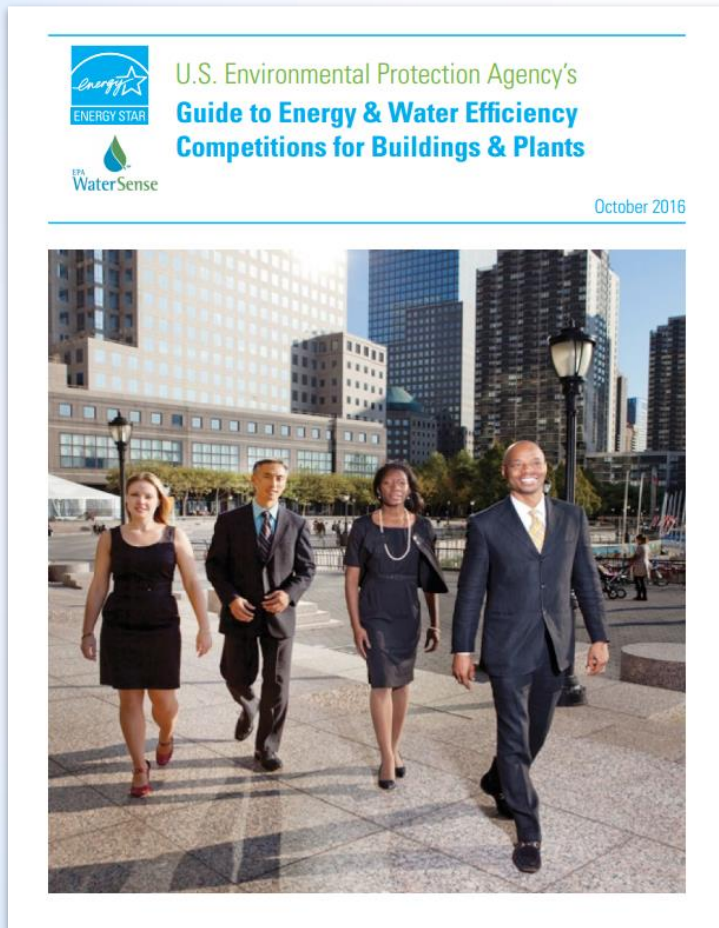


energystar.gov/smallbiz



energystar.gov/congregations

Launch your own energy or water competition!



Step-by-step guidance on how to:

1. Set Goals
2. Define the Playing Field
3. Dedicate Resources
4. Recognize Participants
5. Keep Score
6. Plan the Launch
7. Get the Word Out

www.energystar.gov/competitionguide

ENERGY STAR Bootcamp!

Whip your building into shape with EPA's intense 3-month workout plan!

Month 1: Lighting

Month 2: Plug Load

Month 3: Heating & Cooling

[energystar.gov/
BattleOfTheBuildings](http://energystar.gov/BattleOfTheBuildings)



Use Bootcamp Activity Kits

ACTIVATE COMPUTER POWER SAVING SETTINGS

ENERGY EXERCISE OF THE WEEK

1, 2, 3, 4 - PC POWER SETTINGS SAVE YOU MORE!
5, 6, 7, 8 - DON'T FORGET TO ACTIVATE!

SLEEP MODE

Activate Power Saving Settings

SPOT WASTE? REPORT IT!

ENERGY EXERCISE OF THE WEEK

If you see energy or water waste in our building, please notify the facility manager!

Waste in our building? Notify a report! The facility manager can find it and fix it!

Report Energy & Water Waste

TRY Daylighting

ENERGY EXERCISE OF THE WEEK

STAY UP SOME SAVINGS WHILE YOU SOAK UP THE SUN! WORKING BY DAYLIGHT IS EFFICIENT AND FUN!

Try Daylighting

REPORT TEMPERATURE IMBALANCE

ENERGY EXERCISE OF THE WEEK

REPORT A ROOM THAT'S TOO COLD OR TOO HOT! TO MAINTAIN THE BALANCE WITHOUT WASTING WATTS!

Report Hot/Cold Rooms

SPOTTING ENERGY WASTE

ENERGY EXERCISE OF THE WEEK

Look for these signs of energy waste!

Spot Waste: Heating/Cooling

unlock air vents

ENERGY EXERCISE OF THE WEEK

YOU AND THE HVAC HAVE A COMMON TECHNIQUE: YOU BOTH NEED DEEP BREATHS TO PERFORM AT YOUR PEAK!

Unblock Air Vents

TURN OFF THE LIGHTS

ENERGY EXERCISE OF THE WEEK

DEAL ENERGY WASTE A KNOCKOUT BLOW! TURN OFF THE LIGHTS BEFORE YOU GO!

Turn off the Lights

Look for the ENERGY STAR®

ENERGY EXERCISE OF THE WEEK

THE LITTLE BLUE LABEL - WHAT DOES IT MEAN? THIS USES LESS ENERGY! THIS PRODUCT IS GREEN!

Look for the ENERGY STAR

TAKE TIME TO UNPLUG

ENERGY EXERCISE OF THE WEEK

ELECTRONICS LEFT PLUGGED IN CONTINUE TO CHUG! IF IT'S CHARGED OR NOT IN USE, TAKE TIME TO UNPLUG!

Unplug Unused Appliances

SAVE ENERGY WITH LEDs

ENERGY EXERCISE OF THE WEEK

GET TO WORK - LIFT WITH YOUR KNEES, SAVE 75% WITH LEDs!

Save with LEDs

SHUT IT DOWN

ENERGY EXERCISE OF THE WEEK

A JOB AFTER WORK CAN BE HEALTHY AND FUN - BUT YOUR DESKTOP COMPUTER DOESN'T NEED TO RUN!

Shut It Down

SKIP THE SPACE HEATER

ENERGY EXERCISE OF THE WEEK

SKIP THE SPACE HEATER, IT WASTES ENERGY - TILT THE BLINDS, WEAR A SWEATER, OR SIP A HOT TEA!

Skip the Space Heater

Engage employees with fun tools



Bring Your GREEN TO WORK
with ENERGY STAR®

The small steps you take at work to save energy can make a big difference in the fight against global warming.



Monitor/Computer
Enable power management settings so they automatically enter a low power mode when not in use.



Bring Your GREEN TO WORK
with ENERGY STAR®

Learn how you can make many of the same green choices at work as you make at home to save energy and fight global warming with help from EPA's ENERGY STAR program.

- Give It a Rest**
Use the ENERGY STAR power management settings on your computer and monitor so they go into power save mode when not in use. Also use a power strip as a central "turn off" point when you are using equipment to completely disconnect the power supply.
- Unplug It**
Unplug electronics such as cell phones and laptops once they are charged. Adapters plugged into outlets use energy even if they are not charging.
- Light Up Your Work Life**
Replace the light bulb in your desk lamp with an ENERGY STAR qualified bulb. It will last up to 10 times longer and use about 75 percent less energy. Turn off the lights when you leave, especially at the end of the day.
- Let It Flow**
Keep air vents clear of paper, files, and office supplies. It takes as much as 25 percent more energy to pump air into the workspace if the vents are blocked.
- Team Up**
Create a Green Team with your co-workers, help build support for energy efficiency in your workplace, and reduce office waste. Set a goal to make your building an ENERGY STAR qualified building.

Learn More at energystar.gov/work



**ENERGY STAR®
Green Team Checklist**

One person cannot do it all! So when it comes to making your workplace greener and more energy efficient, nothing beats a team. The Environmental Protection Agency (EPA) has learned from ENERGY STAR partners that forming a green team with coworkers is a great way to help increase energy efficiency and reduce office waste.

Consider the following checklist of creative ideas from EPA to help your green team get started. Once you've formed your team, start by planting the seeds for success with small changes in individual workplaces. Then move through the list and help success bloom with bigger changes that can affect the whole organization. Together, those actions can help your green team build a better world!

STEP 1: GET ORGANIZED

- ☐ **Start Off Right**—Meet with management to get approval and buy in for the idea of forming a green team. Not only does support from management add legitimacy to your team, some of the resources needed to "green" your workplace might require an investment of time, money, or both by your organization.
- ☐ **Recruit from A-Z**—Encourage coworkers from different levels and parts of your organization—from senior management and interns to facility managers and human resources personnel—to get involved. A team approach improves buy in from all levels of the organization, which helps to ensure greater support and success.
- ☐ **Kick It Off**—Organize a kickoff meeting to develop a plan of action—the suggestions below are a great place to start. Another great resource is EPA's *Working Up to Save Energy* poster, which provides step-by-step instructions for forming an energy team—many of which apply to green teams too—as well as real-world examples from other businesses and organizations committed to saving energy, saving money, and fighting global warming.

STEP 2: PLANT THE SEEDS OF SUCCESS

- ☐ **Spread the Word**—Order copies of the *Bring Your Green to Work with ENERGY STAR® tip card* and place them with your coworkers. Display the *Bring Your Green to Work with ENERGY STAR® poster* in break rooms or other common areas, and share the link to the *ENERGY STAR® at work* Web site (energystar.gov/work).
- ☐ **Give It a Rest**—Use the ENERGY STAR power management settings on computers and monitors so they go into power save mode when not in use. Also use a power strip as a central "turn off" point when you are using equipment to completely disconnect the



Did you know that manufacturing in the U.S. is responsible for about one-third of our country's greenhouse gas emissions? You can help! Learn how to help fight climate change with energy-saving steps that can make a big difference.

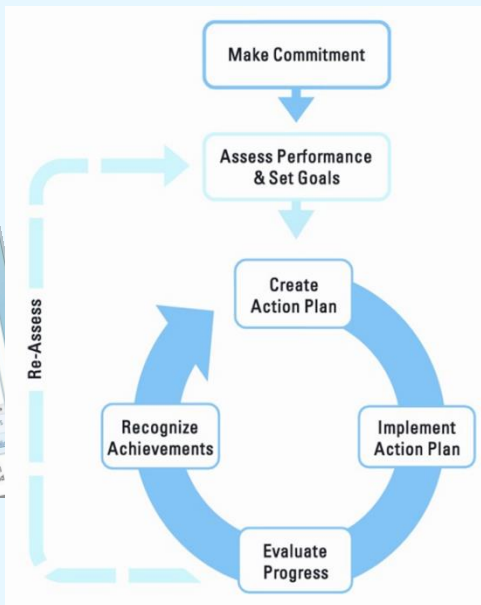
Click on the blue stars to learn more.

- Animated workplace tools
- Green team checklist
- Posters and tip cards
- Building tour video
- Energy quiz
- Fast facts
- ... and more!

energystar.gov/work

ENERGY STAR for Congregations:

Powerful tools and information for stewardship



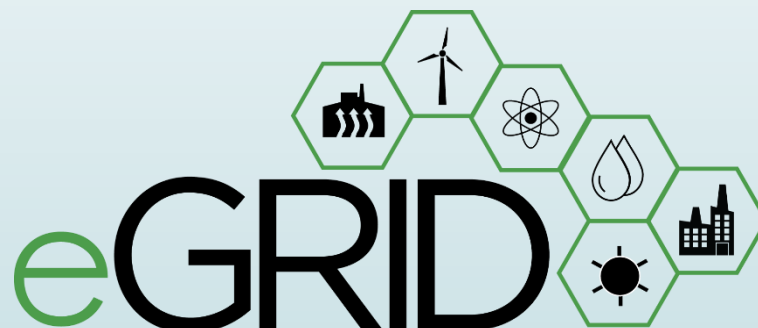
Estimating Air Quality Benefits Associated with Changes in Energy Use – EPA Tools

Emissions & Generation
Resource Integrated Database

www.epa.gov/energy/egrid

Johnson.Travis@epa.gov

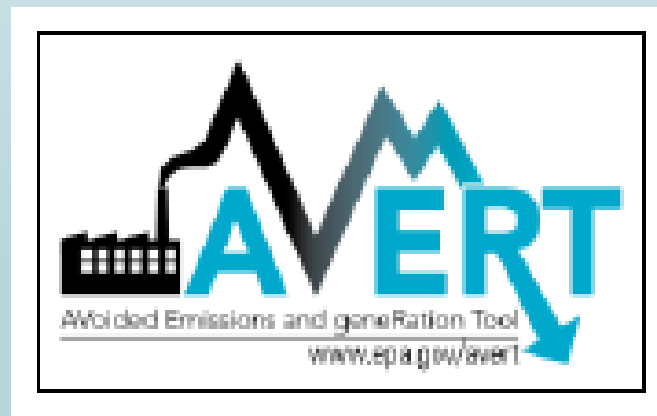
(202) 343-9018



AVoided Emissions and
geneRation Tool (AVERT)

www.epa.gov/avert

AVERT@epa.gov



Caterina (Katy) Hatcher

ENERGY STAR Public Sector National Manager

hatcher.caterina@epa.gov; 202-343-9676

Jerry Lawson

ENERGY STAR Small Business and Faith Communities National Manager

lawson.jerry@epa.gov; 202-343-9314

Advance Program

www.epa.gov/advance

advance@epa.gov