



Energy-Saving

HOMES, BUILDINGS,
& MANUFACTURING

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Federal Energy Efficiency Initiatives

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Overview

- SEP & EECBG Recovery Act Successes
- Energy Data Initiative
- SEP Competitive Grants
- Better Buildings Challenge

Recovery Act: SEP and EECBG Success

Select achievements through December 31, 2012:

- **Retrofit of 190,000 Buildings for Energy Efficiency (1.4 billion square feet)**
- **Installation of Renewable Energy Systems with a total capacity of 800,000 kilowatts**
- **Installation of 300,000 energy efficient traffic signals**
- **Installation of more than 200,000 energy efficient streetlights**
- **More than 10,000 Jobs Created or Retained during a peak Recovery Act period (January 1 – March 30, 2011)**



Energy Data Initiative

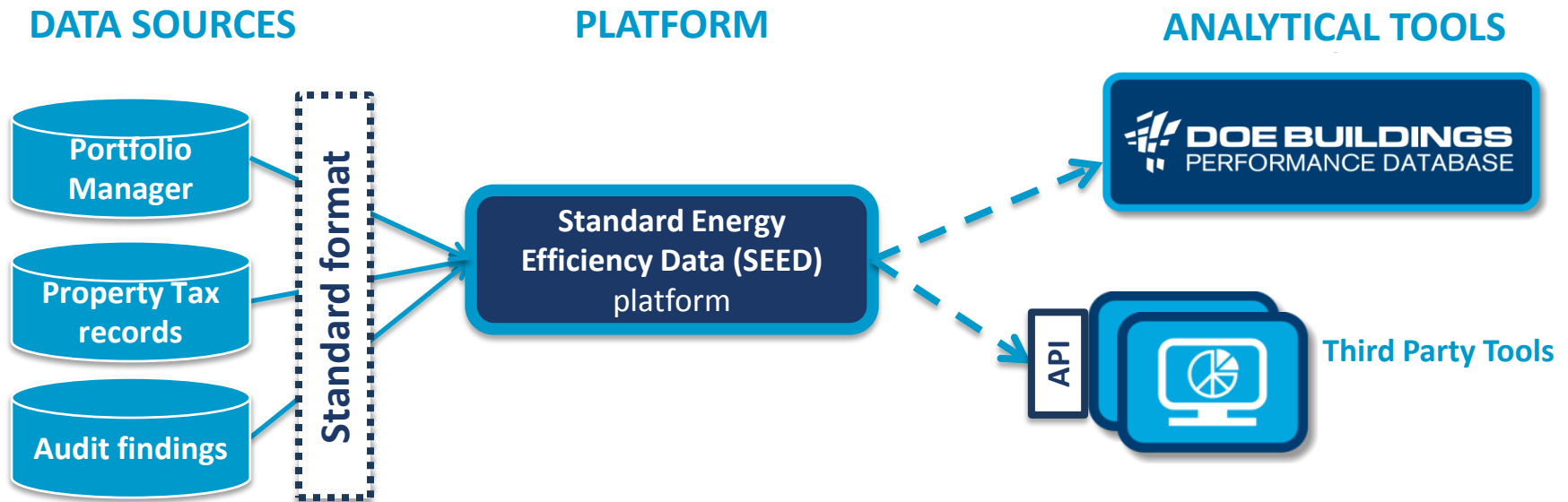
Led by the U.S. Department of Energy, the Energy Data Initiative seeks to:

- Work with data owners inside and outside of government to make energy-related data available, machine-readable, and accessible, while ensuring personal privacy is protected, and
- Collaborate with private-sector entrepreneurs and innovators to ensure they are aware of these existing and newly available digital assets and encourage them to include these data as inputs into their new products, services, and product features that improve our energy productivity and catalyze the transition to a clean energy economy.



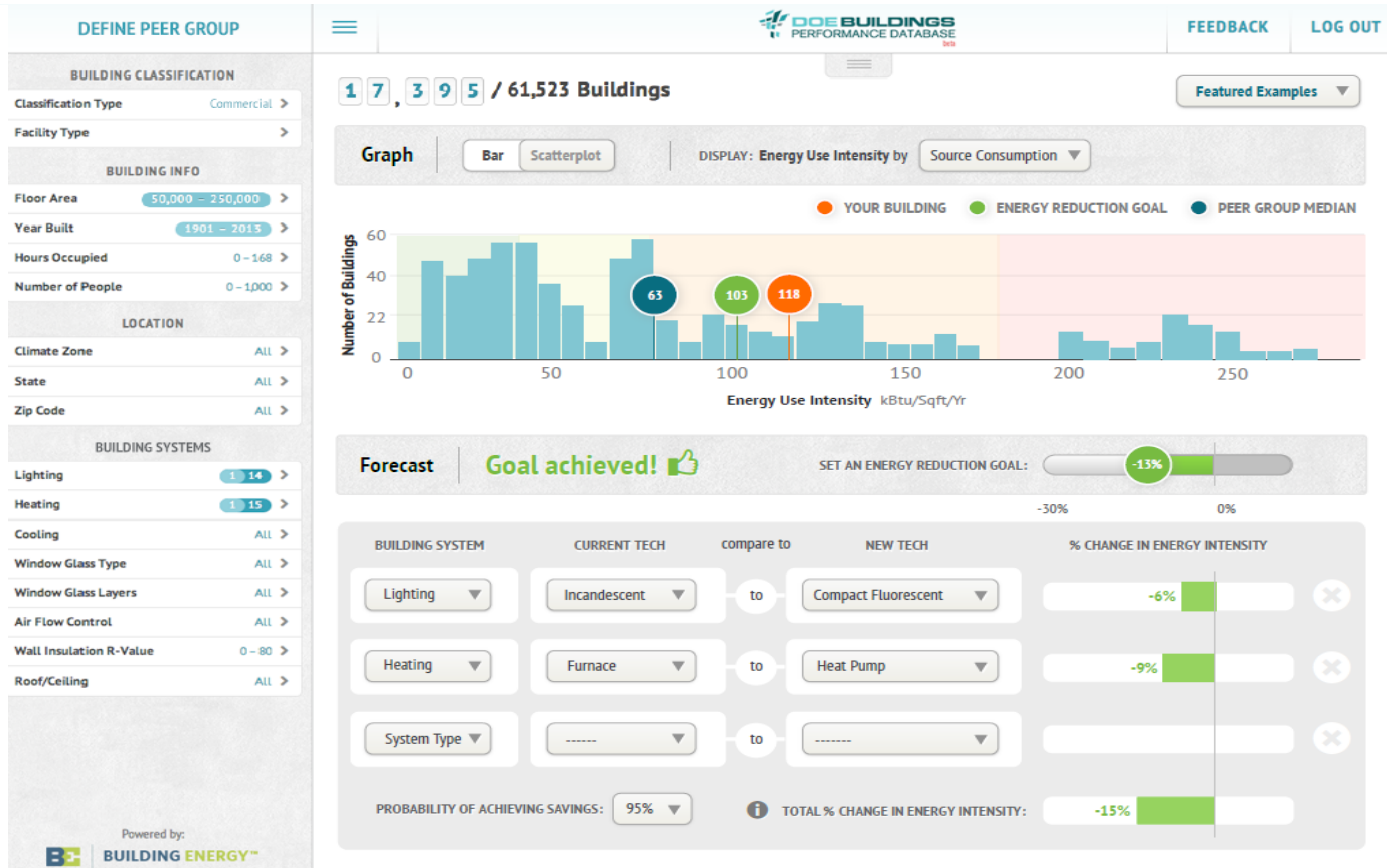
Standard Energy Efficiency Data (SEED) platform

- The SEED platform is a blank database structure. Each user can create their own “instance” of the platform.
- SEED enables users to import data from multiple sources about the same group of buildings, and conduct analysis and reporting of the information.
- The SEED platform utilizes a standard format.
- The owner of each SEED instance can choose which external parties can access the information, and what fields to share.
- An API will enable third-parties to develop additional tools that can be used by many SEED users.



The Buildings Performance Database

- The BPD unlocks the power of building energy performance data. It contains *actual data* on >70,000 existing commercial and residential buildings.
- The BPD can statistically analyze trends in the energy performance and physical and operational characteristics of buildings across the country.
- An API will enable third parties to create applications using the database.



SEP Competitive - Advancing EE in Public Facilities

Develop holistic, whole-building, deep retrofit programs or strategies across as broad a segment of the state's public building portfolio as possible to achieve significant energy and cost savings.

➤ Cohort Based Management

- Peer exchange groups

➤ Deliverables:

- Showcase Project within 9 months of grant initiation
- Annual Energy Data Sharing
- Implementation Model (Playbook)

Implementation Models - Approaches to Overcome Barriers

An “implementation model” is a **replicable pathway** for the deployment of energy efficiency in an organization.

The solution should address a **key barrier** to energy efficiency and provide details to the approach an organization took to create a **sustainable solution**, including:

- *policies*
- *processes*
- *outreach efforts*
- *tools/resources*

Better Buildings Challenge

Launched by President Obama in December of 2011, the goal of the Better Buildings Challenge is to improve the efficiency of American commercial and institutional buildings, industrial plants and public facilities by 20 percent or more by 2020.



CHALLENGE PARTNERS &
ALLIES REPRESENT

2 Billion

Square Feet Committed

\$2 Billion

in Financing through Allies

+300

Manufacturing Facilities

BBC Partners & Allies Agreement

Partner Agrees to:

Commit

- *Assign Senior Executive signature*
- *Entire building portfolio*

Take Action

- *Community outreach*
- *Showcase project*

Report Results

- *Share portfolio-wide, facility-level energy performance twice a year*
- *Share playbooks and solutions*
- *Provide quarterly updates on progress*

Utility Allies Agree to:

- *Provide commercial EE multi-measure programs that save 5% across a customer class by 2015*
- *Provide customers with their energy usage data electronically in a format compatible to Portfolio Manger*

Financial Allies Agree to:

- *Invest or lend at least \$50M for commercial building EE projects*
- *Share all of the information about their projects that will drive more market participants to upgrade energy performance*

DOE Agrees to:

- *Provide TA, National Recognition & Opportunities to Meet Committed & Vetted Partners*

DOE will highlight actions of Challenge Partners

BBC Website

www.betterbuildingsenergy.gov/challenge

- Highlights partners' commitment and progress
- Includes showcase projects and implementation models

BETTER BUILDINGS CHALLENGE
Organizations Leading the Way to Greater Energy Efficiency

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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BOISFEUILLET JONES - ATLANTA CIVIC CENTER

Showcase Project: City of Atlanta

| | | |
|-------------|---------------------|----------------------------|
| LOCATION | PROJECT SIZE | FINANCIAL OVERVIEW |
| Atlanta, GA | 231,000 Square Feet | Project Cost \$2.1 Million |

| Annual Energy Use (Source: EUI) | | Annual Energy Cost | |
|---------------------------------|-----------------|--------------------|-------------|
| Baseline (2009) | 432 kWh/sq. ft. | Baseline (2009) | \$500,000 |
| Expected (2012) | 324 kWh/sq. ft. | Expected (2012) | \$300,000 |
| Actual (2012) | COMING SOON | Actual (2012) | COMING SOON |

Expected Energy Savings: **25%** Expected Savings: **\$200,000**

Outside view of the Atlanta Civic Center

Auditorium with LED lighting

BACKGROUND

By revitalizing the Boisfeuillet Jones - Atlanta Civic Center, the City of Atlanta had the opportunity to turn one of its biggest electricity consumers into an energy-efficient showcase facility. The city is expected to save \$200,000 per year, or a total of \$3.57 million over the 15-year life of the Georgia Sustainable Environmental and Economic Development (SEED) contract.

SOLUTIONS

Prior to a complete energy overhaul, the Atlanta Civic Center was an all-electric building with electric-resistance heating and domestic hot water. The equipment was unreliable, prone to frequent repairs, and inefficient. While services and equipment upgrades were overdue for the Civic Center, the city also faced capital budget constraints.

OTHER BENEFITS

Atlanta's flagship energy efficiency project created 89 construction jobs. The energy efficiency upgrades at the Atlanta Civic Center will also decrease the city's carbon footprint by reducing annual CO₂ emissions by approximately 2.9 million pounds.

[Learn more](#) [Learn more](#) [Learn more](#)

BETTER BUILDINGS CHALLENGE

Partners and Allies:

As of 6/19/12



BBC Alliance Agreement

Alliance Member Agrees to:

Commit

- Assign company representative
- Multi-year savings of 2% annually

Take Action

- Utilize tools like Portfolio Manager
- Participate in BBA workgroups

Report Results

- Share your success, help other BBA members replicate your results
- Provide annual updates on energy savings & progress toward your goals

DOE Agrees to:

Assist

- Provide technical assistance
- Share BBC Partner Playbooks

Connect

- Opportunities through Financial Allies
- Peer exchange forums

Inform

- Keep members informed thru regular BBA communications and webinars
- Provide Access to DOE & trusted third party information and technical resources

BBC – Partner Map

PARTNER MAP

Use the interactive map to select a Partner or Ally, and learn more about the Better Buildings Challenge participants in your area.



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Thank You

2NDAnnual Better Buildings Summit
STATE & LOCAL LEADERS UNLOCKING
THE CLEAN ECONOMY

May 30-31, 2013

Renaissance Hotel

Washington, DC