



Building Energy Benchmarking in Hartford, Connecticut

Square Footage	Residential	Commercial	Manufacturing	Public/City Buildings
<1,000	5463	75	1	4
1,000-4,999	13750	578	30	26
5,000-9,999	137	282	22	19
10,000-19,999	4	192	17	14
20,000-29,999	-	75	20	18
30,000-39,999	-	49	11	11
40,000-49,999	-	26	11	7
50,000+	-	198	37	202
TOTAL:	19350	1475	149	301

Fuel Type	Residential	Commercial	Manufacturing	Public
Gas	14355	1132	120	252
Electric	996	120	1	12
Oil	3984	191	19	12

Commercial and Public Building Benchmarking Policies

Leading city's across the country are establishing greenhouse gas emission reduction targets and taking important steps to ensure those goals are met. One key step in this process involves the adoption of a benchmarking program to measure the energy consumption and greenhouse gas emissions of buildings at an individual level. These programs take slightly different forms but generally require buildings over a certain square footage threshold (e.g. 50,000 ft², 35,000 ft², etc.) to measure and report their energy data to the city.

Hartford's largest buildings (20,000 ft² or greater) are classified as commercial, manufacturing, and public buildings. In total there are 1,925 commercial, manufacturing, and public buildings in Hartford of which 665 are larger than 20,000 ft². The vast majority of these buildings use gas as their primary fuel type followed by oil and then electric.



Commercial Building Benchmarking Policy Examples

Below are two examples of benchmarking policies found in the Northeast. It's important to note that all policies start with the City Leading by Example. For more information on other benchmarking policies in the region, please see NEEP's [policy brief summary here](#).

South Portland, ME

South Portland adopted a benchmarking policy in 2017. The ordinance was passed through zoning requirements and only pertains, at this time, to buildings over 5,000 ft² within a specific commercial district and municipal buildings over 5,000 ft². The City has plans to expand the reach of the ordinance over time. South Portland held a benchmarking workshop to discuss the benefits of benchmarking, how the ordinance would impact local businesses, and to provide a tutorial of Portfolio Manager. South Portland does not publish an energy performance report for the first year that a covered building reports its data. The only information published for first year covered buildings are whether or not the building is in compliance. Written into the ordinance is a requirement for property owners to complete a comprehensive energy audit five-years after the first reporting deadline.

Cambridge, MA

In 2014, Cambridge adopted the Building Energy Usage Disclosure Ordinance. Buildings over 50,000 ft² first reported in 2015 followed by buildings over 25,000 ft² reporting in 2016. The City led by example by requiring municipal buildings over 10,000 ft² to report their energy usage starting in 2014. Reports are due to the city annually by May 1. Individual building data is not published until the second reporting cycle in Cambridge. The City's ordinance contains a section on assessing results that enables the Community Development Department to make recommendations to the City Manager, after December 2018, if building energy performance has not improved in covered buildings.

Multifamily and Residential Building Energy Rating Policies

In Hartford, 91 percent of buildings are residential, with 71 percent of residential buildings between 1,000 and 4,999 square feet. Of the residential properties, 21 percent use fuel oil and 74 percent use natural gas, leaving only five percent with electric for space and water heat. In addition, 70 percent of homes are one to three unit residences and 30 percent condo/multifamily. There is a significant opportunity to target the residential sector to provide more transparency in the market place to the energy and utility costs with residential labeling, particularly at time of listing. By making this information available, home owners and renters can make better informed decisions and the city can target programs towards reducing energy and carbon emissions to meet its goals. Below are example residential labeling policies.



Residential Labeling Program Structure

There are two ways to execute residential labeling schemes: voluntary labeling and mandatory labeling.¹

Voluntary: This structure is typically presented in conjunction with energy efficiency programs offered by utility program administrators to program participants. This method provides transparency to homeowners when completing a home energy audit of the estimated annual energy cost and consumption before and after recommended energy efficiency upgrades.

Mandatory: This structure is implemented at the city or state level where the governing jurisdiction requires a home energy label or certification to be completed, often at time of listing, time of sale, time of rental, or when “obtaining a certificate of occupancy”. Time of listing is a preferred method for market transformation because the information gleaned from the label can be provided to potential home buyers before purchasing a home. This allows home buyers to include this information in their decision-making process. Mandatory programs often generate a higher market participation level compared to voluntary programs

Residential and Multifamily Examples

Austin, Texas

Austin, Texas, was an early adopter of an Energy Conservation Audit and Disclosure ordinance ([ECAD, 2008](#)) requiring ratings and disclosures for all homes and buildings (residential, commercial, and multifamily) by the local utility (Austin Energy) and located within Austin’s city limits. Before selling a home, the homeowner must have an energy audit done if the home is 10 years or older, and the results must be disclosed to potential buyers. Multifamily properties are required to conduct specialized energy audits for properties 10 years or older. They must make the results available to potential and current residents. Multifamily High Energy Use properties use 150 percent over average energy use for similar properties. These properties must reduce energy use by 20 percent and provide a High Energy Use report to current and prospective residents.

New York

New York has a statewide **energy disclosure law** known as the “[New York State Truth in Heating Law](#)”, which went into effect in 1981, making it one of the oldest energy disclose laws in the country. This law requires sellers and landlords to provide buyers and tenants with heating and cooling bill information upon request. There is no system in place for implementing or tracking compliance with this law.

Washington D.C.

The District of Columbia passed a landmark bill at the end of 2018, the [Cleanenergy DC Omnibus Amendment Act Of 2018](#). In order to address the efficiency of the built environment in the District of Columbia, the Council established a first-of-its-kind building energy performance standard. Beginning January 1, 2021, all privately-owned buildings with at least 50,000 square feet and all District-owned or District instrumentality-owned

¹ EMPRESS, <http://empress.naseo.org/mandatory-vs-voluntary-approaches>



buildings with at least 10,000 square feet will be required to comply with [the standard](#). From there, in 2023, buildings of 25,000 square, and by 2026, buildings of 10,000 square will be required to comply. This will encompass commercial and multifamily buildings.

Berkley, California

The Berkeley Building Energy Saving Ordinance ([BESO](#), 2015) requires homeowners and owners of buildings of up to 25,000 square feet to complete comprehensive energy assessments at time of sale, including single-family homes (1-4 units). BESO also requires that large commercial and multifamily buildings submit annual benchmarking and complete an energy assessment once every 5 years. Buildings less than 600 square feet and individually owned units within a larger building are exempted at time of sale. The assessments are conducted by registered energy assessors who provide tailored recommendations on how to save energy and link building owners to incentive programs for energy efficiency upgrade projects.

Montgomery County, Maryland

In 2008, Montgomery County, Maryland adopted an ordinance requiring [energy bill disclosure](#) for the 12 months prior to the sale of the home, with some exemptions for homes that were unoccupied for all or a portion of the 12 months prior to sale. The seller must also provide the buyer with information approved by the county regarding the benefits of home energy audits and energy efficiency improvements. This is different from the examples above because it is disclosing actual energy use compared to estimated energy use from home energy assets. An important caveat to consider to this approach is the behavior in the home. A person may consider renting or buying, and the person selling or previous tenant may have drastically different habits, therefore the estimated energy costs may not be realistic for the new homeowner/tenant.

Portland, Oregon

City of Portland, adopted an [ordinance](#) for mandatory home energy labeling in 2017 and was enacted in 2018. Portland's Home Energy Score policy requires sellers to obtain a home energy performance report prior to listing their properties. The report must contain the DOE Home Energy Score, and each listing must contain the report. Further, the home energy performance report must be given to prospective buyers who visit the listed home.

The Portland label offers the Home Energy Score, carbon impacts, estimated utility costs, and costs of home energy improvement upgrades. Because the ordinance requires a seller to have a home energy assessment prior to listing the home, the city hopes the energy information will drive sellers to make upgrades. Portland will track their program objectives and report back to city council in 2020.

Considerations for Next Steps

Below are some of the key discussion points to consider. NEEP is happy to setup another time to discuss next steps and recommendations.

- Leading by example
- Stakeholder engagement
- Implementation schedule



- Square footage threshold
- Model policy language
- Development of related resources (e.g. How-to-Comply Guide, fact sheets, etc.)
- Trainings and outreach to building owners
- Connecting building owners to EE programs, incentives, technical assistance, grants, etc.

Additional Related Resources

How-to-Comply Guide

- [South Portland](#)

Sample Benchmarking Reports

- [South Portland](#) – first year report
- [Cambridge](#)
- [Municipal buildings only](#)
- [Visualization Tool](#)
- [Philadelphia](#)
- [Boston Visualization Tool](#)
- [Model Policy Language](#)

Training Materials and Other Resources

- [South Portland](#)
- [South Portland Benchmarking Exemplar](#)

Residential resources

- [EMPRESS](#)
- [Home Energy Labeling Information eXchange \(HELIX\)](#)

Multifamily resources

- [Renter's checklist](#)
- [Realtor's checklist](#)
- [Multifamily Energy Efficiency Retrofits: Barriers and Opportunities for Deep Energy Savings](#)