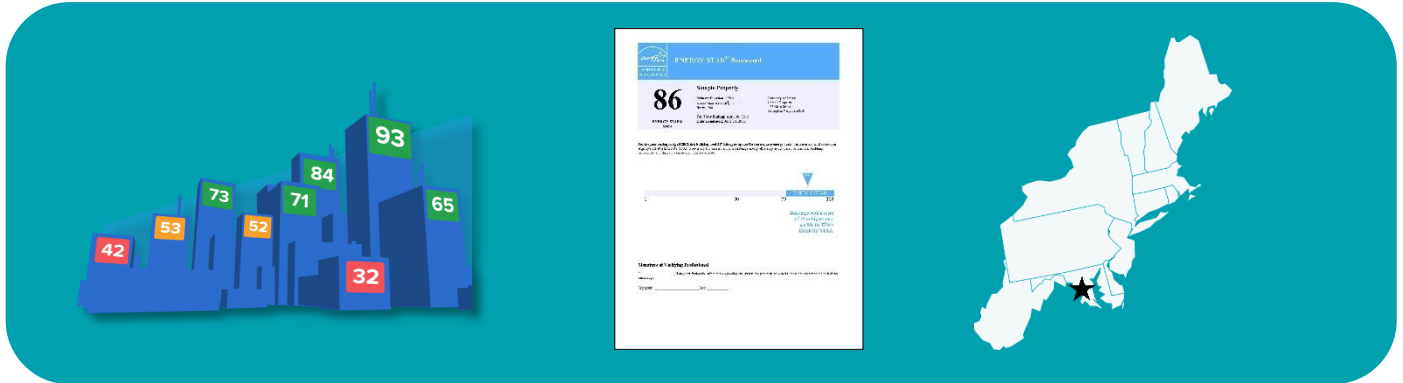




Building Energy Benchmarking Policies in the Northeast and Mid-Atlantic

A snapshot of policies in the NEEP region



Why Track Energy Usage?

Tracking energy usage is an important first step towards reducing energy consumption and associated costs. Benchmarking provides building owners and managers with information they need to make informed decisions about building system optimization or efficiency investments. This is especially relevant in the public and commercial sectors where facilities managers can control large amounts of energy usage.

How Does the Benchmarking Process Work?

Building, utility, and fuel data from 12 full months (13 monthly bills preferred) of usage are collected and input/uploaded into a tracking software, the most popular being U.S. EPA's [ENERGYSTAR Portfolio Manager](#). Portfolio Manager is a freely available tool that normalizes energy data inputs according to weather records and generates a statement of performance detailing a building's [Energy Use Intensity](#) (EUI). Additionally, Portfolio Manager compares similar buildings nationwide and assigns a score from 1-100. Those buildings achieving a score of 75 or more are eligible for [ENERGYSTAR certification](#). More than 450,000 properties, or nearly 45 percent of the total U.S. commercial building space has been assessed using Portfolio Manager¹.

Why Disclose Energy Consumption Information?

Disclosure of a building's energy consumption information sends more accurate signals to market actors than if no such disclosure were available, creating a market-based mechanism for encouraging building energy efficiency. Free markets only function correctly if market actors have access to

¹<https://portfoliomanager.zendesk.com/hc/en-us/articles/211696947-How-many-buildings-are-in-Portfolio-Manager->

accurate information; currently few market participants have access to the crucial information provided by utility bills. Mandating disclosure of such information provides potential renters, buyers, landlords, and other market participants with a better understanding of operating costs than was previously available. With this information disclosed, higher performing buildings or rental spaces become more attractive in the marketplace due to the visibility of their comparatively low operating costs. Conversely, owners of low-performing buildings would have to consider efficiency upgrades to remain competitive in an open marketplace.

How Can I Access My Utility Data?

In order to streamline access to utility data, the Department of Energy has developed the [Green Button](#) Initiative. This initiative provides a standardized format for downloading a building's energy consumption data on a participating utility's website, accessible through a literal green button (*pictured on right*). More information about this initiative, including a list of utilities using or committed to using the Green Button standard can be found at Energy.gov/data/green-button.



Additionally, some utilities and third-party vendors provide a higher level of streamlined access to utility data in the form of [Automated Benchmarking or Web Services](#), which allow for the automatic exchange of data with Portfolio Manager. Without these services, utility data can be accessed by looking at monthly bills or contacting your utility. This information can then be manually entered into Portfolio Manager.

It's important to note that the benchmarking process often includes fuels which do not fall within a utility's realm of responsibility. Such fuels include propane, heating oil, and biomass. For these fuels, building operators must keep track of fuel usage for the required period or engage a supplier who maintains accurate customer records.

Who Benchmarks their Building Energy Usage?

Benchmarking of building energy usage occurs in multiple sectors, including municipal, commercial, and multi-family residential.



Municipal governments often have large building portfolios and a desire to minimize operating costs, so, in many cases, they lead by example as early adopters of benchmarking practices. In fact, several jurisdictions have proven that benchmarking municipal buildings does not require legislative action, and can instead be mandated with an executive order.

Due to their often large portfolio size, municipal governments can face unique barriers when accessing data. To help alleviate these barriers, some utilities offer electronic data interchange. Electronic data interchange (EDI) is a standardized format for the electronic transfer of information, such as a municipality's aggregated utility bills.

CleanEnergy DC Omnibus Amendment Act of 2018:

To amend and expand upon previous energy efforts within Washington D.C., this act establishes advanced goals with the hope to make the district a global climate leader. Under the new amendment, building energy performance standards will incorporate more buildings every three years from 2020-2026. DOEE will conduct assessments every five years, and buildings must comply with no less than the median ENERGY STAR score for their building type. By year, this amendment incorporates:

- 2020: All existing DC-owned buildings of 10,000 sq.ft.+ and private buildings of 50,000 sq.ft.+
- 2023: Expanded to apply to all existing privately-owned building of 25,000 sq.ft.+
- 2026: Expanded to apply to all privately-owned buildings of 10,000 sq.ft.+

South Portland's Benchmarking Ordinance:

On January 4, 2017, the city of South Portland, ME, adopted a benchmarking ordinance for the Mill Creek Business District. A total of 30 buildings are covered under this ordinance and beginning on May 1, 2017 are now required to report their energy use data to the city. South Portland is an excellent example of crafting a policy that fits the needs of a community. Its ordinance is a part of a zoning ordinance being piloted for a specific business district. For more information about South Portland's ordinance, see the [exemplar here](#).

Many cities and some counties have mandated through municipal ordinance that **commercial** buildings above a certain square footage within their jurisdiction benchmark and disclose their energy usage information.

In some cases, such ordinances also require that **multi-family residential** buildings above a certain threshold disclose their energy usage.

Increasingly, cities are utilizing data from benchmarking to craft new policies that require buildings to achieve actual energy reduction targets. An example of one of these new policies is Washington D.C.'s 2018 bill amendment.



Benefits of Building Energy Benchmarking and Disclosure

Market-Based Mechanism

- Building energy usage disclosure provides actionable information to market actors, creating permanent accountability and a demand for energy-efficient buildings that does not require public investment to sustain. The result is a market-driven cycle of building energy improvement.

Identification of Investment Opportunities

- Benchmarking provides building operators and owners with information that can help identify strategic opportunities for investment in energy performance (i.e.- where to find the “low hanging fruit”)

Proven Strategy for Energy Savings

- On average, buildings which are consistently benchmarked reduce their energy consumption by approximately 2.4 percent each year (Source: [EPA](#))
- According to a survey of facility managers, those that benchmark their properties are more likely to make energy efficiency improvements than those that don't benchmark

Enhanced Real Estate Values

- Research suggests that buildings which undergo the benchmarking process and achieve an energy efficiency certification—such as *ENERGY STAR*—are valued accordingly by the market and obtain higher rents, sale values, occupancy rates, productivity rates, and operational savings.

Stimulation of Local Economy

- Building energy usage disclosure ordinances have unquestionably spurred the creation of building construction and energy service job in municipalities where these ordinances are already in effect.
- Money invested in energy efficiency stays within the local economy, rather than flowing to foreign regions for harvesting of their fossil fuels.



Current Benchmarking Policies in the Northeast and Mid-Atlantic

City-Level Benchmarking and Disclosure Ordinances				
	New York, NY	Boston, MA	District of Columbia	Cambridge, MA
Ordinance	Local Law 84	Building Energy Reporting and Disclosure Ordinance	Clean and Affordable Energy Act of 2008 (Title V)	Building Energy Usage Disclosure Ordinance
Enacted	2009	2013	2008	2014
Municipal	10,000 sq.ft.+	All	10,000 ft ²	10,000 sq.ft.+
Municipal Data & Reports	2010-2019	2018 Energy and Water Metrics	Interactive Mapping Tool	Interactive Compliance Map
Commercial	50,000 sq.ft.+	35,000 sq.ft.+	50,000 ft ² +	25,000 sq.ft.+
Multi-Family	50,000 sq.ft.+	35,000 sq.ft.+ or 35 units +	50,000 ft ² +	50+ Units
Non-Compliance Penalty	\$500 per quarter (limit \$2,000 annually)	\$35-\$200/day (limit \$3,000 annually)	For buildings that do not meet the standard, DOEE provides alternative pathways to achieve reductions.	First violation: warning. Subsequent violations: \$300/day.
Compliance Guide	New York City Compliance Guide	Boston Compliance Guide	Most Updated Information as of August 2019	Cambridge How to Report
Data & Reports	2012-2018	All Available Data Sets	2012 – 2018 Data	2016-2018 Building Energy and Water Use Data



City-Level Benchmarking and Disclosure Ordinances (cont.)				
	Portland, ME	South Portland, ME	Pittsburgh, PA	Philadelphia, PA
Ordinance	Order 67-16/17	Zoning Ordinance - Article XVII – Sec. 27-1701	Pittsburgh Building Benchmarking Amendment	BILL NO. 120428-A
Enacted	2016	2017	2016	2012
Municipal	All	5,000 sq.ft. +	All	10,000 sq. ft.+
Municipal Data & Reports	Municipal Energy Use Disclosure Report 2018	Various Report Files	Not Available Yet	2013-2017 Data Map
Commercial	20,000 sq.ft.+	5,000 sq.ft.+ (District Specific)	50,000 sq.ft. +	50,000 sq. ft.+
Multi-Family	50 units +	10 units + (District Specific)	None	50,000 sq. ft.+
Non-Compliance Penalty	First violation: written warning. Subsequent violations: fine up to \$20/day.	Non-compliance is unlawful and any delay in submitting a report greater than thirty days shall be deemed a violation.	Non-compliant buildings will be publicly listed as “eligible and non-participating” on the online platform.	\$300 for first 30 days, \$100 per day thereafter
Compliance Guide	Compliance covered in: Ordinance Section (i)	South Portland Compliance How-To Guide	Pittsburgh’s How to Comply	Philadelphia Compliance Guide
Data & Reports	Not Available Yet	2018 Report	2017 Report	2013-2017 Data Map



State-Level Public Building Benchmarking and Disclosure Initiatives					
	New York	Connecticut	Rhode Island	New Jersey	Delaware
Statute or Regulation	Executive Order 88	Public Act 13-298	DOE Funded Grant (Non-Law)	Assembly Bill No. 3723	Executive Order 18
Enacted	2012	2013	2012-2015	2018	2010
Notable Features	<ul style="list-style-type: none"> Benchmarking of all state buildings ASHRAE Level II Audits for buildings with low benchmarking scores Two years to make substantial progress toward implementing cost effective portfolio of recommended measures Sub-metering of all buildings 100,000 sq. ft.+ on a metered campus by 2017 Goal to reduce the average EUI in municipal buildings by 20% before April 2020 (baseline 2010) 	<ul style="list-style-type: none"> Department of Energy and Environmental Protection (DEEP) “may” benchmark municipally owned buildings DEEP shall make the data from Portfolio Manager public information The state will create benchmarking analytical tools and an interactive website DEEP has established a State of Connecticut Master Account in Portfolio Manager to track statewide energy usage and usage reductions 	<ul style="list-style-type: none"> Rhode Island Public Energy Partnership with Department of Energy funding Benchmarking municipal facilities throughout the state Conduct retrofits in approximately 100 facilities that achieve a 20% usage reduction Create a comprehensive inventory of energy consumption in the public sector Identify and mitigate barriers to efficiency improvements in the public sector 	<ul style="list-style-type: none"> Within five years of enactment, benchmarking is required by all owners and operators of commercial buildings over 25,000 sq.ft. using Portfolio Manager. Requires 21% of statewide electricity sales to be derived from Class I renewable energy sources by January 1, 2020, 35% by January 1, 2025, and 50% by January 1, 2030. 	<ul style="list-style-type: none"> Benchmarking of all state-owned and leased buildings Starting in 2018, owners of non-residential buildings 50,000 sq.ft.+ required to benchmark Target facilities with highest energy use and identify low-cost changes to reduce energy use without capital investment
Reports/Data	EO88 2018 Annual Report	Connecticut’s Energy Agenda	Rhode Island’s Public Energy Partnership Report	None Available as of August 2019	None Available as of August 2019



County Level Benchmarking and Disclosure Initiatives	
	Montgomery County, MD
Statute or Regulation	BILL 2-14 Amendment Bill 35-15 (Nov 2015)
Enacted	2014, Updated 2017
Notable Features	Commercial and Municipal Benchmarking and Disclosure <ul style="list-style-type: none"> • Reporting verified every three years by qualified professional <ul style="list-style-type: none"> • Municipal 50,000 sq.ft.+ • Commercial 50,000 sq.ft. + • Non-compliance Penalty is “Class A violation” (Max \$750)
Related Initiatives	Part of a suite of Nine Energy Bills related to: <ul style="list-style-type: none"> • LED Street lighting • Social Cost of Carbon Usage Calculations • 100% Renewable Power Purchases by 2016 • Expedited Solar Permitting Review • Expedited electric vehicle charging station permit review • Telecommuting regulations and liason • Electric Vehicle Ready Zoning requirements • Residential photovoltaic systems exemption from set-back requirements Time of Sale Disclosure and Audit for residential buildings (2008)
Reports/Data	1. Montgomery County Interactive Benchmarking Map 2. Annual Reports



NEEP Resources:

- [South Portland Benchmarking Exemplar](#) (2018)
- [Benchmarking Dashboard](#) (2018)
- [Public Sector Building Energy Benchmarking: Utility Data Access Options and Opportunities](#) (2016)
- [Building Energy Rating and Disclosure Policies: Update and Lessons from the Field](#) (2013)
- [Building Energy Rating and Disclosure Handout](#) (2013)
- [Regional Operations and Maintenance Guide for High Performance Schools and Public Buildings in the Northeast and Mid-Atlantic](#) (2018 Update)
- [Roadmap to Zero Energy Public Buildings: Progress Report](#) (2016)
- [Valuing Building Energy Efficiency Through Disclosure and Upgrade Policies: A Roadmap for the Northeast United States](#) (2009)

Other Related Resources:

- [ENERGYSTAR Portfolio Manager](#) (U.S. Environmental Protection Agency)
- [Green Button](#) Initiative (U.S. Department of Energy)
- [Apps for Energy](#) Initiative (U.S. Department of Energy)
- [Benchmarking and Disclosure: State and Local Policy Design Guide](#) (SEE Action Network)

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