Iowa Public Building Benchmarking Project Phase II

Impacting:

State Agencies
Cities
Counties
K-12 Schools
Community Colleges

Presented by Jeff Beneke, University of Northern Iowa
Webinar Overview

- What is Benchmarking and why is it important?
- Project Overview
- Main functions of Iowa public building benchmarking platform
- How can I get involved?
- Next steps – what information is needed?
What is Building Energy Benchmarking?

Benchmarking is the process of accounting for and comparing:

• A building’s current energy performance with its energy baseline or a benchmark

• A building’s energy performance with the energy performance of similar types of buildings
Benchmarking Value Proposition

- Identify cost-effective buildings to improve
  - Identify the best buildings to improve in a portfolio
  - Select candidates for energy audits, re-commissioning, and/or retrofits
  - Targeted approach much more effective than a random approach

- Reward exemplary performance
  - Recognize and reward buildings that perform much better than their peers or the objective benchmark

- Measure and verify energy improvement projects
  - Compare the consumption of your facility before and after an asset or operational improvement and determine if the building is achieving the expected savings results.
Project Overview

The Iowa Public Building Benchmarking Process
# Project Overview

- Benchmarking statistics from current building population

<table>
<thead>
<tr>
<th>Sector</th>
<th>Floor Area (SF)</th>
<th>Number of Sites</th>
<th>Number of Buildings</th>
<th>Average Benchmarking Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>3,053,750</td>
<td>123</td>
<td>125</td>
<td>1.81</td>
</tr>
<tr>
<td>Community Colleges</td>
<td>2,457,257</td>
<td>52</td>
<td>98</td>
<td>0.82</td>
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<tr>
<td>County</td>
<td>706,447</td>
<td>32</td>
<td>34</td>
<td>1.59</td>
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<tr>
<td>K-12 Public Schools</td>
<td>12,682,273</td>
<td>183</td>
<td>173</td>
<td>0.9</td>
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<tr>
<td>State</td>
<td>13,710,149</td>
<td>239</td>
<td>788</td>
<td>1.44</td>
</tr>
<tr>
<td>Total</td>
<td>32,609,876</td>
<td>629</td>
<td>1218</td>
<td>1.32</td>
</tr>
</tbody>
</table>

*Benchmarking Ratios of 1 or less are buildings closest to meeting code
*Benchmarking Ratios of 1 or more have more opportunity to make energy efficiency improvements.
Project Overview Phase II

- Phase II project received a grant from Iowa Economic Development Authority (IEDA)

- Project goals
  - Establish a model to integrate benchmarking platform into building energy efficiency improvement process
  - Add an additional 800 buildings to the benchmarking platform
  - Select 5 “showcase” buildings with 20% energy savings potential as case studies and monitor energy efficiency improvement results (energy efficiency improvement process by others)
Project Overview Phase II

Integrating Benchmarking into Building Improvement Process

State and Local Government Buildings
State Agencies + Cities + Counties + Public Schools + Higher Education

Iowa Energy Center
Public Building Benchmarking Program
- Track on-going energy consumption and building attributes
- Benchmark and analyze results
- Information feedback to building owners
- Stack rank best buildings to improve by organization and state wide portfolio
- Measure and verify improvement targets to actual consumption

Iowa Energy Bank
Improvement Loans and Technical Assistance Program
- Market and qualify projects
- 3rd party technical review
- Provide low interest loans
- Coordinate with utility incentive programs

Iowa Utility Energy Efficiency Programs
Incentives and Technical Assistance Programs
- Market and qualify projects
- 3rd party technical assessment
- Provide incentives
Main Functions of the Benchmarking Platform
Summary View

Summary of organizational completeness
Add new buildings & sites
Click on Site in tree or list to view
Summary of consumption data by days overdue and contiguous months
Main Functions of the Benchmarking Platform
Report Options

Report Options

Report Types

Show/Hide Report Options

Weather Normalized

Baseline
How Can I Get Involved?

- Approval by building owner, manager, or organization leader
- Authorized person registers to participate through the B3 benchmarking website
  - [https://ia.b3benchmarking.com/Participation-Request.aspx](https://ia.b3benchmarking.com/Participation-Request.aspx)
How Can I Get Involved?

*Required fields are indicated with asterisks.

Sector: (Select) *
Organization: (Select) *

First Name: * (Person to be responsible for managing info on this site)
Last Name: *
Company: 
Job Title: 
Street Address: 
City: State: IA Zip: 
Phone: *
E-mail: *

Buildings: * (Number of buildings within the organization)
Square Feet: * (Estimated total square footage of all buildings in organization)

Comments:

[Submit]
NEXT STEP – Collecting Building Information

- After registering online, a benchmarking team member will contact you to collect basic building data

- Type of Building Data Collected
  - Building Name
  - Site Address
  - Building Gross Square Footage
  - Year Built
  - Define space types
  - Utility account numbers and associated Meter ID’s

- Verify Data collected
NEXT STEPS – Collecting Utility Data

- Authorization
  - Authorize Iowa Energy Center to collect building energy information directly from the utilities.

- Collect Energy Data
  - Work with utilities and building owners to collect energy data
  - Verify data collected and resolve any issues

- Training

- Use it!
Thank you!

Contact Xiaohui “Joe” Zhou (xhzhou@iastate.edu), or Jeff Beneke (jeff.beneke@uni.edu) for more information