

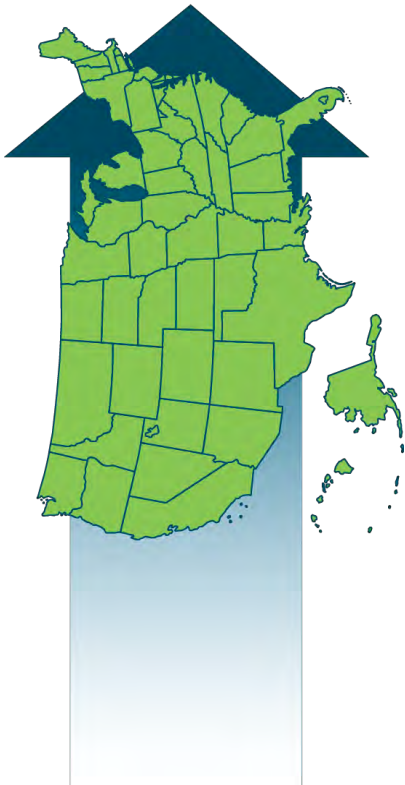
SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Benchmarking and Disclosure: State and Local Policy Design Guide and Sample Policy Language

Existing Commercial Buildings Working Group

May 2012



The State and Local Energy Efficiency Action Network is a state and local effort facilitated by the federal government that helps states, utilities, and other local stakeholders take energy efficiency to scale and achieve all cost-effective energy efficiency by 2020.

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Table of Contents

Acknowledgments	iv
1. Introduction	1
1.1 Why Encourage Benchmarking?	1
1.2 About Benchmarking and Disclosure Policy	1
1.3 About Energy Benchmarking	2
1.4 About Benchmarking Tools.....	2
2. Policy Design Guide	4
Section A: Definitions. As Used in this Section.....	4
Section B: Benchmarking Required for [State/Local Government] Buildings	5
Section C: Benchmarking Required for Covered Buildings.....	5
Section D: Disclosure and Publication of Benchmarking Information	6
Section E. Whole-Building Energy Consumption Data Access.....	7
Section F: Providing Benchmarking Information to the Building Owner	8
Section G. Violations	9
Section H. Enforcement	9
Section I. Rules	9
3. Items for Considerations	10
3.1 Transactional Disclosure	10
3.2 Leveraging Benchmarking Data to Inform Demand-Side Management Programs.....	10
3.3 Benchmarking Information Quality Assurance	11
Appendix: Sample Policy Language (Without Annotation)	12



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1. Introduction

Since 2007, seven U.S. state and local governments have adopted benchmarking and disclosure policies requiring the comparative measurement and disclosure of commercial building energy performance. More than 10 states and local governments are actively developing benchmarking and disclosure policies or considering legislative proposals.

As jurisdictions seek the adoption of new policies, a patchwork of localized requirements is rapidly emerging. In the absence of federal policy or guidance, this trend is likely to continue. This document is intended to guide policymakers in the design of a commercial benchmarking and disclosure policy and provide a standard policy foundation for jurisdictions. It presents sample policy language and provides discussion points on key provisions.

1.1 Why Encourage Benchmarking?

Commercial buildings compose nearly half of building energy use and roughly 20% of total energy consumption and greenhouse gas emissions in the United States.^{1,2} Energy expenditures average more than \$2 per square foot in commercial and government buildings,¹ making energy a cost worth managing.

Building owners who want to manage energy costs must be able to measure their building's performance. State and local governments can encourage building owners to improve the efficiency of their buildings by making energy performance visible, which can drive new investment and create an estimated 5 to 15 green jobs per \$1 million invested.³ For example, a recent study found that energy performance benchmarking prompted energy efficiency investments through improved energy management processes (62% of those who participated in a benchmarking program) or building upgrades and behavioral efficiency projects (84% of benchmarking participants).⁴ Energy efficiency services companies operating in New York City and San Francisco are seeing a 30% increase in business in response to local benchmarking ordinances.⁵ Efficient buildings are also more profitable and more valuable at resale,⁶ which can increase property tax revenues.

By ensuring access to data about commercial building energy performance, governments can enable businesses to make smarter decisions and save money on their energy bills. Disclosing public building energy performance data for public buildings can drive energy performance improvement, save taxpayer dollars, and build public trust in the effectiveness of such policies.

1.2 About Benchmarking and Disclosure Policy

Benchmarking and disclosure is a market-based policy tool to increase building energy performance awareness among key stakeholders and create demand for energy efficiency improvements. It represents an effort by policymakers to overcome barriers that prevent the commercial real estate marketplace and public sector institutions from identifying and valuing the energy efficiency of existing buildings. A recent study found that

¹ U.S. Department of Energy (DOE). *Buildings Energy Data Book*, Chapter 3. March 2011. <http://buildingsdatabook.eren.doe.gov/ChapterIntro3.aspx>.


² U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2009*, Table ES-8. April 2011. www.epa.gov/climatechange/emissions/usinventoryreport.html.

³ U.S. Environmental Protection Agency, *Rapid Deployment Energy Efficiency (RDEE) Toolkit: Planning & Implementation Guides*. www.epa.gov/cleanenergy/documents/suca/rdee_toolkit.pdf. December 9, 2009.

⁴ NMR Group, Inc. and Optimal Energy, Inc., *Statewide Benchmarking Process Evaluation, Volume 1: Report*, April 2012. www.energydataweb.com/cpucFiles/pdaDocs/837/Benchmarking%20Report%20%28Volume%201%29%20w%20CPUC%20Letter%204-11-12.pdf.

⁵ Hurley, A.K.; Burr, A. *Building Energy Disclosure Laws Push Companies to Hire*. www.bepanews.com/images/pdf/Disclosure_Laws_Push_Companies_Hire.pdf.

⁶ Burr, A. "CoStar Study Finds Energy Star, LEED Bldgs. Outperform Peers." March 26, 2008. www.costar.com/News/Article/CoStar-Study-Finds-Energy-Star-LEED-Bldgs-Outperform-Peers/99818.



building owners and managers planned to use benchmarking data to market or differentiate a building or company and inform the sale or acquisition of existing buildings.⁷ In this role, disclosure of benchmarking data can help strengthen local real estate markets.

The states of California and Washington, the cities of Austin, New York, San Francisco, and Seattle, and the District of Columbia have adopted commercial benchmarking and disclosure policies. Collectively, these policies will impact approximately 60,000 nonresidential and multifamily buildings totaling more than four billion square feet of floor space as they are implemented over the next few years.⁸ A number of other states and several of the nation's largest cities are actively considering similar policies.

There are two distinct components to benchmarking and disclosure policy. Benchmarking requires the building owner, operator, or manager to measure the building's energy performance and generate comparable energy performance metrics, similar to a fuel economy rating on a vehicle. Some existing policies require benchmarking to occur once each year, while other policies require benchmarking only when a building is involved in a financial transaction, such as a sale or a lease. After benchmarking is complete, the benchmarking information must be made available to the marketplace, which typically occurs through a direct disclosure to stakeholders (such as a tenant or a prospective lessee, investor, or lender) or by publication on a publicly accessible web site. Most existing policies also require the reporting of certain benchmarking information to the state or local government.

1.3 About Energy Benchmarking

Benchmarking is the process of comparing inputs, processes, or outputs within or between organizations, often to motivate performance improvement. Benchmarking typically measures performance using an indicator per common unit (e.g., cost per unit produced), which allows for comparison over time, to others, or to an applicable standard.

When applied to building energy performance, benchmarking provides a measurement for how efficiently a building uses energy as compared to a baseline, which may be the same building over time; the performance of similar buildings; or modeled simulations of a building. Energy use is typically measured on a per-square-foot basis and normalized for a range of factors, such as building size, operational characteristics, tenancy, and climate. To make benchmarking outputs consumer friendly, many benchmarking programs use a scale to show building performance as a numeric score, letter grade, or other simple metric.

1.4 About Benchmarking Tools

A number of benchmarking tools exist today that are used by commercial real estate stakeholders to measure building energy performance. Many of these tools are offered by private companies and nonprofit organizations, while some are administered by state and local governments or the federal government. Jurisdictions interested in developing benchmarking and disclosure policy are encouraged to work with local stakeholders to identify the benchmarking tool or multiple tools that best address policy needs.⁹


This document references the U.S. Environmental Protection Agency's (EPA) ENERGY STAR® Portfolio Manager energy measurement and tracking tool, which is specified in many existing policies and widely used within the United States commercial real estate industry. It is available online at the EPA ENERGY STAR website at no cost.¹⁰ This policy design is not fundamentally tied to a single benchmarking or rating tool; the example policy language can still be used by replacing or appending references to Portfolio Manager with references to another tool of

⁷ NMR Group, Inc. and Optimal Energy, Inc., *Statewide Benchmarking Process Evaluation*. April 2012.

⁸ Institute for Market Transformation, "Building Energy Transparency: A Framework for Implementing U.S. Commercial Energy Rating and Disclosure Policies." July 2011. Available at www.buildingrating.org/Building_Energy_Transparency_Implementation_Report.

⁹ For more information about benchmarking tools, see the State and Local Energy Efficiency Action Network, Existing Commercial Buildings Working Group fact sheet on energy benchmarking, rating, and disclosure, available at www.seeaction.energy.gov/existing_commercial.html.

¹⁰ For more information, see www.energystar.gov.



choice. As new tools and methods emerge, policymakers may wish to update their policies to use an approach that best fits their needs.

All commercial and multifamily buildings can be benchmarked in Portfolio Manager and receive energy performance metrics, including total annual energy use and weather-normalized energy use per square foot for the building. For 15 common commercial building types, Portfolio Manager also generates a numeric energy performance score from 1 to 100 (with 100 being the best score) on a percentile scale comparing the building's energy performance to that of similar buildings nationwide. It normalizes energy use for factors including climate and the building's size, occupancy, and operating hours, enabling fair comparisons between buildings with different operational demands. For a building to be benchmarked in Portfolio Manager, users must enter nontechnical information about the building, including space use attributes, physical characteristics, and energy consumption data for the past 12 months. The nation's most energy-efficient buildings are eligible to receive ENERGY STAR certification, a voluntary recognition by EPA of buildings with scores of 75 or higher.



2. Policy Design Guide

This section provides an annotated version of the sample policy language, organized into sections:

- Section A: Definitions
- Section B: Benchmarking Required for [State/Local Government] Buildings
- Section C: Benchmarking Required for Covered Buildings
- Section D: Disclosure and Publication of Benchmarking Information
- Section E: Whole-Building Energy Consumption Data
- Section F: Providing Benchmarking Information to the Building Owner
- Section G: Violations
- Section H: Enforcement
- Section I: Rules.

The sample policy language is also available with annotations removed in the appendix.


Section A. Definitions. As Used in this Section

- (1) *“benchmark” means to input the total energy consumed for a building and other descriptive information for such building as required by the benchmarking tool.*
- (2) *“benchmarking information” means information related to a building’s energy consumption as generated by the benchmarking tool, and descriptive information about the physical building and its operational characteristics. The information shall include, but need not be limited to:*
 - (a) *Building address;*
 - (b) *Energy use intensity (EUI);*
 - (c) *Annual greenhouse gas emissions;*
 - (d) *Water use; and*
 - (e) *The energy performance score that compares the energy use of the building to that of similar buildings, where available.*
- (3) *“benchmarking tool” means the U.S. Environmental Protection Agency’s ENERGY STAR Portfolio Manager tool, or an equivalent tool adopted by the director.*

Discussion: This definition references the ENERGY STAR Portfolio Manager benchmarking tool but allows the director of the implementing agency to reference an alternative tool or multiple tools.

- (4) *“building owner” means an individual or entity possessing title to a building, or an agent authorized to act on behalf of the building owner.*
- (5) *“covered building” means:*
 - (a) *Any nonresidential building containing [xx,xxx] or more gross square feet, or any residential building containing [xx] or more dwelling units;*
 - (b) *Two or more buildings on the same tax lot that together exceed [xxx,xxx] gross square feet or [xx] dwelling units;*
 - (c) *Two or more buildings held in the condominium form of ownership that are governed by the same board of managers and that together exceed [xxx,xxx] gross square feet or [xx] dwelling units.*

The term “covered building” shall not include any building owned by the [state/local government].



Discussion: This definition sets the minimum building size threshold for covered buildings, and addresses the treatment of multiple buildings on a single parcel or held under common condominium ownership.¹¹ Size thresholds are flexible; however, states and local jurisdictions are encouraged to focus initially on large buildings relative to the average size of the local building stock. For states and large cities, an appropriate minimum threshold may be nonresidential buildings that contain at least 50,000 square feet, and multifamily buildings that contain at least 30 dwelling units. Smaller communities should adjust thresholds as necessary.

- (6) “director” means the director of the [agency overseeing administration of law].
- (7) “dwelling unit” means a single unit consisting of one or more habitable rooms, occupied or arranged to be occupied as a unit separate from all other units within a building, and used primarily for residential purposes and not primarily for professional or commercial purposes.
- (8) “energy” means electricity, natural gas, steam, heating oil, or other product sold by a utility for use in a building, or renewable on-site electricity generation, for purposes of providing heating, cooling, lighting, water heating, or for powering or fueling other end-uses in the building and related facilities.
- (9) “energy performance score” means the numeric rating generated by the ENERGY STAR Portfolio Manager tool or equivalent tool adopted by the director that compares the energy usage of the building to that of similar buildings.
- (10) “ENERGY STAR Portfolio Manager” means the tool developed and maintained by the U.S. Environmental Protection Agency to track and assess the relative energy performance of buildings nationwide.
- (11) “[state/local government] building” means any of the following:
 - (a) a building that is 10,000 gross square feet or more that is owned by the [state/local government]; or
 - (b) a building that is 10,000 gross square feet or more where a [state/local government] agency leases at least 5,000 rentable square feet of space.

Discussion: This definition sets the minimum building size threshold for buildings owned by the state or local government. Size thresholds are flexible.

- (12) “tenant” means a person or entity occupying or holding possession of a building or premises pursuant to a rental agreement.
- (13) “utility” means an entity that distributes and sells natural gas, electric, or thermal energy services for buildings.

Section B. Benchmarking Required for [State/Local Government] Buildings


- (1) No later than April 1, [xxxx], and no later than every April 1 thereafter, each [state/local government] building shall be benchmarked for the previous calendar year by the entity primarily responsible for the management of such building, in coordination with the director.

Discussion: This provision requires the annual benchmarking of state or local government facilities, increasing the ability of local governments to manage and reduce taxpayer-funded energy costs. It should be structured to take effect prior to private sector benchmarking requirements, ensuring that local governments are leading by example.

Section C: Benchmarking Required for Covered Buildings

- (1) Building owners shall annually benchmark for the previous calendar year each covered building and obtain an energy performance score as available according to the following schedule:

¹¹ To see an example of how this definition is applied in existing policy, see www.nyc.gov/ggbp.

- 
- (a) A nonresidential building that is [xxx.xxx] gross square feet or more by May 1, [xxxx] and by every May 1 thereafter; and
 - (b) A nonresidential building that is [xx.xxx] gross square feet or more, or a residential building that has [xx] or more dwelling units, by May 1, [xxxx] and by every May 1 thereafter.

Discussion: This provision requires the annual benchmarking of privately owned nonresidential and multifamily buildings. It establishes a multi-year implementation schedule based on a building's gross floor area or number of dwelling units. It is structured to affect the largest nonresidential buildings in a given area first, while extending the initial compliance period by an additional year for smaller nonresidential buildings and multifamily buildings. This phased approach makes implementation activities more manageable for local governments and gives the market ample time to comply with policy requirements. Whereas many of the owners and operators of the largest nonresidential buildings have experience benchmarking, stakeholders of slightly smaller nonresidential buildings and multifamily buildings may require additional benchmarking resources and education, and would benefit from more time to comply.

The implementation schedule is flexible depending on the types of buildings and the size of buildings required to benchmark, as well as the overall desired length of the implementation period. Most policies feature phased implementation schedules of at least two years. Aligning benchmarking requirements for all buildings (covered and state/local government) to the previous calendar year establishes a fixed and standard benchmarking period that enhances the comparability of benchmarking information and increases the ability of local governments to evaluate the data.

Section D. Disclosure and Publication of Benchmarking Information


- (1) *The building owner shall annually provide benchmarking information to the director, in such form as established by the director's rule, by the date provided by the schedule in Section (C)(1).*

Discussion: This provision requires the annual reporting of benchmarking information to the state or local government, enabling policymakers to track compliance, measure data quality, evaluate policy impacts, and leverage building energy performance metrics to inform the development of new policies and incentives. It is intended to complement additional disclosure requirements, including transactional disclosure and public disclosure. Without this type of reporting, local governments have no mechanism to assess policy impacts and effectiveness.

- (2) *The director shall make available to the public on the internet, and update at least annually, benchmarking information for the previous calendar year for [state/local government] buildings no later than Sept. 1, [xxxx], and each Sept. 1 thereafter; and for covered buildings for the previous calendar year no later than Sept. 1, and each Sept. 1 thereafter, following the second annual receipt of benchmarking information. No benchmarking information received by the director in the first year a covered building is required to benchmark pursuant to Section (C) will be published.*

Discussion: This provision requires the state or local government to annually publish benchmarking information for state/local government and covered buildings on a publicly accessible web site. Similar to the benchmarking implementation schedule in Section (C)(1), it establishes a multi-year publication schedule beginning with state or local government facilities, followed by privately owned buildings. The publication of benchmarking information begins in year two of compliance for each building, meaning that no benchmarking information submitted by a building owner in the first year of compliance (according to the implementation schedule) will be published. This delay provides owners and operators a window of time to improve building energy performance before benchmarking information is published.

Public disclosure maximizes the accessibility of building energy performance information for commercial real estate practitioners and many other relevant audiences, including the investors of companies with



real estate holdings and the general public. It also enables the integration of benchmarking information into influential real estate information resources, such as those administered by CoStar Group, Real Capital Analytics, and other companies.

Some existing policies reference a different disclosure model known as transactional disclosure, whereby the building owner must release benchmarking information to prospective counterparties in a building financial transaction, such as a lease, sale or financing. Transactional disclosure is discussed in more detail in Section 3.1 of this document.

- (3) *The director shall make available to the public, and update at least annually, the following information:*
- (a) *Summary statistics on energy consumption in [state/local government] buildings and covered buildings derived from aggregation of benchmarking information for those buildings;*
 - (b) *Summary statistics on overall compliance with this chapter;*
 - (c) *For each [state/local government] building and covered building:*
 - (1) *The status of compliance with the requirements of this chapter;*
 - (2) *Annual summary statistics for the building, including energy use intensity, annual greenhouse gas emissions, water use per gross square foot, and an energy performance score where available; and*
 - (3) *A comparison of benchmarking information across calendar years for any years such building was benchmarked.*


Discussion: This provision establishes the information that must be published each year for individual buildings and requires the state or local government to annually publish aggregate compliance and energy performance statistics for the entire affected building stock. This type of jurisdiction-wide analysis can provide useful feedback for state or local governments on the implementation or administration of the policy.

Section E. Whole-Building Energy Consumption Data Access

- (1) *Utilities providing energy service to a covered or [state/local government] building shall maintain energy consumption data for each building for at least the most recent 36 months in an electronic format capable of being uploaded to the benchmarking tool.*
- (2) *On and after Jan. 1, [xxxx], upon the written or electronic request and authorization of a building owner, a utility shall provide the building owner with at least 12 consecutive months of energy consumption data for the specified building in its entirety, including consumption data derived from readings of separate utility-grade meters that measure energy consumption in tenant-occupied spaces. The utility shall provide the data in the following manner:*
- (a) *Within 14 days of a request by the building owner; and*
 - (b) *In an electronic format capable of being uploaded to the benchmarking tool, or through the direct, secure upload to the benchmarking tool account specified by the building owner.*

Discussion: This section establishes requirements for the transfer of historical, whole-building energy consumption data from utilities to building owners to facilitate benchmarking. It is relevant for state or local governments with authority to regulate utilities. Local jurisdictions that lack such authority should work with utilities to facilitate the voluntary adoption of energy consumption data accessibility practices as outlined in this section.

In order to benchmark, owners must collect and input 12 months of energy consumption data for the entire building in Portfolio Manager and most other benchmarking tools. However, building owners and managers may not know how to find or read meter data. In addition, many owners of multi-tenant commercial buildings and multifamily buildings cannot access energy consumption data for their entire building due to separately metered tenant spaces. Utilities have the ability to provide owners with access to whole-building energy consumption data without compromising customer confidentiality, as data access programs established recently by several utilities have successfully demonstrated.



The provisions referenced above require utilities to maintain historical energy consumption data for buildings in their service territories that are required to benchmark, and to provide consumption data for an entire building upon the request of a building owner. The provisions do not require utilities to provide other types of data, such as personal customer information or cost data. Utilities have the option of providing the data in an electronic format directly to the owner, or automating the process to facilitate direct data uploading to the owner's benchmarking account by leveraging EPA's Automated Benchmarking System (for use with Portfolio Manager) or other automated services. Depending on the utility, additional staff resources or IT modifications may be needed to comply with the provisions.

- (3) *Utilities may provide such data in a form that aggregates energy consumption data from tenant meters. Aggregated data shall be provided to the building owner without prior consent from tenants, provided that the data:*
- (a) *Does not contain the individual identities of tenants or other personally identifying information;*
 - (b) *Does not contain additional customer-specific billing data; and*
 - (c) *Otherwise provides adequate protections for the security of the information and the privacy of the owner and tenants.*

Discussion: This provision allows utilities to provide the building owner with aggregated energy consumption data for multiple meters in a building. A number of utilities are using this strategy to conveniently provide owners with whole-building data in a manner that protects the confidentiality of individual customers.¹² Some utilities have established a minimum threshold for the number of meters subject to aggregation as an additional customer confidentiality safeguard.

Section F. Providing Benchmarking Information to the Building Owner

- (1) *Each tenant located in a covered building subject to this chapter shall, within 30 days of a request by the building owner and in a form to be determined by the director, provide all information that cannot otherwise be acquired by the building owner and that is needed by the building owner to comply with the requirements of this chapter. A failure to provide information to a building owner may result in penalties as provided under Section (H)(2).*

Discussion: This provision requires tenants to provide the building owner with the energy consumption data and space use characteristics required to benchmark. In practice, this provision should have limited applicability because many owners and building managers will already have access to most or all of the space use information needed to benchmark, and the issue of consumption data is addressed by Section (E).

- (2) *Where the building owner is unable to benchmark due to the failure of any or all tenants to report the information required by Section (F)(1), the owner shall complete benchmarking using such alternate values as established by the director prior to the implementation of this chapter. The director shall evaluate the quality of any alternate values established pursuant to Section (F)(2) and propose revisions that increase the quality of such values prior to Dec. 31, [xxxx], and not less than once every 10 years thereafter.*

Discussion: This provision requires the director to establish proxy or default values for use by building owners in benchmarking, to be used in cases where the owner is unable to benchmark due to a failure by tenants to provide energy consumption or space use information. The director may choose to reference proxy or default values that are already established, or create new values. The director must review any values established in this section periodically.

¹² Utilities providing aggregate, whole-building data to building owners include Austin Energy, Commonwealth Edison, Consolidated Edison, Puget Sound Energy, Sacramento Municipal Utility District and Seattle City Light. For more information on whole-building energy consumption data aggregation, please see www.energydataalliance.org.



Section G. Violations

- (1) *It shall be unlawful for any entity or person to fail to comply with the requirements of this chapter or misrepresent any material fact in a document required to be prepared or disclosed by this chapter.*

Section H. Enforcement

- (1) *If the director determines that a building owner has failed to report accurate energy benchmarking information pursuant to Section (D)(1), the director may seek the following remedies:*
 - (a) *A written warning may be issued for the first violation; and*
 - (b) *If benchmarking information is not reported within 15 days of the date the written warning is issued, the director may issue a notice of violation with a penalty of up to \$[xxx] per day for the first 10 days of noncompliance, then up to \$[xxx] per day for each day in violation past the 10th day until compliance is achieved.*

Discussion: This provision gives the implementing agency authority to enforce noncompliance in the annual reporting of benchmarking information to the state or local government.¹³ The agency may assess penalties if no benchmarking is submitted or if the submitted benchmarking information is found to be inaccurate.

- (2) *If the director determines that a tenant has failed to provide information to a building owner pursuant to Section (F)(1), the director may seek the following remedies:*
 - (a) *A citation of up to \$[xxx] may be issued for the first violation;*
 - (b) *A citation of up to \$[xxx] may be issued for the second violation within a 12-month period; and*
 - (c) *A citation of up to \$[xxx] may be issued for the third and subsequent violation within a 12-month period.*

Discussion: This provision gives the implementing agency authority to enforce noncompliance in the disclosure of information by the tenant to the building owner.

Section I. Rules

- (1) *The director shall promulgate such rules as deemed necessary to carry out the provisions of this article.*

¹³ For more information about policy enforcement, see the State and Local Energy Efficiency Action Network, Existing Commercial Buildings Working Group fact sheet on energy benchmarking, rating, and disclosure, available at www.seeaction.energy.gov/existing_commercial.html.



3. Items for Consideration

The sample policy language provided in Section 2 provides a standard policy foundation for jurisdictions considering benchmarking and disclosure policy; however, there are several other concepts that may be important to states or local policymakers as they consider policy options.

3.1 Transactional Disclosure

Transactional disclosure is an alternative to public disclosure that is referenced in several existing benchmarking and disclosure policies. Instead of requiring the publication of benchmarking information on the internet, transactional disclosure requires the disclosure of benchmarking information between parties in a real estate transaction, such as a sale or a lease. Typically, the building owner is required to disclose information to prospective lessees, investors, and lenders prior to the completion of a transaction. This disclosure may also require owners to give benchmarking information to current tenants in a building.

The concept of transactional disclosure dovetails with many established real estate disclosures. It can effectively integrate building performance data into the transaction process and typically has little or no fiscal impact for state or local governments; however, it provides less overall transparency and accountability than a public disclosure requirement. In designing transaction-based disclosure requirements, it is also important to consider when disclosure is triggered. Some existing transaction-based disclosure requirements do not take effect unless an entire building turns over or is sold. Thus, if a lease changes for a single tenant in a building with multiple tenants, disclosure for the whole building may not be triggered. Similarly, upon the sale of an entire building, the transfer of ownership often occurs in increments to avoid new tax assessments, so proper policy design is needed to ensure that disclosure is triggered as intended.


Sample language on transactional disclosure is provided below. The sample provision requires the disclosure of benchmarking information by the building owner or operator to current tenants in a building and to the prospective counterparties in a real estate lease, sale, or financing transaction. It gives prospective lessees and buyers the legal right to view benchmarking information for a building within seven days of a request at any point during the transaction process, and establishes a mandatory backstop requiring the building owner to disclose that information at the time a lease or sales contract is presented if no previous request was made. For financing transactions, the disclosure must occur to the prospective lender at or before a loan application is filed. The implementation schedule is flexible and can be phased in similar to other benchmarking and disclosure requirements outlined in the sample policy language provided in Section 2.

DISCLOSURE OF BENCHMARKING INFORMATION

- (1) *The building owner shall provide, on and after the date designated by the schedule in Section [xx], and in such form as established by the director's rule, benchmarking information for the previous calendar year or for the most recent continuously occupied 12-month period to:*
 - (a) *Prospective lessees, within 7 days of a request by the prospective lessee, and not later than the time a lease contract is presented by the building owner if no such request is made;*
 - (b) *Prospective buyers, within 7 days of a request by the prospective buyer, and not later than the time a sale contract is presented by the building owner if no such request is made;*
 - (c) *Prospective lenders, at or before the time a loan application is presented by the building owner to finance or refinance the building; and*
 - (d) *Current tenants, at least once per calendar year.*

3.2 Leveraging Benchmarking Data to Inform Demand-Side Management Programs

State and local governments that receive benchmarking information for privately owned buildings will have access to a wealth of new information about their local building stocks. This information can inform the development of



more effective energy efficiency policies and incentives. Similarly, utilities may use benchmarking information to inform the design, development, implementation, and evaluation of demand-side management programs and other ratepayer-funded programs.

Policymakers and utilities should jointly explore and coordinate policy needs related to benchmarking data, and develop information-sharing practices, during the policy development process. Both of those groups, as well as taxpayers and the real estate industry, will benefit if benchmarking data can be effectively integrated into energy efficiency policy and program planning. State and local governments should consider formalizing the sharing of benchmarking information with utilities in benchmarking and disclosure policy language.

3.3 Benchmarking Information Quality Assurance

State and local governments must ensure benchmarking information is accurate and not subject to intentional gaming or accidental mistakes that distort the quality of the data. Most existing policies grant the implementing agency the authority to audit benchmarking information and issue violations for inaccurate submissions; however, this is an imperfect solution given the continuous, high volume of benchmarking submissions expected in some states and local jurisdictions.

State and local governments should consider requiring third-party verification of benchmarking submittals as a basic quality assurance measure. Verification could be conducted by credentialed professionals, such as a Professional Engineer or a Registered Architect, as is currently required by the EPA ENERGY STAR program for buildings seeking voluntary ENERGY STAR certification.

Other verification methods may exist and should be explored. Requiring any type of third-party verification will result in the building owner incurring additional cost to comply with policies. State and local governments should engage with local stakeholders to explore this issue further before developing verification requirements.



Appendix: Sample Policy Language (Without Annotation)

This section provides sample policy language without annotation, organized into sections:


- Section A. Definitions
- Section B. Benchmarking Required for [State/Local Government] Buildings
- Section C. Benchmarking Required for Covered Buildings
- Section D. Disclosure and Publication of Benchmarking Information
- Section E. Whole-Building Energy Consumption Data
- Section F. Providing Benchmarking Information to the Building Owner
- Section G. Violations
- Section H. Enforcement
- Section I. Rules.

An annotated version of the sample policy language is also available in Section 2.

Section A. DEFINITIONS. AS USED IN THIS SECTION;

- (1) *“benchmark” means to input the total energy consumed for a building and other descriptive information for such building as required by the benchmarking tool.*
- (2) *“benchmarking information” means information related to a building’s energy consumption as generated by the benchmarking tool, and descriptive information about the physical building and its operational characteristics. The information shall include, but need not be limited to:*
 - (a) *Building address;*
 - (b) *Energy use intensity (EUI);*
 - (c) *Annual greenhouse gas emissions;*
 - (d) *Water use; and*
 - (e) *The energy performance score that compares the energy use of the building to that of similar buildings, where available.*
- (3) *“benchmarking tool” means the U.S. Environmental Protection Agency’s ENERGY STAR Portfolio Manager tool, or an equivalent tool adopted by the director.*
- (4) *“building owner” means an individual or entity possessing title to a building, or an agent authorized to act on behalf of the building owner.*
- (5) *“covered building” means:*
 - (a) *Any nonresidential building containing [xx,xxx] or more gross square feet, or any residential building containing [xx] or more dwelling units;*
 - (b) *Two or more buildings on the same tax lot that together exceed [xxx,xxx] gross square feet or [xx] dwelling units;*
 - (c) *Two or more buildings held in the condominium form of ownership that are governed by the same board of managers and that together exceed [xxx,xxx] gross square feet or [xx] dwelling units.*

The term “covered building” shall not include any building owned by the [state/local government].
- (6) *“director” means the director of the [agency overseeing administration of law].*

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- (7) “dwelling unit” means a single unit consisting of one or more habitable rooms, occupied or arranged to be occupied as a unit separate from all other units within a building, and used primarily for residential purposes and not primarily for professional or commercial purposes.
 - (8) “energy” means electricity, natural gas, steam, heating oil, or other product sold by a utility for use in a building, or renewable on-site electricity generation, for purposes of providing heating, cooling, lighting, water heating, or for powering or fueling other end-uses in the building and related facilities.
 - (9) “energy performance score” means the numeric rating generated by the ENERGY STAR Portfolio Manager tool or equivalent tool adopted by the director that compares the energy usage of the building to that of similar buildings.
 - (10) “ENERGY STAR Portfolio Manager” means the tool developed and maintained by the U.S. Environmental Protection Agency to track and assess the relative energy performance of buildings nationwide.
 - (11) “[state/local government] building” means any of the following:
 - (a) a building that is 10,000 gross square feet or more that is owned by the [state/local government]; or
 - (b) a building that is 10,000 gross square feet or more where a [state/local government] agency leases at least 5,000 rentable square feet of space.
 - (12) “tenant” means a person or entity occupying or holding possession of a building or premises pursuant to a rental agreement.
 - (13) “utility” means an entity that distributes and sells natural gas, electric, or thermal energy services for buildings.

Section B. BENCHMARKING REQUIRED FOR [STATE/LOCAL GOVERNMENT] BUILDINGS


- (1) No later than April 1, [xxxx], and no later than every April 1 thereafter, each [state/local government] building shall be benchmarked for the previous calendar year by the entity primarily responsible for the management of such building, in coordination with the director.

Section C. BENCHMARKING REQUIRED FOR COVERED BUILDINGS

- (1) Building owners shall annually benchmark for the previous calendar year each covered building and obtain an energy performance score as available according to the following schedule:
 - (a) A nonresidential building that is [xxx.xxx] gross square feet or more by May 1, [xxxx] and by every May 1 thereafter; and
 - (b) A nonresidential building that is [xx.xxx] gross square feet or more, or a residential building that has [xx] or more dwelling units, by May 1, [xxxx] and by every May 1 thereafter.

Section D. DISCLOSURE AND PUBLICATION OF BENCHMARKING INFORMATION

- (1) The building owner shall annually provide benchmarking information to the director, in such form as established by the director’s rule, by the date provided by the schedule in Section (C)(1).
- (2) The director shall make available to the public on the internet, and update at least annually, benchmarking information for the previous calendar year for [state/local government] buildings no later than Sept. 1, [xxxx], and each Sept. 1 thereafter; and for covered buildings for the previous calendar year no later than Sept. 1, and each Sept. 1 thereafter, following the second annual receipt of benchmarking information. No benchmarking information received by the director in the first year a covered building is required to benchmark pursuant to Section (C) will be published.
- (3) The director shall make available to the public, and update at least annually, the following information:
 - (a) Summary statistics on energy consumption in [state/local government] buildings and covered buildings derived from aggregation of benchmarking information for those buildings;
 - (b) Summary statistics on overall compliance with this chapter;
 - (c) For each [state/local government] building and covered building:

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- (1) *The status of compliance with the requirements of this chapter;*
 - (2) *Annual summary statistics for the building, including energy use intensity, annual greenhouse gas emissions, water use per gross square foot, and an energy performance score where available; and*
 - (3) *A comparison of benchmarking information across calendar years for any years such building was benchmarked.*

Section E. WHOLE-BUILDING ENERGY CONSUMPTION DATA ACCESS

- (1) *Utilities providing energy service to a covered or [state/local government] building shall maintain energy consumption data for each building for at least the most recent 36 months in an electronic format capable of being uploaded to the benchmarking tool.*
- (2) *On and after Jan. 1, [xxxx], upon the written or electronic request and authorization of a building owner, a utility shall provide the building owner with at least 12 consecutive months of energy consumption data for the specified building in its entirety, including consumption data derived from readings of separate utility-grade meters that measure energy consumption in tenant-occupied spaces. The utility shall provide the data in the following manner:*
 - (a) *Within 14 days of a request by the building owner; and*
 - (b) *In an electronic format capable of being uploaded to the benchmarking tool, or through the direct, secure upload to the benchmarking tool account specified by the building owner.*
- (3) *Utilities may provide such data in a form that aggregates energy consumption data from tenant meters. Aggregated data shall be provided to the building owner without prior consent from tenants, provided that the data.*
 - (a) *Does not contain the individual identities of tenants or other personally identifying information;*
 - (b) *Does not contain additional customer-specific billing data; and*
 - (c) *Otherwise provides adequate protections for the security of the information and the privacy of the owner and tenants.*

Section F. PROVIDING BENCHMARKING INFORMATION TO THE BUILDING OWNER


- (1) *Each tenant located in a covered building subject to this chapter shall, within 30 days of a request by the building owner and in a form to be determined by the director, provide all information that cannot otherwise be acquired by the building owner and that is needed by the building owner to comply with the requirements of this chapter. A failure to provide information to a building owner may result in penalties as provided under Section (H)(2).*
- (2) *Where the building owner is unable to benchmark due to the failure of any or all tenants to report the information required by Section (F)(1), the owner shall complete benchmarking using such alternate values as established by the director prior to the implementation of this chapter. The director shall evaluate the quality of any alternate values established pursuant to Section (F)(2) and propose revisions that increase the quality of such values prior to Dec. 31, [xxxx], and not less than once every 10 years thereafter.*

Section G. VIOLATIONS

- (1) *It shall be unlawful for any entity or person to fail to comply with the requirements of this chapter or misrepresent any material fact in a document required to be prepared or disclosed by this chapter.*

Section H. ENFORCEMENT

- (1) *If the director determines that a building owner has failed to report accurate energy benchmarking information pursuant to Section (D)(1), the director may seek the following remedies:*
 - (a) *A written warning may be issued for the first violation; and*
 - (b) *If benchmarking information is not reported within 15 days of the date the written warning is issued, the director may issue a notice of violation with a penalty of up to \$[xxx] per day for the first 10 days of noncompliance, then up to \$[xxx] per day for each day in violation past the 10th day until compliance is achieved.*

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- (2) *If the director determines that a tenant has failed to provide information to a building owner pursuant to Section (F)(1), the director may seek the following remedies:*
- (a) *A citation of up to \$[xxx] may be issued for the first violation;*
 - (b) *A citation of up to \$[xxx] may be issued for the second violation within a 12-month period; and*
 - (c) *A citation of up to \$[xxx] may be issued for the third and subsequent violation within a 12-month period.*

Section I. RULES

- (1) *The director shall promulgate such rules as deemed necessary to carry out the provisions of this article.*



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