

Benchmarking 101 for Municipalities

What is Benchmarking?

Building energy benchmarking is *measuring and tracking* a building's *energy use* over time. A benchmarking policy requires commercial building owners to track and report energy use in buildings annually.

Why Does it Matter?

The goal of benchmarking is to enable municipalities, as well as building owners and managers, to:

- understand energy use patterns and relative performance
- establish foundation for future building performance standard
- set energy goals
- track progress
- identify opportunities to save energy and money

Potential Savings¹

ENERGY STAR

- An average of 2.4% savings annually for buildings that benchmark

Chicago

- 5.2% reduction in energy from 2014 to 2018
- \$15.1 million savings per year

Minneapolis

- 3.4% reduction in energy from 2014 to 2016
- \$21 million savings per year

Denver

- 4.5% reduction in energy from 2017 to 2018
- \$13.5 million savings per year

IMPLEMENTATION OF BENCHMARKING POLICY

In implementing a benchmarking policy, key items to consider are included below:

REPORTING REQUIREMENTS IN POLICY

Reporting Tool: ENERGY STAR Portfolio Manager (ESPM)

- *Free and easy-to-use* web-based tool developed by the U.S. EPA
- Used by almost all municipalities implementing benchmarking
- Requires property owners to input utility bills, and some basic information about building (e.g., use type, location, size, occupancy)

Reporting frequency

- Most often required annually

Verification

- Recommended to require third-party verification of building and energy data every 3 years
- Verification must be completed by third-party to ensure data quality and accuracy

Approach to transparency

- Report published annually after data collection and analysis

UTILITY SUPPORT FOR POLICY

Discuss with utilities options for support for benchmarking. Potential support includes:

- Tools to push energy data directly to ESPM
- Technical assistance with data verification or data analysis
- Assistance with data jams



MUNICIPAL SUPPORT FOR BUILDING OWNERS

Organize "data jams" to help building owners understand how to comply with policy

- Free workshops to answer questions about newly adopted benchmarking ordinances and empower building owners or managers with tools to track and reduce their energy costs
- Experienced volunteers and industry professionals help building owners open their own accounts, set up their buildings in the software, and overcome any technical challenges

ONGOING IMPLEMENTATION

Tools, such as the Building Energy Analysis Manager (BEAM), can track compliance and streamline the back-end administration of benchmarking ordinances. These tools:

- Pull data from ESPM and perform data quality checks as needed
- Model energy efficiency measures and potential savings for building owners and city

¹<https://www.nrdc.org/sites/default/files/media-uploads/accc-benchmarking-overview-fs-20210420.pdf>
https://www.energystar.gov/sites/default/files/buildings/tools/DataTrends_Savings_20121002.pdf