

# ENERGY STAR Update for Statewide K-12 Efficiency Programs

January 18, 2018





## About NASEO

- 
- The National Association of State Energy Officials (NASEO) was formed by the states in 1986
  - Membership includes the 56 Governor-designated energy officials from each state and territory, as well as private sector affiliates
  - Facilitates peer learning across states to improve the effectiveness of energy programs and policies
  - Serves as a resource for and about State and Territory Energy Offices
  - Advocates on behalf of the State Energy Offices (SEO) with Congress, federal agencies, and private-sector organizations
  - Organized through regional and committee structure

Interested in side meeting at the Energy Policy  
Outlook Conference?  
Email [ecarley@naseo.org](mailto:ecarley@naseo.org)



# Program support materials



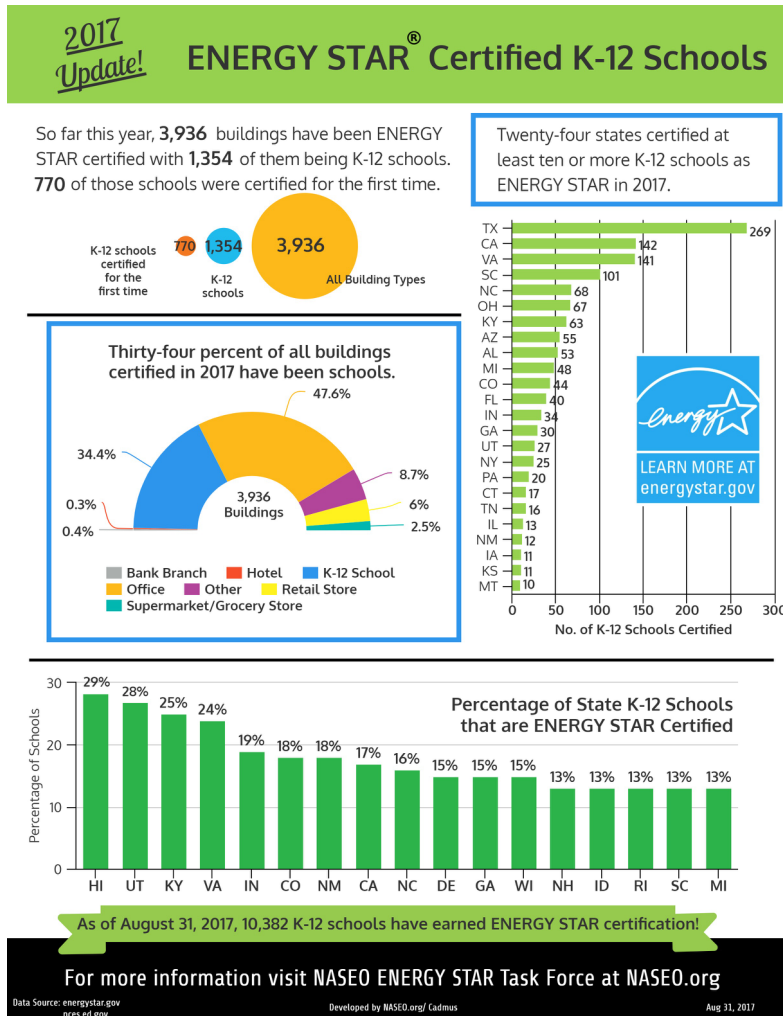
## 8 Things to Do

### To recognize ENERGY STAR® partners

Being recognized as an ENERGY STAR leader is great news.

Here are some ideas on how you can spread the word and maximize the impact within your state.

- 1. Issue a Press Release**  
 Spread the good news through your communication channels with quotes from your leadership and the recipients leadership.
- 2. Use Social Media**  
 Extend your reach through social media. ENERGY STAR.gov offers a social media kit as a starting point.
- 3. Make an Announcement**  
 Make plans to officially announce the news at a scheduled meeting where members of your community and the press typically are in attendance. Use the power of your leadership's bully pulpit.
- 4. Recognize Local Building Representatives**  
 Hold a staff meeting and invite representatives from your community's ENERGY STAR certified buildings to be recognized. Take photos for an internal newsletter, and also send a photo with caption to the local newspaper.
- 5. Send Certificates or Thank-you Notes**  
 Distribute certificates of recognition and letters of thanks to those organizations that own or operate your community's ENERGY STAR certified buildings.
- 6. Notify Other Community Leaders**  
 Write a letter celebrating the achievement to the local Chamber of Commerce, Board of Education, congressperson or senator, or state representative. Encourage them to challenge other organizations to earn the ENERGY STAR for their buildings.
- 7. Host a VIP Tour**  
 Invite local government officials, regional EPA officials, and members of the press to tour one of your ENERGY STAR certified buildings along with its owners and managers. Don't forget to take photos!
- 8. Set a New Goal**  
 Set a goal to move up on next year's list. Invite your local building community to help by earning the ENERGY STAR for their buildings.



**5 Reasons To Engage with ENERGY STAR®**

- 1. Branding**  
 For nearly 25 years, people across America have looked to the ENERGY STAR program for guidance on how to save energy, save money, and protect the environment. Today, ENERGY STAR is the most widely recognized symbol for energy efficiency in the world.
- 2. Metrics**  
 There are more than 1,000 pieces of data that you can pull out of ENERGY STAR's Portfolio Manager, including more than 150 performance metrics, options run from certification ratings to greenhouse gas emissions to use of district chilled water. Data you can use to measure progress.
- 3. Materials**  
 ENERGY STAR offers many tools and materials to promote energy efficiency. These include public service announcements; promotional materials; performance rating systems; training materials; educational brochures; and awards. All at no-cost to ENERGY STAR partners.
- 4. Partners**  
 Thousands of industrial, commercial, utility, state, and local organizations—including more than 40 percent of the Fortune 500®—rely on their partnership with ENERGY STAR to deliver cost-saving energy efficiency solutions.
- 5. Recognition**  
 ENERGY STAR celebrates success by offering several ways to earn recognition for top performance or improvement at the individual facility level, that includes ENERGY STAR certification as well as building performance competitions.

Source: [www.energystar.gov](http://www.energystar.gov)  
Prepared by: NASEO.org  
December 2017



Ed Carley  
NASEO Buildings Program Manager

**Speakers**

Katy Hatcher  
ENERGY STAR National Manager, Public Sector, U.S. Environmental Protection Agency

Dub Taylor  
Director, State Energy Conservation Office;  
Treasurer, NASEO Board of Directors

Saleem Khan  
President, Texas Energy Engineering Services Inc.





# EPA's ENERGY STAR for Schools: Portfolio Manager and More

Katy Hatcher

US EPA

January 18, 2018



## The biggest little label in energy efficiency



5.5 billion  
products



30,000  
buildings



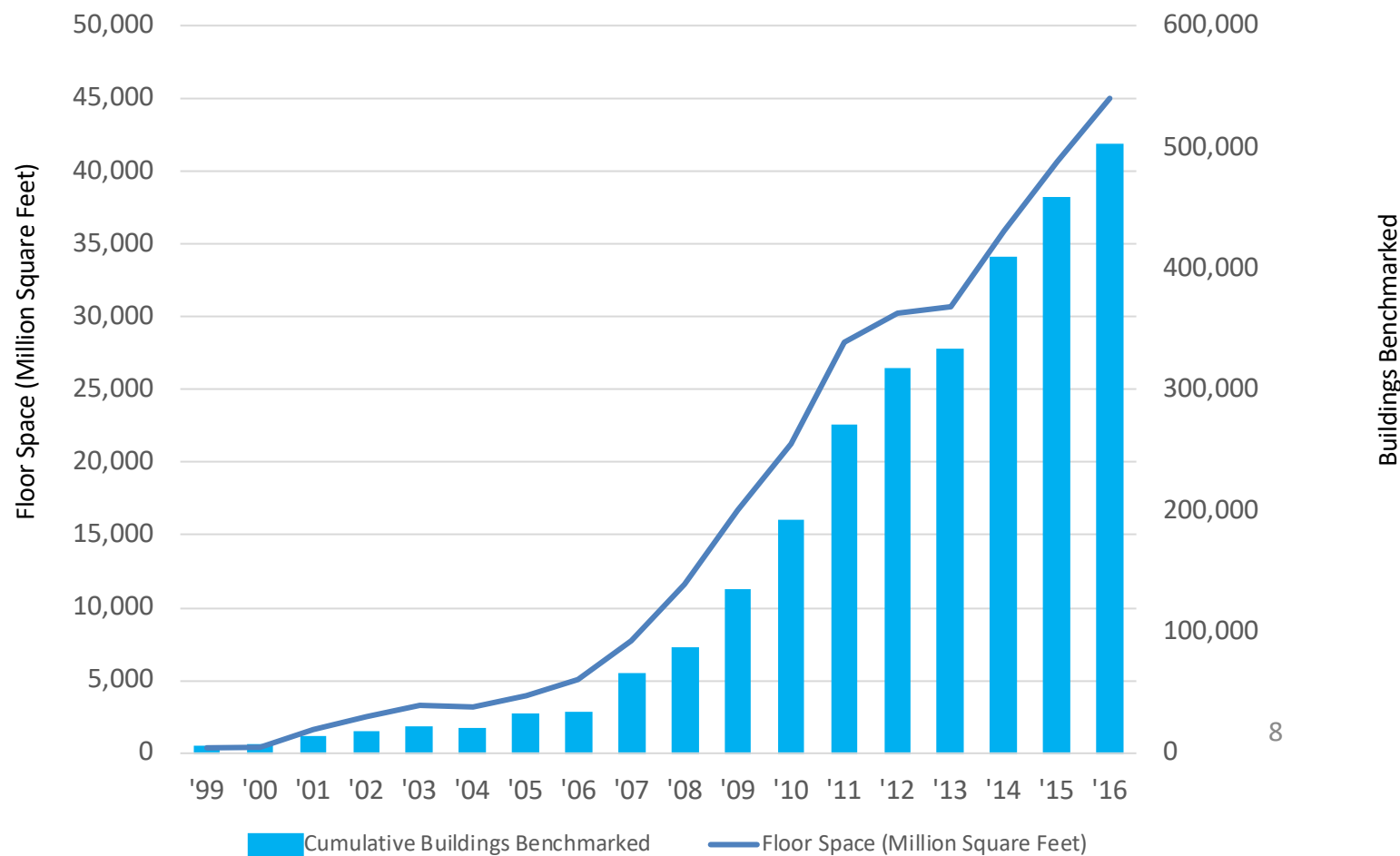
130  
industrial plants



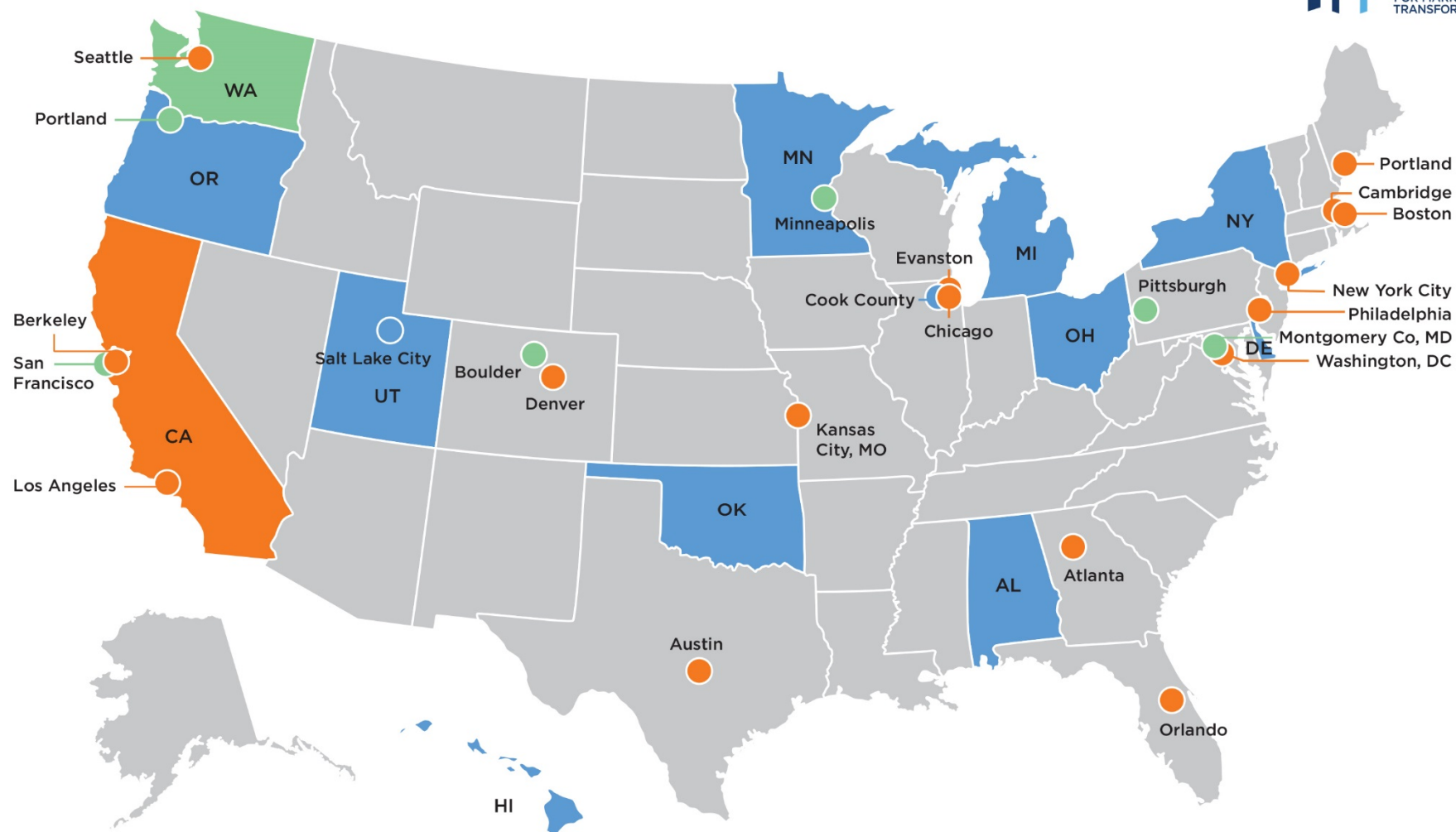
1.7 million  
homes



## Benchmarking with ENERGY STAR is the industry standard.



# U.S. Building Benchmarking and Transparency Policies



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



# ENERGY STAR® PortfolioManager®

The most-used energy measurement and tracking tool for commercial buildings.



## Use Portfolio Manager to track:

- Energy
- Water
- Waste & Materials

[www.energystar.gov/benchmark](http://www.energystar.gov/benchmark)

# ENERGY STAR® PortfolioManager®

## Calculate Key Performance Metrics

- ✓ Whole building energy consumption and cost
- ✓ ENERGY STAR 1-to-100 score (available for many building types)
- ✓ Water consumption and cost
- ✓ Greenhouse gas emissions attributed to building energy use
- ✓ Waste tracking

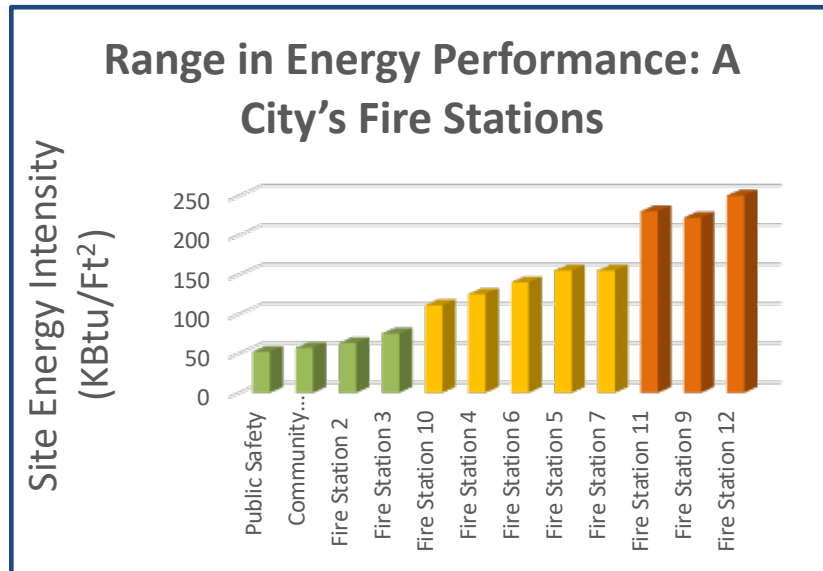
## Manage Your Portfolio of Buildings

- ✓ Prioritize poor performing facilities for immediate improvement.
- ✓ Identify high performing facilities for recognition and replicable practices.
- ✓ Report trends and share energy and water savings.
- ✓ Apply for ENERGY STAR certification.

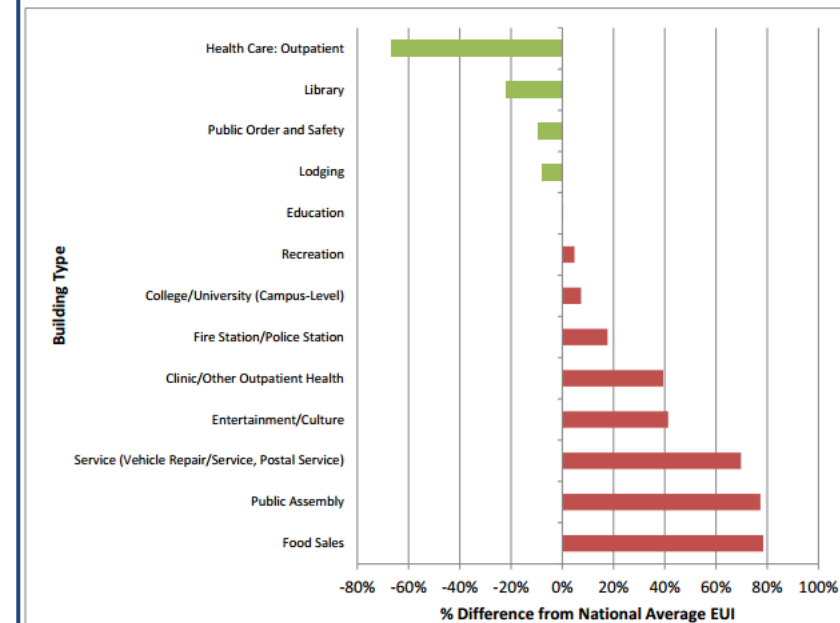
→ Accessible in a cost-free, online secure platform at

[www.energystar.gov/benchmark](http://www.energystar.gov/benchmark)

## What can we do with this data?

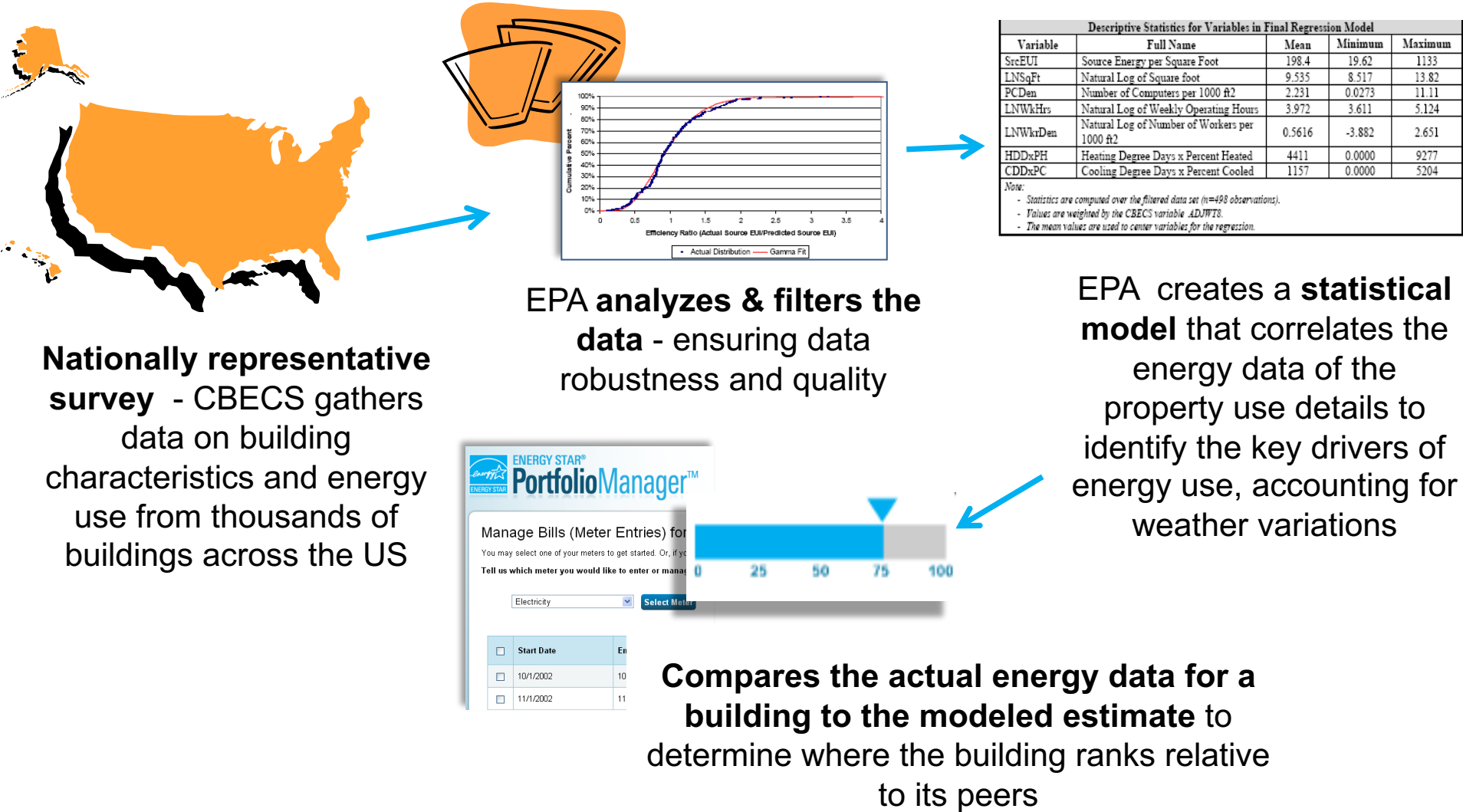


**Figure 6: City Building EUI Averages: Percent from National Average by Building Type, 2010**



Salt Lake City Mayor Becker recognizes top achievers of the Mayor's Skyline Challenge based on the organizations' EPA Portfolio Manager benchmarking results.

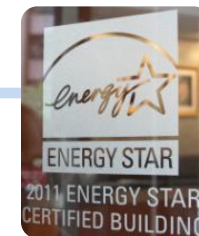
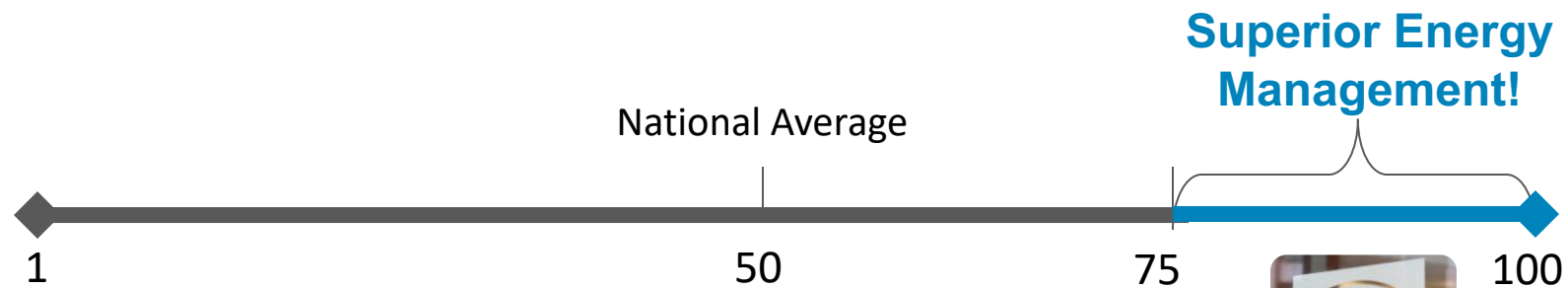
# EPA's 1 – 100 ENERGY STAR Score



## ENERGY STAR Certification for Commercial Buildings

- Recognition for superior energy performers – score 75 or above – as verified by a Professional Engineer and provided they meet industry standards for indoor environmental quality.
- Awarded based on the calendar year. Buildings can re-apply annually.

### 1 to 100 Energy Performance Scale



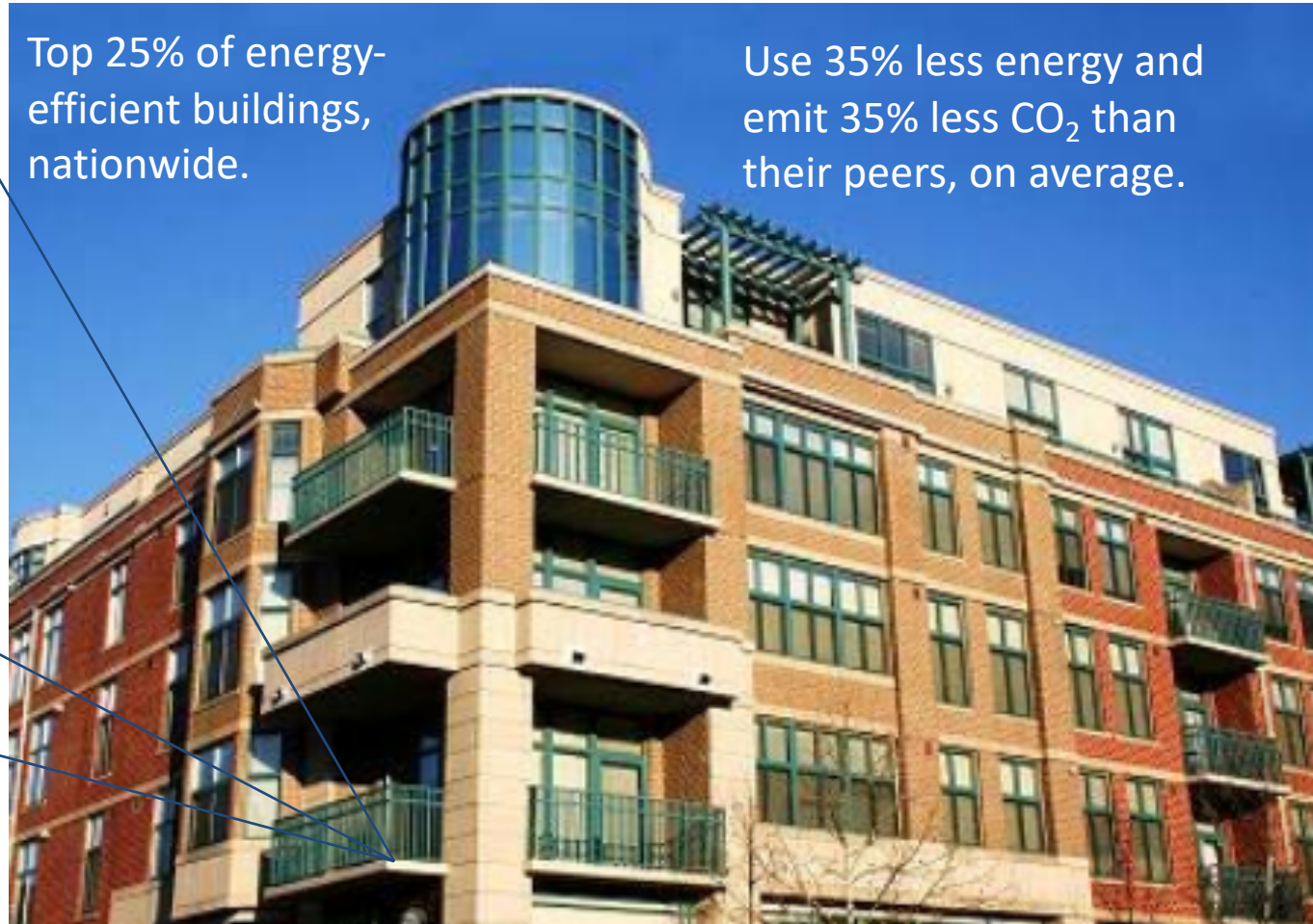


## Earn ENERGY STAR Certification



Top 25% of energy-efficient buildings, nationwide.

Use 35% less energy and emit 35% less CO<sub>2</sub> than their peers, on average.



## Set goals and track progress

**Set performance targets and baselines**

**Track targets at the portfolio level**

**Monitor progress and document savings goals achieved**

**ENERGY STAR® PortfolioManager®**

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

**My Properties' Targets & Baselines**

Properties with Targets (5)  
[Set One Target for All](#)

Properties That Have Met Set Targets

Properties with Baselines (5)  
[Set One Baseline for All](#)

Properties with at Least 12 Months of Information (required for metrics)

Name	Energy Baseline	Water Baseline	Target	Target Met	Action
<a href="#">Federal Building</a>	12/31/2003	09/30/2011	Target ENERGY STAR Score of 80		<a href="#">I want to ...</a>
<a href="#">Higher Campus</a>	Not Available	Not Available	Not Set		<a href="#">I want to ...</a>
<a href="#">Hill Store</a>	07/31/2006	07/31/2006	Target ENERGY STAR Score of 80	✓	<a href="#">I want to ...</a>
<a href="#">Insurance Office</a>	04/30/2007	01/31/2009	Target ENERGY STAR Score of 80		<a href="#">I want to ...</a>
<a href="#">Sunnyside Elementary</a>	08/31/2005	07/31/2006	Target ENERGY STAR Score of 80		<a href="#">I want to ...</a>
<a href="#">Supermarket A-1</a>	Not Available	Not Available	Not Set		<a href="#">I want to ...</a>

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Want this information in a report? Use EPA's standard spreadsheet template to [select properties and export this information from your portfolio](#).

Yes 14% No 86%

Yes 71% No 29%

EPA

## Understand energy cost trends

### Portfolio Average Energy Cost Intensity

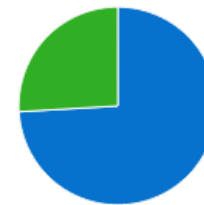
**-0.15** ▶ Change in Average Energy Cost Intensity

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



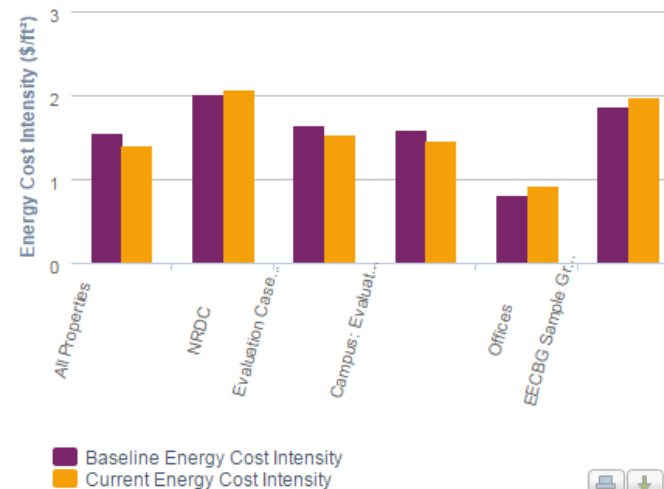
■ Energy Cost Intensity  
Equal to or Below the Median

■ Energy Cost Intensity  
Above the Median



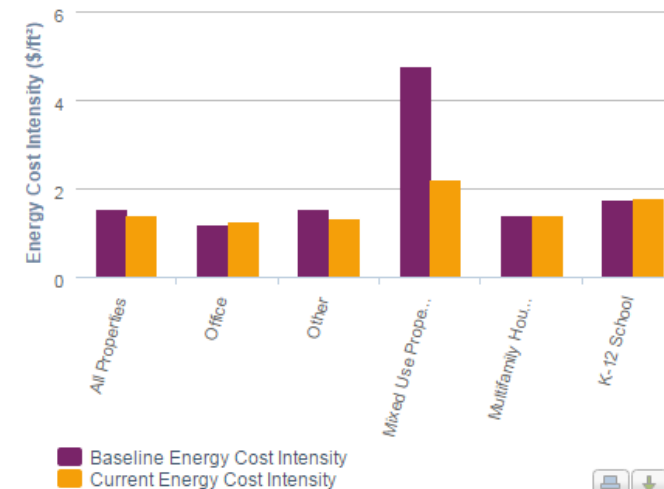
### Energy Cost Intensity by Group

[Select Groups](#)



### Energy Cost Intensity by Property Type

[Select Types](#)





## Launch an energy efficiency campaign

### ENERGY STAR Energy Efficiency Competition Guide

The guide will help you understand 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



U.S. Environmental Protection Agency  
**ENERGY STAR® Guide to Energy Efficiency Competitions for Buildings & Plants**



## Treasure Hunt – Energy Efficiency

### ENERGY STAR® Energy Efficiency Student Toolkit

#### Activity 4: Conducting an Energy Efficiency Treasure Hunt at Your School

For more information, view the [ENERGY STAR Building Upgrade Manual, Chapter 10: K-12 Schools](#).

Energy Management Program				
Feature	Y	N	Room for improvement?	Location (ex. Classroom 101)
Energy management program in place				
School has an energy efficiency goal or target				
School is consistently benchmarked in EPA's Portfolio Manager				
School has a designated staff person responsible for energy management				
Communication plan in place to promote energy management program				
Summer shutdown program in place (if school unoccupied during summer)				
School has an active energy or energy efficiency club or committee				
Energy efficiency included in science curriculum				
Lighting				
Starting Question(s)	Y	N	Describe	
Has your school implemented a lighting upgrade in the past 5 years?				
Feature	Y	N	Room for improvement?	Location (ex. Classroom 101)
ENERGY STAR qualified lighting in place				
Lights are off in unoccupied rooms, gymnasiums, and at athletic fields				
Natural light used where possible instead of artificial lighting				
Window shades in place to regulate light and block excess heat				



## Tap into ENERGY STAR Technical Assistance

- Live and recorded webinars offered regularly
- New 2-5 minute training videos
- Step-by-step training guides, FAQs, and technical reference documents
- On-demand user support

[energystar.gov/buildings/training](http://energystar.gov/buildings/training)



## 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*

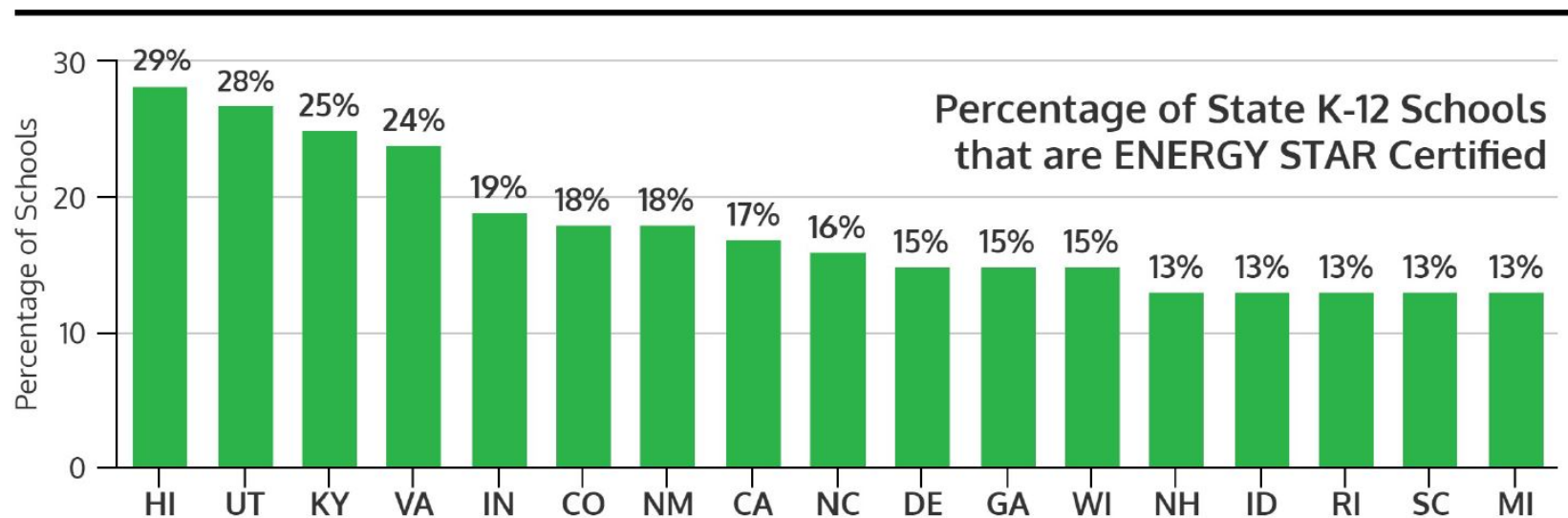
### ENERGY STAR Recognition

- Partner of the Year (2017)

*"Innovative student solutions for energy conservation."*



## More than 10,000 ENERGY STAR Certified Schools Across the Nation!



As of August 31, 2017, 10,382 K-12 schools have earned ENERGY STAR certification!

For more information visit NASEO ENERGY STAR Task Force at [NASEO.org](http://NASEO.org)



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Homepage - [www.energystar.gov/buildings](http://www.energystar.gov/buildings)

Portfolio Manager - [www.energystar.gov/benchmark](http://www.energystar.gov/benchmark)

Training - [www.energystar.gov/buildingstraining](http://www.energystar.gov/buildingstraining)

Help - [www.energystar.gov/buildingshelp](http://www.energystar.gov/buildingshelp)





# ENERGY STAR in Texas K-12 Schools



Dub Taylor, Director  
Texas State Energy Conservation Office

Saleem Khan, PE - CEO  
Texas Energy Engineering Services, Inc. (TEESI)

# Texas Public Schools

- 1,024 school districts (non-charter)
- 5.3 million students / 347,000 teachers
- 8,056 campuses
  - 64% elementary, 19% middle/junior high, 17% high school
  - Average building is 35 years old (oldest over 100)
  - 40% considered fair, poor or needs replacing
- Annual Revenue: \$56 billion (50% local, 40% state, 10% federal)
- Annual Utility Expenditures: \$1.4 billion (\$267/student)



# Energy Efficiency Drivers in Schools

- Direct more of every education dollar into the classroom
  - Instruction vs plant/support services
- Improve indoor/outdoor air quality
- Address deferred maintenance via EE (MEP projects)

## **Texas Policy – Gov't Code 2265.001(b), Education Code 44.902**

- Utility consumption/cost reporting
  - Public website or equivalent
- Long range energy plans established by Board or Trustees
  - 5% reduction in electric use starting in 2008

# Why Portfolio Manager?



- Value of benchmarking in measuring progress toward goals
- Recognition/positive PR
  - Certification for high performing buildings
  - Shows good stewardship of educational \$
- Viewed as objective/independent with good branding
- Compatibility with third party AP/EM tools, utilities
- The price is right!

# Hurdles/Roadblocks



- No time
  - Learning curve too steep
  - Updating is laborious
- Engineer/Architect certification costs
- Did not capture demand/related charges (pre 2017)
- K-12 properties under 5,000 sq ft not eligible for ENERGY STAR Certification

# SECO Support

## Technical Assistance

- Preliminary energy audits (K-12, local gov'ts)
  - Needs assessment – majority of schools in Texas have some tracking mechanism
    - 80% requested to have data tracking in Portfolio Manager
  - Training - 1:1 ENERGY STAR Portfolio Manager use/ data input (2-3 hours)
  - Utility data bulk upload formatting
- Virtual energy audits

## Financing

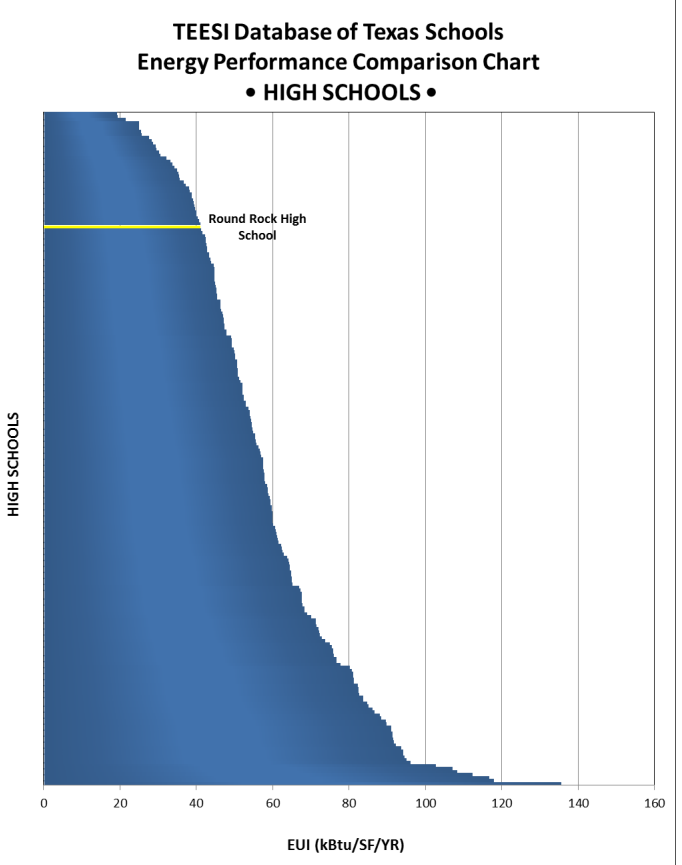
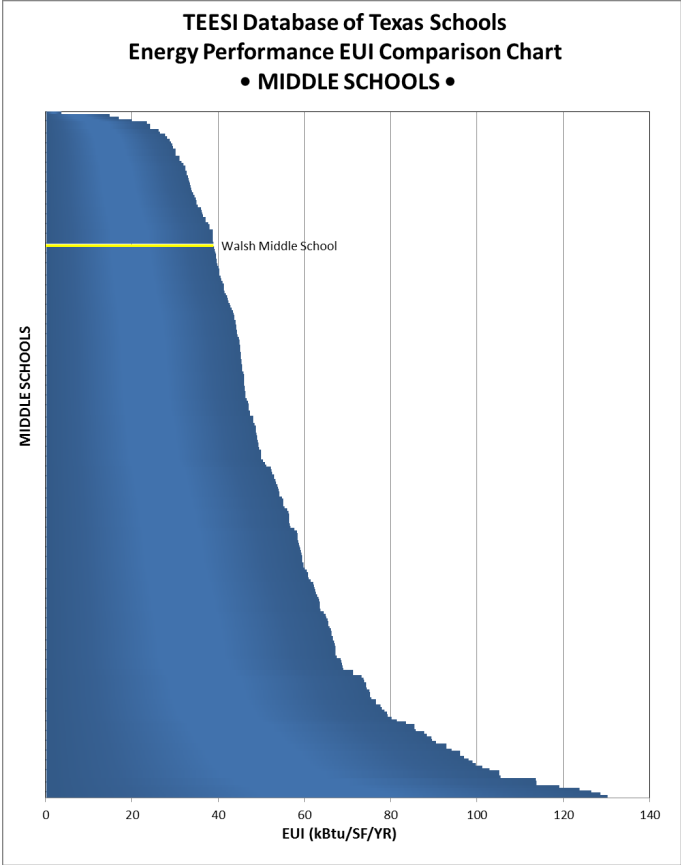
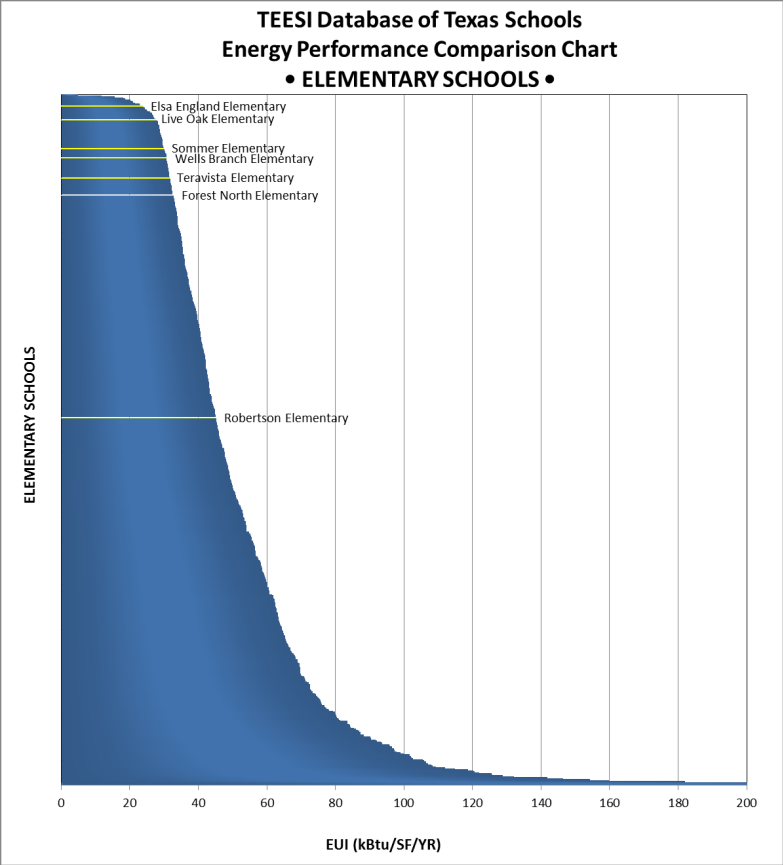
- LoanSTAR revolving loan program
- ESPC guidelines

## Training/Education

- WattWatchers – student engagement, energy curriculum, career readiness



# Visual Benchmarking



# Case Study Discussion



# Case Study Discussion (contd.)

## Round Rock ISD

- Preliminary energy audits and ENERGY STAR certification
  - Staff training
    - Utilization of “bulk data upload” and reports generations
  - 15 campuses meeting the certification criteria were recognized
  - Program continuation



## Northside ISD

- Technical Assistance with ENERGY STAR Certification
  - First five (5) schools in the San Antonio area to get recognition (2014)
  - Program continuation



# Collaboration



**TEMA**

*Texas Energy Managers Association*

A professional association for those responsible for energy management in Texas public entities



**Texas Electric  
Cooperatives**



**Texas Public Power Association**



# Questions?

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