



ENERGY STAR

Energy Efficiency Competitions

Katy Hatcher

**ENERGY STAR
US EPA**

2018 NASEO Annual Meeting, September 24th

To date, the ENERGY STAR program has helped Americans:

- Save **\$450 billion**
- Save **3.5 trillion kWh** of electricity
- Avoid **3.1 billion metric tons** of GHG emissions





The biggest little label in energy efficiency



5.8 billion
products

32,000
buildings

190
industrial
plants

1.9 million
homes



JANUARY | FEBRUARY | MARCH

ENERGY STAR MOST EFFICIENT

NATIONAL PROMOTION POOL PUMPS

APRIL | MAY | JUNE | JULY

NATIONAL PROMOTION FLIP YOUR FRIDGE

NATIONAL PROMOTION LAUNDRY

NATIONAL PROMOTION ROOM A/C

SEPTEMBER | OCTOBER | NOVEMBER

NATIONAL PROMOTION WATER HEATERS

NATIONAL PROMOTION SMART THERMOSTATS

NATIONAL PROMOTION LIGHTING

- Materials Available: MARCH
 - Water Heaters
 - Smart Thermostats

EARTH DAY

COOLING

STREAMING

- Materials Available: APRIL
 - Lighting

- Materials Available: AUGUST
 - Pool Pumps

HEATING

RULE YOUR ATTIC

ENERGY STAR DAY

HOLIDAY

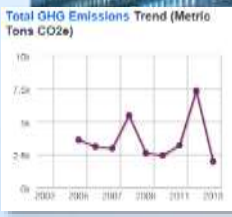
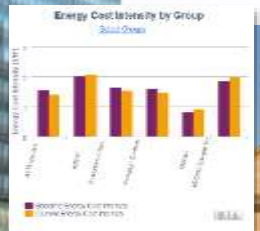
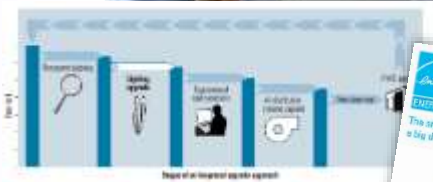
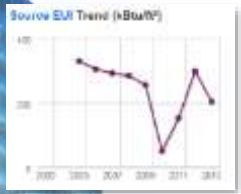
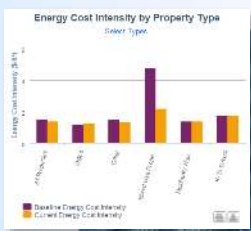
- Materials Available: OCTOBER
 - Flip Your Fridge

- Materials Available: NOVEMBER
 - Room AC
- DECEMBER
 - Laundry



ENERGY STAR for Buildings and Plants

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





- **Hundreds of thousands of buildings**
- **Two dozen** local benchmarking policies
- **One** foreign government (Canada)

Interactive map of policies and programs



www.energystar.gov/policiesandprograms

Can be hosted on your site!



ENERGY STAR® PortfolioManager®

Management Tool



Assess whole building energy and water consumption, plus waste



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®

Hundreds of metrics, including:



Energy use
Source, site,
weather
normalized,
demand



Water use
Water use
intensity,
Water Score
(for Multifamily)



**Waste &
Materials**
Waste intensity,
diversion rate



**1-100
ENERGY
STAR score**



**GHG
emissions**
Indirect,
direct, total,
avoided

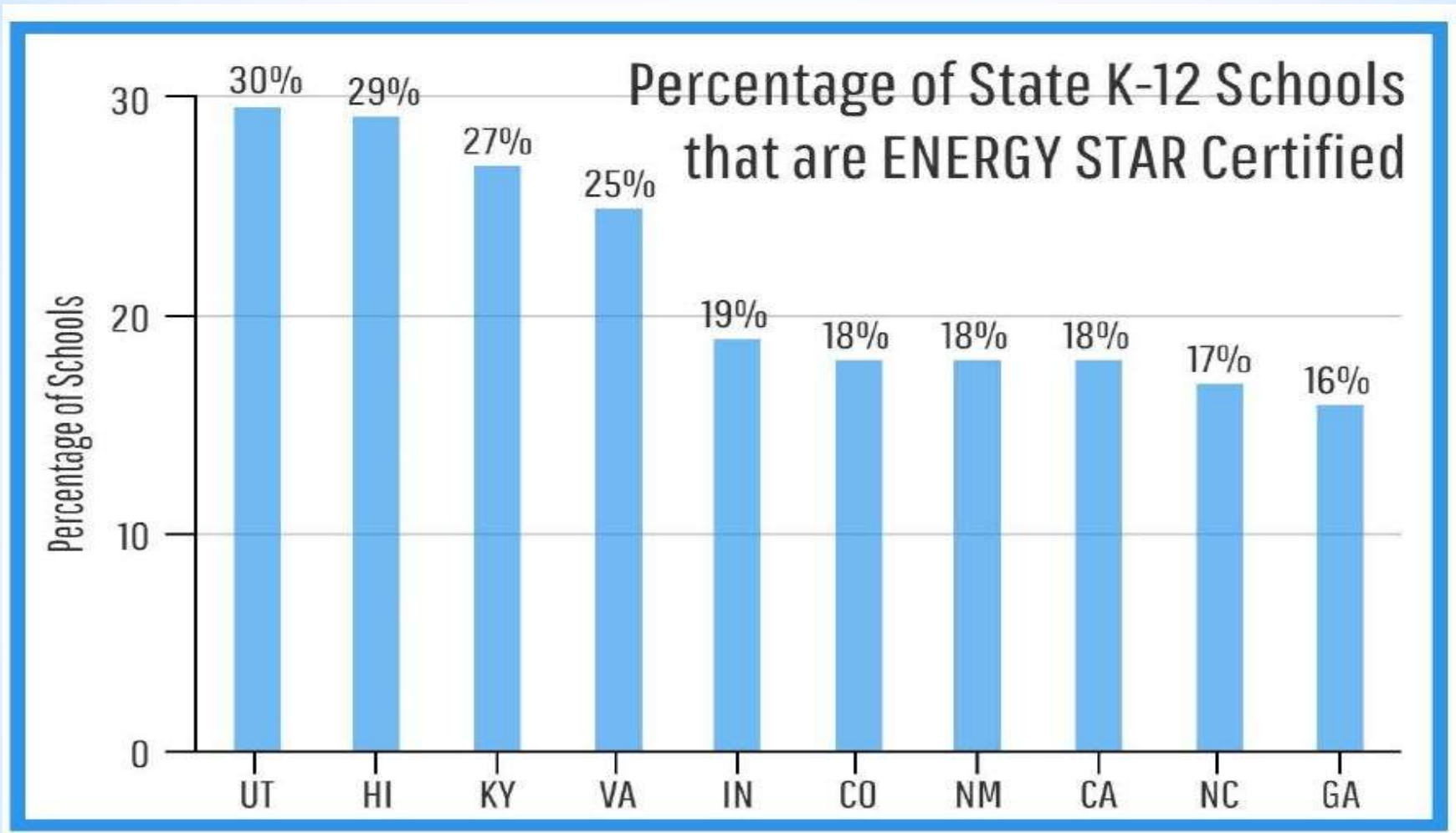
NASEO ENERGY STAR Task Force



- Through the establishment of an ENERGY STAR Task Force, NASEO and EPA will work with key member-states to develop policy and programmatic recommendations, resources, and best practices to be shared through the broader Buildings Committee and NASEO membership at-large.
 - Launch model state-wide ENERGY STAR programs that target sectors such as K-12, Industrial, Multifamily, CRE
 - Implement successful state-wide benchmarking programs
 - Leverage local benchmarking/transparency programs
 - Improve access to whole building energy data
 - ENERGY STAR “kit” for State Energy Plans

www.naseo.org/committee-buildings/energy-star-task-force

More than 11,000 ENERGY STAR Certified Schools



www.naseo.org/committee-buildings/energy-star-task-force

ENERGY STAR Battle of the Buildings

Ready to host your own competition?

We have the tools you need!



Everything you need to get started:

- Template rules, timeline, communications
- Competition Guide
- Data Management Guide and Template Data Tracker
- Activity kits
- ...and more!

www.energystar.gov/BattleoftheBuildings

EPA Resources

www.energystar.gov/battleofthebuildings



The Competition Guide



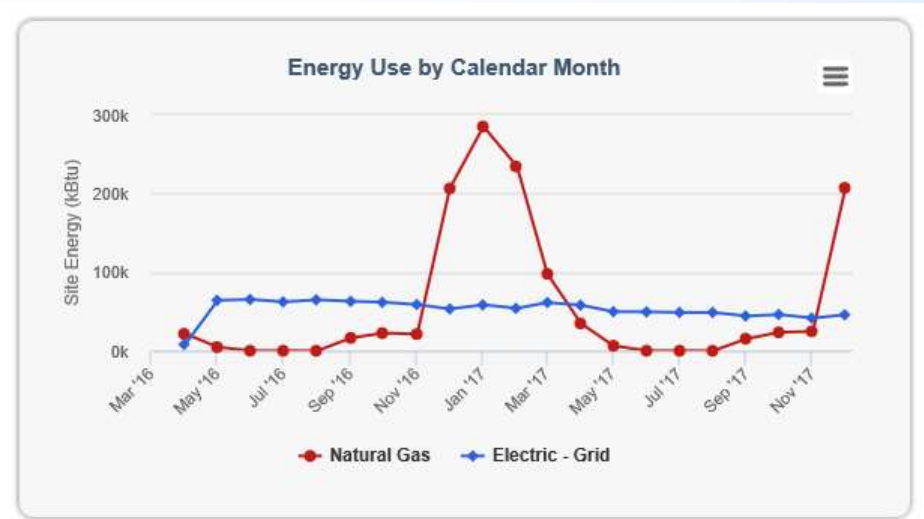
The Data Management Guide + Competitor Data Tracker Excel Template



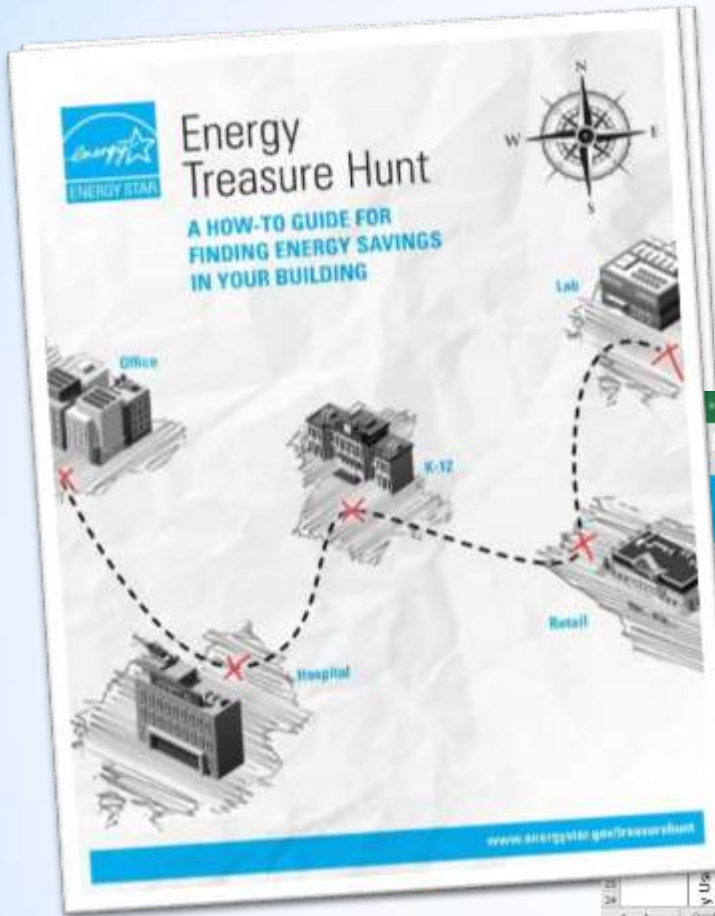
Communication Plans + Activity Kits

New! Monthly Usage Totals by Fuel Type

- New monthly metrics will be available in the Reporting tab to pull aggregated monthly consumption for:
 - Electricity
 - Natural Gas
- Will be calculated similarly to the values in the monthly chart exports on the Energy tab



Treasure Hunt Kit

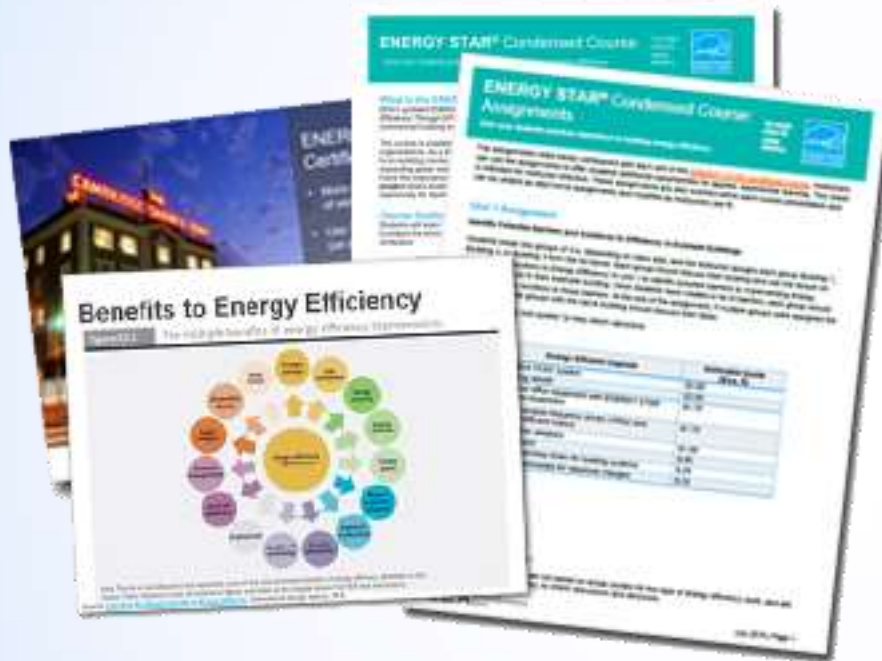
A screenshot of the 'Project Details' form, which is a spreadsheet-style form. It includes a title 'Project Details' and a section for 'Opportunity Short Title'. Below this, there are fields for 'Opportunity Type' (Operational, Equipment Modification, Equipment Upgrade, Other), 'Background', and 'Opportunity'. The form is divided into two main sections: 'Current Situation (before Opportunity)' and 'Projected Situation (after Opportunity)'. Each section has a table for 'Equipment Name' with columns for 'Business Hours' and 'Non-Business Hours', and rows for 'Running: hours/Day', 'Days/Month', 'Months', and 'Set point'. There are also sections for 'Utility Use' with columns for 'Electricity', 'Natural Gas', and 'District Steam', and rows for 'kWh', 'MMBtu', and 'MMBtu'. The form is displayed in a web browser window.

www.energystar.gov/TreasureHunt



Three-Unit College Course

Includes slide decks, assignments, and other teaching aids



Unit 1: Why Energy Efficiency Matters

Unit 2: Strategies for Overcoming Barriers to Efficiency

Unit 3: How to Benchmark a Building Using Portfolio Manager

www.energystar.gov/course

The image is a composite of two photographs. The top photograph shows a modern, multi-story glass building with a curved facade, partially obscured by lush green trees. The bottom photograph shows an outdoor courtyard with a paved walkway made of light-colored rectangular tiles. The walkway is flanked by raised planters containing green grasses and other plants. Several wooden benches with metal frames are scattered throughout the courtyard. A blue semi-transparent banner is overlaid across the middle of the image, containing the title text.

Michigan Battle of the Buildings

Michigan

Competition:

- Free and open to all buildings, except single-family residential, in Michigan
- Competition is run annually from April 1 through December 31.
- Buildings must have the previous year's energy data to use as baseline
- Winners recognized at the Michigan Energy Summit in April of the following year.



EPA resources used:

- Based off of the EPA model
- EPA webinars
- Customized graphics

Michigan

Success to date:



191,979,708

- **Square footage** of Battle of the Buildings participants in 2018

137,355.2

- Total **GHG emissions** (Metric tons of CO₂e) eliminated from battle competitors since 2014

7,600,000

- U.S. Dollars in utility **costs avoided** in 2017

Source: <http://www.michiganbattleofthebuildings.org/>



The Boeing Company Battle of the Buildings

The Boeing Company

Competition:

- Boeing facilities
- 30 days (April); shorter approach
- Site level

EPA resources used:

- BoB mascot
- Activity Kits

Outcome:

- 47 sites in six countries competed
- Represented **93% of Boeing's energy use**
- 25 sites saw an overall **reduction in electricity use**
- Overall **1.6% reduction in energy use** across all participating sites



The Boeing Company

Battle of the Buildings Energy Reduction Competition Toolkit

During April, Boeing facilities are encouraged to compete in an energy reduction competition as the company's key Earth Day activity. Explore the guidelines and resources below to get involved. Contact the [Earth Day Focal](#) for your site with questions.



Planning

- Brief Overview
- Environment Tip
- Standard Presentation
- Guidelines
- Newsletter Blurbs
- Printing Instructions
- BoB Wrap Up Plasma

We're Competing!

- We're Competing
- We're Competing Banner
- Custom: Conserve
- Custom: BoB
- You Have the Power
- People Powered Generator
- Energy Pledge
- Energy Trivia
- Share Ideas, Help Needed

Turn it off!

- Turn off lights
- Task lighting
- Daylighting

Unplug!

- Shut it down
- Unplug
- Plug into power strips
- Compressed air leaks
- Compressed air leaks Banner
- Efficient ovens are hot

Conservation is hot and cool!

- Skip the space heater
- Tilt your blinds
- Close the gap (doors)
- Don't blow it (paint booths)

QUESTIONS?

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Portfolio Manager or ENERGY STAR Buildings Questions: www.energystar.gov/buildingshelp