

CEE Whole Building Performance Committee: Evolving Commercial Programs with Automated Benchmarking

Jason Erwin, CEE
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Agenda

- Introduction
- Overview of Benchmarking & Portfolio Manager
- Program Experiences
 - PG&E Automated Benchmarking Services, Peter Turnbull
- Discussion on Program Approaches, Challenges & Collective Actions

Session Objectives

- To learn about program-supported automated energy benchmarking as a commercial program enabling strategy
- To understand the program benefits and considerations involved with supporting an automated benchmarking model
- To understand important program challenges
- To discuss program approaches to integrating an automated benchmarking system and collective needs

Overview of Energy Benchmarking

Owner Perspective

- How well is my building performing currently?
- Is my building performing well consistently?
- How does my building performance relative to its peers?
- How does energy affect my bottom line?

Program Perspective

- How do we engage commercial customers about energy efficiency?
- How do we identify and screen good building candidates for program offerings?
- How do we gauge and show building or portfolio energy performance improvements?

Overview of Portfolio Manager

- EPA's free, online energy benchmarking tool
- Provides a standardized, comparable measurement of whole building energy performance
 - “Miles per gallon”; Basic scoring system, 1-100 scale
 - Over 32,000 buildings benchmarked
- Top building quartile (over 75) eligible to receive ENERGY STAR® label



<http://www.energystar.gov/benchmark>

Overview of Portfolio Manager

- Provides national, whole-building, apples-to-apples comparison using source energy use intensity (EUI)
- Reflects as-billed energy data (12 months, all fuels)
- Normalizes for weather and accounts for building operating characteristics (square footage, operating hours, plug load, etc.)
- Allows baselining, tracking energy performance over time
- Provides a “peer group” comparison
 - Includes 11 different commercial building types and waste water treatment plants
 - Collecting data for data centers



Overview of Portfolio Manager

The System Does

- Evaluate as-billed energy use relative to building operations
- Depend on a statistically representative sample of U.S. commercial buildings
- Provide ratings for 12 different building types (including WW)
- Provide a normalized EUI for all types of commercial buildings

The System Does Not

- Explain why a building performs the way it does
- Attempt to sum the energy use of each piece of equipment
- Normalize for specific technology choices
- Provide a rating (score) for all building types

Overview of Portfolio Manager

Customer Engagement

- Foot in the door, dispel “myth” that buildings are already efficient (scores used to communicate efficiency)
- Enhanced program offering

Building Screening & Tracking

- Remotely track single building or portfolio-wide energy performance, weather-normalized EUI
- Target buildings with greatest room for improvement

National Branding & Recognition

- Integrate ENERGY STAR brand
- Help customers achieve ENERGY STAR building/plant label and national recognition



Overview of Portfolio Manager

About 13 CEE members have reported that they support Portfolio Manager benchmarking

- Most support manual benchmarking, may be pilot scale

Ways efficiency programs can access PM:

- Single building, manual data entry
- Bulk data upload (upload large sets of building data in Portfolio Manager using an Excel template)
- Utility-based Automated Benchmarking
 - Option 1: Provide utility data to third-party provider
 - **Option 2: Provide automated benchmarking services**