



# Better Buildings Initiative

June 16, 2016

# What is Better Buildings?

In February 2011, President Obama announced the **Better Buildings Initiative** to:

- make buildings 20% more energy efficient over the next 10 years
- accelerate private sector investment in energy efficiency.



# Better Buildings Challenge

# Better Buildings Challenge

1. Set a public goal (minimum 20% portfolio-wide over 10 years\*)
2. Share transparent examples describing:
  - **What they've done** (showcase projects): Buildings in which they have achieved significant energy savings
  - **How they've done it** (implementation models or “playbooks”): real-world, successful approaches they've used to overcome barriers
3. Report annually on progress

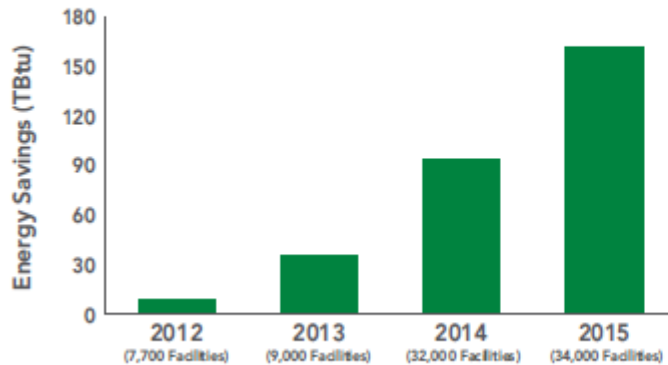


**Launched 2011, Now 300+ Partners**  
*Commercial, Industrial, Public, Private*  
**Represent:**  
4+ Billion Square Feet  
\$5+ Billion Private Financing  
1000+ Manufacturing plants  
\$2 B Federal Commitment

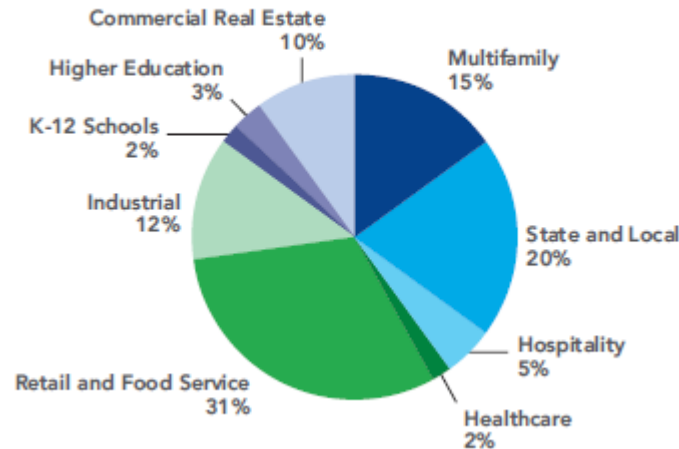
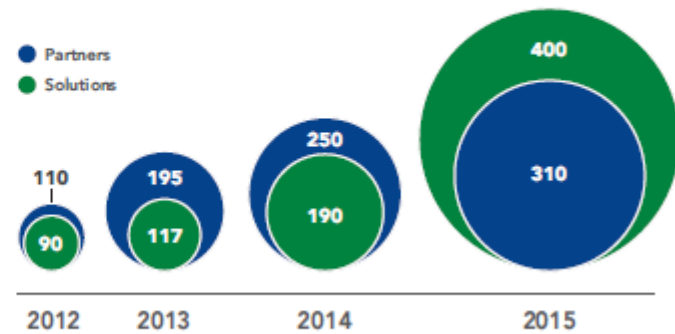
# Better Buildings Challenge: Who is Involved?

>300 partner organizations >4.2 billion sq. ft.

Cumulative Energy Savings by Year



Better Buildings Challenge Program Growth





# Implementation Model: City of Philadelphia



## Creating Incentives for City Departments to Save Energy

**GOAL:** Incentivize city depts. to save energy and contribute to citywide energy reduction goal outlined in sustainability plan

**BARRIER:** City's centralized utility bill payment system distanced individual depts. From tracking their energy use and costs, and reduced motivation to save energy

**SOLUTION:** Created the Energy Efficiency Incentive Program pilot, an inter-departmental savings incentive program to share energy use and costs with individual city departments, and reward savings efforts by allowing depts. To keep a portion of their energy cost savings rather than return to city's general fund

**OUTCOME:** \$115,000 savings in first year

# Implementation Model: King County, WA



## Fund to Reduce Energy Demand (FRED)

**GOAL:** Achieve 20% energy reduction in county buildings by 2020 based on 2007 baseline

**BARRIER:** Lack of dedicated financing for some county agencies to implement projects and meet reduction goals

**SOLUTION:** Creation of FRED to provide agencies with a new financing tool

**OUTCOME:** First 8 energy and water projects had \$2.5M total investment, projected to result in combined \$250,000 annual savings, and CO2 reductions of 1000 tons/year



# Implementation Model: City of Cleveland



CITY OF CLEVELAND  
Mayor Frank G. Jackson

## Municipal Action Plan for Sustainability

**GOAL:** Achieve 20% energy reduction in county buildings by 2020 based on 2010 baseline

**BARRIER:** Lack of coordinated actions to accomplish the city's long-term climate and energy goals

**SOLUTION:** Creation and implementation of **Sustainable Cleveland Municipal Action Plan (SC-MAP)**, focused on municipal operations

**OUTCOME:** Once implemented, **SC-MAP** will result in annual utility cost savings of \$12M and 45% reduction in GHG by 2030

# Showcase Project: Macy's



## METRO CENTER Showcase Project: Macy's

**LOCATION**  
Washington, D.C.

**PROJECT SIZE**  
272,000 Square Feet

**FINANCIAL OVERVIEW**  
Project Cost \$210,000

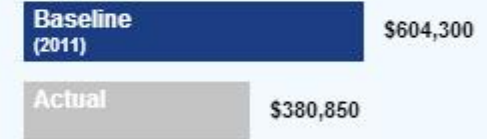
### Annual Energy Use (Source EUI)



Energy Savings:

**30%**

### Annual Energy Cost



Cost Savings:

**\$223,450**

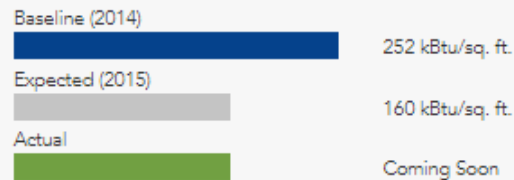
# Showcase Project: Towson University



Towson University Fieldhouse

## Annual Energy Use

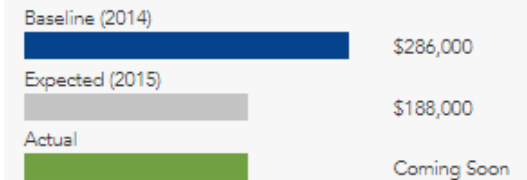
(Source: EUI)



Energy Savings:

**37%**

## Annual Energy Cost



Cost Savings:

**\$98,000**

# Energy Data: Kohl's

## ENERGY PERFORMANCE

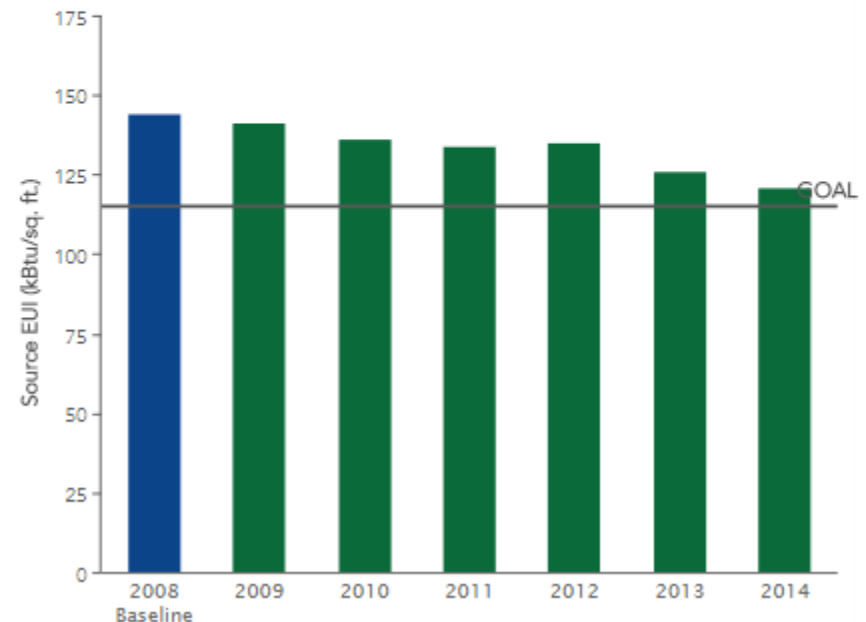
Cumulative (vs. Baseline)	16%
Annual (2014)	3%

**KOHL'S**

## PORTFOLIO ENERGY PERFORMANCE

Better Buildings Challenge Partners strive to decrease portfolio-wide source energy use intensity (EUI) and to increase the percent improvement compared to a set baseline. Kohl's portfolio consists of more than 1,100 buildings and 112 million square feet. Since 2008, Kohl's has improved energy performance by 16%. Energy savings have been achieved through lighting upgrades, integration of Energy Management Systems, and installation of solar photovoltaic systems on more than 160 locations.

EUI and % Improvement vs. Baseline



# Implementation Model: Staples



## Eco-Treasure Hunts at Fulfillment Centers

**BARRIER:** Difficulty identifying and implementing comprehensive energy efficiency opportunities at fulfillment centers

**SOLUTION:** Partner with fulfillment center staff to conduct Eco-Treasure Hunts, 3 day intensive energy & water recommissioning exercise

**OUTCOME:** Energy use reduction of 20% or more at participating centers, lasting collaboration with fulfillment center staff

# Better Buildings Alliance

# Better Buildings Alliance: How is it organized?



Commercial Real Estate



Food Service, Retail & Grocery



Healthcare



Hospitality



Higher Education

## Technology Solutions Teams



Lighting



Space Conditioning



Plug & Process Loads



Refrigeration



Energy Information Systems



Renewables Integration

## Market Solutions Teams



Financing Strategies



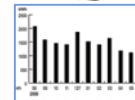
Leasing and Tenant Engagement



Training / Workforce



Appraisals and Valuation



Data Access

# What do members commit to?

## COMMIT

- Set an organization-wide energy reduction goal – 2% per year or greater encouraged.
- Assign a representative to communicate with DOE

## ACT

- Participate in at least one workgroup or activity each year.
- Monitor progress toward your goals through publicly available tools, such as the ENERGY STAR® Portfolio Manager.

## SHARE

- Share your successes.
- Share progress toward meeting your goals.



# How do partners take advantage of the BBA?

- Peer networking through:
  - Sector group activities
  - Technology solutions teams
- Access the publically available resources:
  - Technology specifications
  - Fact sheets, guides, primers
  - Green leasing resources
  - Archived and live webinars
- Technology demonstration opportunities

## ADOPTION CAMPAIGN:

- LED lights with controls produce 75% savings.
- Goal: 1,000,000 troffer retrofits
- Current commitments to retrofit or replace 580,000 troffers including Target, MGM, Deutsche, CKE, and GSA.
- Recognition for exemplary energy savings projects at the BOMA Plenary on June 26<sup>th</sup>.



[www.interiorlightingcampaign.org](http://www.interiorlightingcampaign.org)



# ADOPTION CAMPAIGN: Smart Energy Analytics

## PLEDGE

### COMMIT TO:

- 1) Install EMIS or use existing EMIS
- 2) Analyze energy use
- 3) Implement measures

### METRICS

Square footage  
# buildings  
EMIS and Process  
(baseline + pledged)

## ACTIONS

### SHARE:

- 1) Measures implemented
- 2) EMIS and Process implemented
- 3) Annual energy use intensity, all fuels

### METRICS

Update pledge metrics with actuals

## AWARDS

### SHARE:

- 1) Actions submission
- 2) Energy savings
- 3) Cost and labor

### METRICS

Energy savings  
Cost-benefit

[www.smart-energy-analytics.org](http://www.smart-energy-analytics.org)



# Better Buildings Solution Center



- Over 400 solutions tested and proven by Partners
- Find solutions by topic, building type, solution type, building size, sector, technology, location, and more.

[BetterBuildingsSolutionCenter.energy.gov](http://BetterBuildingsSolutionCenter.energy.gov)

# Questions?

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