Better Buildings Challenge:
Getting More out of the Data you Share

January 17, 2017
2:00 – 3:00 p.m. ET
Number: 415-655-0060
Passcode: 627-255-705
Agenda

- Energy Data Tracking: A First Step Toward Demonstrating Leadership
- Accessing Whole Property Energy Data
- Sharing Data with the Better Buildings Challenge
- Better Buildings Challenge Data Reports
  - How do they work?
  - How can they help?
- Partner Success Stories
Why Track Energy Data?

- Measurement is the first step toward management!
- Identify opportunities for energy and cost savings
- Ensure energy bills are correct
- Demonstrate progress toward energy savings goals and validate energy efficiency efforts
Important elements of energy efficiency leadership are transparency, sharing, and action

- Progress is tracked against a baseline year
- Partners share data across their U.S. portfolio
  - Whole-property data is collected
  - Data is shared at the building level
- Energy performance improvements are expressed in terms of energy intensity
- Progress is displayed on the Better Buildings Solution Center

Details on program policy are included in the Better Buildings Challenge Data Tracking Manual
## Sharing Energy Performance Data

### Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Action Steps</th>
</tr>
</thead>
</table>
| January - February | • Gather utility bills through end of December 2016  
• Enter in your bill tracking system  
• Review data to ensure accuracy |
| March 1            | • **Share energy performance data with DOE**  
*Early submissions are encouraged!* |
| By April 14        | • Confirm or update data following DOE’s review  
• Review final energy performance results  
• Review text for the Better Buildings Solution Center |
| May 15-17          | • Recognition at the Better Buildings Summit |
Accessing Whole Property Data

- Check with your accounting department for copies of bills or utility billing histories
- Contact your utility to see if they provide:
  - Web-based account access
  - Spreadsheet of historical bills
  - Copies of recent bills with billing history included
- For properties with tenant-paid bills:
  - Utilize tenant release forms or lease clauses
  - Obtain aggregate data from your utility
    - ENERGY STAR Utilities Providing Aggregated Data: [Map or PDF](#)
Two Options to Share Data

1. Portfolio Manager
   - Share all covered properties through a partner-specific Portfolio Manager account
     - DOE-BBC-XXXX, where XXXX is the partner name
   - Benefits:
     - Updates are automatically shared with DOE
     - Data is normalized for weather and operating characteristics
     - Provides 1-100 ENERGY STAR score to benchmark against peers
     - One-stop shop to track energy, water, and now waste

2. Data Collection Template
   - Share data for all properties in an Excel template
   - Benefit: Flexible for partners not using Portfolio Manager
Sharing with Portfolio Manager

- See Appendix A of the Data Tracking Manual for detailed instructions
- Steps include:
  - Connect with the “BBC-DOE-” sharing account
  - Select the properties you wish to share
  - Choose “Read Only Access”
Tip: Use the Portfolio Manager Data Quality Checker to improve accuracy of data before sharing with the Better Buildings Challenge.
Data can be exported from data tracking software and provided via Excel spreadsheet.

Key information included in the template:
- Property Name, Type, Zip Code, and Floor area
- Time period for data
- Annual energy use by fuel type
Better Buildings
Data Reports:
*How do they work?*
■ **Data Status Report**
  - **When used:** Early March, after partners provide partial data in Portfolio Manager
  - **Purpose:** Helps partners identify data that is missing

■ **Data Review Report**
  - **When used:** When a partner shares complete energy data
  - **Purpose:** Identifies anomalies in data, calculates energy performance improvement at the building and portfolio levels, includes a draft display for the Solution Center

■ **Better Buildings Solution Center Data Display**
  - **When used:** When data is reviewed and final
  - **Purpose:** To promote partner accomplishments!
Data Status Report:
Has data been entered for all of 2016?

- Generated for partners sharing partial data in Portfolio Manager for 2016
  - Provided for partners sharing 50-90% of their committed square feet
  - Shows properties that do not have data through December 2016
- Use the Energy Current Date column to determine energy data needed for complete 2016 results

<table>
<thead>
<tr>
<th>Property ID</th>
<th>Property Name</th>
<th>Year Ending</th>
<th>Energy Current Date</th>
<th>Source EUI (kBTU/sq. ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Office Building</td>
<td>12/31/2016</td>
<td>10/31/2016</td>
<td>94</td>
</tr>
<tr>
<td>200</td>
<td>Elementary School</td>
<td>12/31/2016</td>
<td>10/31/2016</td>
<td>126</td>
</tr>
<tr>
<td>300</td>
<td>Fire Station</td>
<td>12/31/2016</td>
<td>7/31/2015</td>
<td>163</td>
</tr>
<tr>
<td>400</td>
<td>Parking Garage</td>
<td>12/31/2016</td>
<td>12/31/2016</td>
<td>130</td>
</tr>
<tr>
<td>500</td>
<td>Warehouse</td>
<td>12/31/2016</td>
<td>12/31/2016</td>
<td>84</td>
</tr>
<tr>
<td>600</td>
<td>Mall</td>
<td>12/31/2016</td>
<td>8/31/2016</td>
<td>175</td>
</tr>
</tbody>
</table>

This property has data through October, but is missing November and December.
## Data Review Report
Ensuring Complete and Accurate Data

### Key Points

1. **Properties highlighted for unusual data**
2. **Partners confirm or update data**
3. **Properties that pass checks are included in savings results**
4. **Percentage of committed square feet that passes checks used for recognition purposes**
5. **Portfolio-wide energy savings are computed**

### Portfolio EUU Improvement (%): 14%

- **Baseline Year End Date:** 12/31/2013
- **Current Year End Date:** 12/31/2015
- **Baseline EUI:** 50
- **Current Year EUI:** 47

### Portfolio Summary

<table>
<thead>
<tr>
<th>Partner</th>
<th>Period</th>
<th>Sq. Ft.</th>
<th>kBtu</th>
<th>EUI</th>
<th>Sq. Ft.</th>
<th>kBtu</th>
<th>EUI</th>
<th>% Change</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>12/31/2013</td>
<td>2,313,845</td>
<td>690,244,733</td>
<td>263</td>
<td>12/31/2015</td>
<td>2,313,845</td>
<td>372,148,008</td>
<td>225</td>
<td>-14%</td>
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</tbody>
</table>

### By Property

<table>
<thead>
<tr>
<th>ID</th>
<th>Property Name</th>
<th>Baseline Year End Date</th>
<th>Baseline Sq. Ft.</th>
<th>Baseline kBtu</th>
<th>Baseline EUI</th>
<th>Current Year End Date</th>
<th>Current Sq. Ft.</th>
<th>Current kBtu</th>
<th>Current EUI</th>
<th>% Change</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1133001</td>
<td>Property #1</td>
<td>12/31/2013</td>
<td>911,903</td>
<td>276,762,561</td>
<td>304</td>
<td>12/31/2015</td>
<td>911,903</td>
<td>241,654,295</td>
<td>265</td>
<td>-13%</td>
<td>-11%</td>
</tr>
<tr>
<td>1133002</td>
<td>Property #2</td>
<td>12/31/2013</td>
<td>130,000</td>
<td>56,329,000</td>
<td>413</td>
<td>12/31/2013</td>
<td>130,000</td>
<td>-</td>
<td>-</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>1133003</td>
<td>Property #3</td>
<td>12/31/2013</td>
<td>622,000</td>
<td>3,592,284</td>
<td>182</td>
<td>12/31/2013</td>
<td>622,000</td>
<td>140,136,600</td>
<td>225</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>1133004</td>
<td>Property #4</td>
<td>12/31/2013</td>
<td>22,202</td>
<td>3,592,284</td>
<td>182</td>
<td>12/31/2013</td>
<td>22,202</td>
<td>4,331,610</td>
<td>195</td>
<td>21%</td>
<td>0%</td>
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</tbody>
</table>

### Notes

- For cells highlighted in yellow, please provide an explanation in the Notes column or update shared building data.
• Once data is final:
  • DOE prepares results for posting on the Solution Center
  • Partners draft and/or review text describing accomplishments

• Critical step to ensure that results are posted on the Better Buildings Solution Center
Partner Profile

Sharing Project:
Share of Rooster: A Smaller Slice of the Energy Pie

Choices Made:
Streamlining Energy Barriers through Empowerment Behavioral Change Management

Energy Performance:
View details on Shari's Cafe & Pies' progress to date

Shari's Cafe & Pies is the largest full-service restaurant chain based in the Pacific Northwest. Founded in 1977, Shari's provides high-quality, reasonably priced meals 24 hours a day in comfortable surroundings. Shari's has increased its commitment to environmental responsibility over the years. In 2009, the company created Shari's Water Efficiency Program (SWEP). Since then, the program has evolved into a larger strategic plan that is now part of the company's core values. For Shari's, it's not just about saving dollars, it's about being a good corporate citizen and the community the company serves.

Shari's Cafe & Pies is constantly striving to reduce its impact on the environment. The company is committed to continuously improving performance and reducing energy, water and other resources.

Energy Performance

<table>
<thead>
<tr>
<th></th>
<th>Cumulative vs. Baseline</th>
<th>Annual (2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER PERFORMANCE</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

PORTFOLIO ENERGY PERFORMANCE
Better Buildings Challenge Partners strive to decrease portfolio-wide source energy use intensity (EU) and to increase the percent improvement compared to a set baseline. Shari's Cafe and Pies' portfolio consists of 36 buildings and 400 thousand square feet. Shari's has improved energy performance by 7% from a 2012 baseline, making progress towards a goal of 25% by 2025. Energy savings have been achieved by implementing lighting retrofits and HVAC upgrades across many restaurants, and an energy awareness program focused on low-cost opportunities for savings.

Energy Performance by Property
Looking at the percent improvement in energy performance across all facilities can provide insight into how an organization is doing. Shari's has achieved energy performance improvement of greater than 7% at 51% of its restaurants. These restaurants have been targeted for future energy efficiency improvements.
Better Buildings
Data Reports:
*How can they help?*
Better Buildings Data Reports can help:

- **Flag** properties where data isn’t being tracked properly or that may have billing problems
- **Identify** high energy users, energy intensity trends over time, and opportunities for savings
- **Verify** data provided by service providers
- **Identify** vacant buildings with energy waste
- **Recognize** high performing and most improved buildings
Partner Success Story
Making the Case for Energy Efficiency

Will County, IL

CHALLENGE COMMITMENT

925 Thousand Square Feet

GOALS
20% Reduction in Energy Intensity

PROGRESS
8% Cumulative (vs. Baseline)

View details on Will County, IL’s progress to date

Sam Bluemer
Energy and Conservation Specialist
Will County Land Use Department
Resource, Recovery, and Energy Division
Partner Success Story
Improving Data Quality

- Data review for a retail partner showed:
  - ~30% of the properties in the partner’s portfolio contained some anomalies

- The partner carried out the following steps:
  - Collected baseline data for buildings by contacting the utility
  - Identified sites that were closed and improperly accounted for
  - Identified maintenance issues that were responsible for unusually low or high EUI’s at specific locations

- Updated data was posted on the Solution Center
Data review for a K-12 school partner showed:

- Very low EUI for 2 properties
- Caused by incomplete fuel oil data in Portfolio Manager

The partner carried out the following steps:

- Updated fuel oil meters with a full year of data
- Updated data was posted on the Solution Center
Data review for a data center partner showed:
- Internal calculation of Power Usage Effectiveness (PUE) values did not match Portfolio Manager outputs

The partner carried out the following steps:
- Repositioned and/or repaired several meters
- Removed an unrelated load from the metered data to calculate an accurate PUE value
- Simplified the calculation by treating three data halls as a single larger entry in Portfolio Manager to better align with the mechanical chiller configuration
Partner Success Stories

More?
Thank You

- Questions about sharing data?
  - Contact your Better Buildings Account Manager

- Get recognized for your progress!
  - Share data by March 1
  - Finalize data by April 14