

## C. Benchmarking

1. The goal of benchmarking
2. Energy Star Portfolio Manager
3. Other benchmarking tools
4. Benchmarking project(s)

# What is Benchmarking?

- Benchmarking is a starting point.
- The purpose of benchmarking is to help building owners and operators to make more informed decisions about their facility with regards to energy use and efficiency:
  - Assess operational effectiveness
  - Assist in the planning process
  - Set investment priorities
  - Identify under performing facilities

# EPA'S Energy Star Portfolio Manager

- Portfolio Manager can be used by all organizations to:
  - Establish a baseline energy performance for each property using Portfolio Manager.
  - Set goals for energy performance.
  - Prioritize investments.
  - Conduct ongoing measurement and verification of improvements - both financial and environmental.
  - Earn recognition from EPA, BOMA, ASHE, and others for environmental and operational excellence.
- Certain building types can receive an EPA energy performance score, comparing facility performance to similar buildings across the country.

# Energy Star Portfolio Manager

- Portfolio Manager is an interactive energy management tool that allows building owners to track and assess energy and water consumption across their entire portfolio of buildings in a secure online environment.
- It is available on-line at no-cost to all users.

# Benefits of Portfolio Manager

Use Portfolio Manager to generate a Statement of Energy Performance (SEP) for each building, summarizing building characteristics, energy consumption, CO2 emissions, and energy performance ratings where applicable.

# Benefits of Portfolio Manager

The Statement of Energy Performance can help you to:

- Apply for the ENERGY STAR label.
- Satisfy LEED for Existing Buildings: Operations and Maintenance (LEED-EBOM) requirements
- Support mortgage, sale, and/or lease transactions (AB 1103 compliance)
- Document performance in energy service contracts
- Communicate energy performance with tenants/owner/customers

# How to Benchmark a Building

## 1<sup>st</sup> Step: Create a Portfolio Manager account

- Provide building street address, year built, and contact information
- Collect and input the building gross floor area and key operating characteristics for each major space type in your building
- Gather at least 11 consecutive months of utility bills for all fuel types used in the building

# The EPA's Rating System

- Reflects the building's energy use intensity (EUI).
- Indicates how efficiently buildings use energy on a 1-100 scale
- A score of 50 indicates average energy performance while a score of 75 or better indicates top performance.



# Factors affecting energy performance scores

- EPA's energy performance scale accounts for the impact of weather variations as well as changes in key physical and operating characteristics of each building.
- Based on the information you enter about your building (such as its size, location, number of occupants and number of personal computers), the energy performance score compares your building's energy use to the actual energy use of similar buildings around the country.
- EPA developed the energy performance scale as a screening tool to help organizations assess performance and identify those buildings that offer the best opportunities for improvement and recognition. The tool's 1–100 scale is easily understood, and can facilitate communication between facility managers and senior executives regarding building performance.

# Energy Performance Scores

- EPA's energy performance score is available for the following building types:

Bank/Financial Institution

Hospital (acute care and children's)

House of Worship

Medical Office

Office

Retail Store

Supermarket

Courthouse

Hotel

K-12 School

Wastewater Treatment Plant

Residence Hall/Dormitory

Senior Care Facility

Warehouse

# Energy Performance Scores

- Mixed use buildings cannot receive a score but can still be benchmarked
- Benchmarks for mixed use facilities reflect overall EUI and require percentage of square footage dedicated to each use
- Buildings that are not eligible to receive a score also benefit by benchmarking. Performance improvements for all buildings can be tracked over time by comparing current performance to the baseline established in Portfolio Manager

# BEST Center Curricula, Resources & Recordings

## Academic Programs

Georgia Piedmont Technical College - Building Automation Systems

Milwaukee Area Technical College - Sustainable Facilities Operations

Laney College - Commercial HVAC Systems

City College San Francisco - Commercial Building Energy Analysis & Audits

## Professional Development Materials, Presentations & Videos

National Institutes

Building Automation Systems Instructor Workshops

Webinars (e.g., BEST Talks)

## Faculty Profile Videos

## Reports & Case Studies

## Marketing Resources

© 2013-2025 by BEST Center: NSF National Center for Building Technician Education is licensed under Creative Commons Attribution-Non Commercial (CC BY-NC) 4.0 International.

To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc/4.0/>

 CC BY-NC 4.0

# Attribution-NonCommercial 4.0

