

CITY OF BOSTON
AIR POLLUTION CONTROL COMMISSION
BOSTON CITY HALL
BOSTON, MASSACHUSETTS 02201

BUILDING EMISSIONS REDUCTION AND DISCLOSURE REGULATIONS

1.01 **Introduction.** The following Regulations are promulgated by the City of Boston Air Pollution Control Commission (“the Commission”) pursuant to the authority granted to it under Chapter VII, Section 7-2.2 of the City of Boston Code.

1.02 **References.** References to Section 7-2.2 are to Chapter VII, Section 7-2.2 of the City of Boston Code.

1.03 **Definitions.** Terms defined in Section 7-2.2 have the same meanings for purposes of these Regulations and those definitions are hereby incorporated by reference. Terms related to data reporting that are not otherwise defined shall have the same meanings as in the ENERGY STAR Portfolio Manager. For the purposes of this section, the following additional terms are defined as follows:

Emissions Intensity means Emissions divided by the floor area for which those Emissions are applicable.

Energy Type means any Energy source used in a Building, including, but not limited to, electricity, natural gas, fuel oil, propane, steam, and hot and chilled water, and any other Energy Types that the Commission may designate.

Energy Use Intensity means Energy consumption divided by the floor area for which that consumption is applicable.

Owner, as defined in Section 7-2.2, means a Building’s Owner of record, provided that the "Owner" may be deemed to include (i) multiple Owners in common ownership; (ii) the association or organization of unit Owners responsible for overall management in the case of a condominium; and (iii) the board of directors in the case of a cooperative apartment corporation. In the case of a Building subject to a lease that assigns maintenance, regulatory compliance and/or capital improvement costs to Tenants with a term of at least thirty (30) years, inclusive of all renewal options, the Owner may designate the lessee as “Owner” for purposes of compliance with this Subsection; such designation must be provided in writing to the Commission as required by the Regulations. An Owner may designate an agent to act on its behalf, including reporting as required by this Subsection; provided, however, that such designation (i) must be provided in writing to the Commission, and (ii) does not relieve the Owner of any compliance obligation under this Subsection.

Space Type, also referred to as Building Use, means the primary activity for which a given building or part of a building is utilized.

Tenant, as defined in Section 7-2.2, means any tenant, tenant-stockholder of a cooperative apartment corporation, and condominium unit Owner.

Verification Year, as defined in Section 7-2.2, means any year where an Owner must report third-party verified reporting data. Verification Years will be 2022, 2026, and every five years thereafter.

Whole-Building Data means complete energy consumption data for all Energy Types used in a building and complete water data for an entire building, inclusive of Tenant spaces and uses.

1.04 **Reporting Process.** Owners must annually report data through the ENERGY STAR Portfolio Manager and/or other methods as outlined in guidance documents issued by the Commission. Data should be reported in accordance with the requirements in Section 7-2.2, the following provisions and any other methods detailed in guidance documents issued by the Commission.

a. **Energy and Water Use.**

- (i) Owners shall report Whole-Building Data for all Energy and water uses. Owners that are unable to obtain Whole-Building Data shall follow the procedures in section 1.04(e) of these Regulations.
- (ii) Owners that procure Energy through the City of Boston's Community Choice Electricity (CCE) program, or Owners whose Tenants procure energy through the CCE program, may provide evidence of enrollment in the CCE program when reporting a Building's Energy use in accordance with any guidance documents issued by the Commission.
- (iii) Owners that authorize an Energy or water utility or other third party to report Building-specific data on their behalf shall remain responsible for verifying the accuracy of such data. Any discrepancies between data provided by a utility or other third-party and reported data must be indicated in the "Property Notes" section of Portfolio Manager. The direct upload of such data by a utility or other third party does not relieve an Owner of the duty to report other required data.

b. **Calculation of Gross Floor Area.** Owners may use the Gross Floor Area listed in the Boston Assessing Department records for purposes of Section 7-2.2. Alternatively, Owners may calculate Gross Floor Area in accordance with the following provisions: (i) Gross Floor Area means the total number of square feet measured between the principal exterior surfaces of the enclosing fixed walls of the building, including Tenant areas, lobbies, common areas, restrooms, stairways, elevator shafts, mechanical equipment rooms, basement space, and storage rooms; (ii) Gross Floor Area excludes all surface parking areas, unroofed courtyards, outdoor balconies, exterior loading docks, plenums

between floors, and unroofed light wells; (iii) for atria, Gross Floor Area includes only the area of atrium floors; and (iv) for Tenant spaces, interior demising walls should be measured to the centerline of the wall. Owners that calculate Gross Floor Area in accordance with this provision must preserve the supporting documentation pursuant to Section 1.09.

c. **Building Use Classifications.** For purposes of Section 7-2.2, the Building Use classifications in Appendix A are assigned to ENERGY STAR Portfolio Manager property types. Owners are encouraged to report all Building Uses and associated square footage in Portfolio Manager, including Building Uses that occupy less than ten percent (10%) of the Building's square footage.

d. **Vacant Space.** Owners must account for any vacant or unoccupied space in Portfolio Manager in accordance with Portfolio Manager instructions or with guidance documents issued by the Commission.

e. **Buildings without Whole-Building Data.** If an Owner is not able to obtain Whole-Building Data for any Energy Type or water use, then the Owner must report such Energy Type use or water use as provided in this Subsection. In the event that an Owner does not have Whole-Building Data because Tenant(s) failed to respond to data requests and utilities have not provided Whole-Building Data within the time period specified in Section 7-2.2(o), the Owner shall also comply with the requirements in Section 1.05.

(i) **Common Area Energy and Water Use.** The Owner shall submit Energy and water use data for all common areas and all centrally metered areas.

(ii) **Calculating Energy Use in Tenant Spaces.** For each Energy Type used in separately metered Tenant space, the Owner must report known Energy usage data and then use one of the following methods to determine Energy usage for the areas in which it is unknown, for each month.

1. **With Significant Partial Data for a Building Use.** If an Owner has actual Energy use data for at least 50 percent of a given Building Use, the Owner shall extrapolate the energy data for the remainder of Gross Floor Area with the same Building Use. This extrapolation shall be applied only to those areas for which Energy use is unknown and shall be calculated by (i) multiplying the average Energy Use Intensity of the floor areas for which Energy Use Intensity is known by the total floor area for which the Energy Use Intensity is not known, and (ii) multiplying the result from step (i) by one hundred and fifty percent (150%).

2. **Without Significant Partial Data for a Building Use.** If an Owner does not have actual Energy use data for at least 50 percent of any particular Building Use, the Owner shall utilize the default values set by the Commission, applied only to those areas for which Energy use is unknown. The appropriate energy use per square foot per month from Appendix B shall be multiplied by the floor area of that Building Use for which Energy use is unknown. The Commission may revise the tables in Appendix B as it deems appropriate.

(iii) **Noting When Whole-Building Use Data Are Not Available.** In accordance with guidance documents issued by the Commission, Owners shall indicate when Whole-Building Data for Energy or water use is not available and where extrapolated data is used.

g. **Contextual Information.** Owners may supply contextual information regarding their required data, including hyperlinks, in the “Property Notes” section of Portfolio Manager or via any supplemental reporting methods detailed by the Commission in guidance documents. Such contextual information may be included in public disclosures. Contextual information shall conform to guidance that the Commission may issue regarding acceptable length and formats.

h. **New Information.** If, after having submitted a report to the Commission, the Owner of a Building changes or an Owner receives or becomes aware of new or updated information that would result in a change to Emissions, Energy or water use, or Emissions or Energy Intensity of two percent (2%) or more, the Owner shall, within thirty (30) Days of the change or of receiving the new information, submit the additional or corrected data to the Commission in accordance with guidance documents issued by the Commission, and notify the Commission accordingly. Owners may submit other updates at any time. The Commission will include such updates in its annual disclosure of data.

1.05 *Obligation to Request and Report Information from Building Tenants.*

a. **Delegating Reporting Duties to Single Tenant.** If an Owner has leased a Building to a single Tenant and that Tenant has assumed management, maintenance, regulatory compliance and/or capital improvement costs of the entire building, the Owner may, with the consent of the Tenant, delegate all responsibility regarding reporting under 7-2.2 to that Tenant. The Owner shall report such delegation in accordance with guidance documents issued by the Commission.

b. **Tenant Non-Response.** Owners shall report in writing to the Commission if any non-residential Tenant fails to respond to data requests from the Owner within the time period specified in Section 7-2.2(o), accompanied by documentation of the Owner’s request. Owners seeking data from Tenants shall document reasonable steps to collect

such data, including making the written request using the most up-to-date contact information for the Tenant at least twice.

1.06 *Requesting Alternative Reporting Dates.* A request for an alternative reporting date to that otherwise required by Section 7-2.2(e)(ii) must explain the extenuating circumstances that make an Owner unable to complete the report by the deadline and must be submitted prior to the applicable deadline. Such requests must comply with any procedures created by the Review Board or guidance documents issued by the Commission. The Commission may grant a request for an alternative reporting date for a period not to exceed six months.

1.07 *Special Conditions.*

a. **Multiple Buildings on a Single Tax Lot.** If there are multiple buildings on a single tax lot, the Owner(s) shall report data required by Section 7-2.2 as follows:

(i) For any building whose Energy and/or water use is separately metered or sub-metered, data must be reported for each such building.

(ii) For any building whose Energy and/or water use is not separately metered or sub-metered, the total Energy and water use should be apportioned by the Gross Floor Area of each building and reported for each such building. The apportioned data shall be marked as an “Estimation” in Portfolio Manager.

b. **Buildings on Multiple Tax Lots that Share Systems.** If there are multiple buildings on multiple tax lots that share utility systems and are not separately metered or sub-metered for Energy or water use, the Owner(s) shall report data required by Section 7-2.2 as follows:

(i) If all the buildings are classified as the same property type in Portfolio Manager, then they shall, if practicable, be reported as individual buildings, with Energy and water use apportioned by the Gross Floor Area of each building. The apportioned data shall be marked as an “Estimated Value” in Portfolio Manager.

(ii) If all the buildings are not classified as the same building type in Portfolio Manager, they must be reported as a campus as defined in Portfolio Manager.

c. **Newly Constructed Buildings.** The first reporting requirement for newly-constructed buildings shall be the first full calendar year following the issuance of a Certificate of Occupancy for the building.

d. **Change of Ownership.** When a building changes ownership, the previous Owner shall provide to the new Owner any required data that has been collected and is necessary for completing the next required report under Section 7-2.2.

1.08 ***Third-Party Data Verification.*** Third party verifications of a Building Owner’s reporting data shall be performed by a qualified energy professional who is not on the staff of a Building’s Owner or Building’s management company. Pursuant to 7-2.2(h), third-party verification is required for all reporting data for the specified time period, including, but not limited to, data necessary to show compliance with and qualification for Emissions Standards, Individual Compliance Schedules and Hardship Compliance Plans, if applicable.

a. ***Qualified energy professionals*** include individuals who hold an active qualification of at least one of the credentials listed in Appendix C. Starting in 2023, individuals with different qualifications may apply to the Review Board for designation as a qualified energy professional.

b. ***Corrections to Reported Data.*** In the event of errors found in previously reported data or discrepancies between previously reported data and third-party verified data, Owners shall submit an updated report as outlined in guidance documents provided by the Commission.

1.09 ***Preservation of Records.***

a. Building Owners shall retain, in printed or electronic format, the following records until at least two years after the reporting deadline in the Building’s next Verification Year:

(i) All records and information submitted pursuant to 7-2.2, including records and information that is optional to report, whether submitted via the ENERGY STAR Portfolio Manager or otherwise;

(ii) All records and information necessary to demonstrate compliance with 7-2.2, including, but not limited to, any back-up information substantiating a Building’s Energy and water data, Emissions, and qualifications for Building Portfolios, blended Emission standards, Individual Compliance Schedules or Hardship Compliance Plans, if applicable;

(iii) Confirmation of submissions from ENERGY STAR Portfolio Manager or other systems designated for reporting by the Commission;

(iv) Requests to Tenants for information pursuant to 7-2.2(o) or as otherwise needed to comply with Section 7-2.2;

(v) Third-party verifications and a copy of the credentials and the contact information for the qualified energy professional that were uploaded to Portfolio Manager or other systems designated for reporting by the Commission; and

- (vi) Requests for extensions of reporting deadlines.

Building owners shall make such records and information available for inspection or audit upon request by the Commission, Environment Department, Review Board or any third-party acting at their direction.

1.10 ***Disclosure of Records and Information.***

a. All records and information submitted pursuant to 7-2.2, including records and information that is optional to report, whether submitted via the ENERGY STAR Portfolio Manager or otherwise, may be disclosed as determined appropriate by the Commission, Environment Department or Review Board.

b. The Commission's public disclosure of any Building's compliance with the Emission Standards in 7-2.2 may include information regarding a Building Owner's use of "Estimated" data and the Additional Compliance Mechanisms in Section 7-2.2(m), including, but not necessarily limited to, the type and amount of each Additional Compliance Mechanism used in a compliance period.

1.11 ***Enforcement and Penalties.***

a. **Penalties.** The violation of any provision of these Regulations is subject to the imposition of penalties as outlined in Sections 7-2.2(q) and 7-2.2(r).

APPENDIX A: BUILDING USE CLASSIFICATIONS

| Building Use | Energy Star Portfolio Manager Property Type |
|---------------------------------|---|
| <u>Assembly</u> | Aquarium Convention Center Fitness Center/Health Club/Gym Heated Swimming Pool Indoor Arena Ice/Curling Rink Museum Movie Theater Other - Entertainment/Public Assembly Other - Recreation Other - Stadium Performing Arts Race Track Social/Meeting Hall Stadium (Open) Swimming Pool Worship Facility |
| <u>College/ University</u> | College/ University |
| <u>Education</u> | Adult Education K-12 School Other - Education Pre-school/Daycare Vocational School |
| <u>Food Sales & Service</u> | Bar/Nightclub Fast Food Restaurant Food Sales Food Service Other - Restaurant/Bar Restaurant Supermarket/Grocery Store |
| <u>Healthcare</u> | Ambulatory Surgical Center Hospital (General Medical & Surgical) Medical Office Other - Specialty Hospital Outpatient Rehabilitation/Physical Therapy Urgent Care/Clinic/Other Outpatient Veterinary Office |

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| Building Use | Energy Star Portfolio Manager Property Type |
|--------------------------------------|---|
| <u>Lodging</u> | Barracks Hotel Other - Lodging/Residential Residence Hall/Dormitory Residential Care Facility Senior Care Community Senior Living Community Single Family Home |
| <u>Manufacturing/ Industrial</u> | Manufacturing/ Industrial |
| <u>Multifamily housing</u> | Multifamily housing |
| <u>Office</u> | Financial Office Office |
| <u>Retail</u> | Automobile Dealership Bank Branch Enclosed Mall Lifestyle Center Other - Mall Retail Store Strip Mall Wholesale Club/Supercenter |
| <u>Services</u> | Convenience Store without Gas Station Courthouse Energy/Power Station Fire Station Library Other - Public Services Other - Services Other - Utility Personal Services (Health/Beauty Dry Cleaning etc.) Police Station Repair Services (Vehicle, Shoe, Locksmith, etc.) |

| Building Use | Energy Star Portfolio Manager Property Type |
|---------------------------|---|
| <u>Storage</u> | Distribution Center Non-Refrigerated Warehouse Parking Refrigerated Warehouse Self-Storage Facility |
| <u>Technology/Science</u> | Data Center Laboratory Other - Technology/Science |

APPENDIX B: DEFAULT ENERGY USE VALUES

| Building Use | Electricity (kBtu/sq ft/month) | Natural Gas (kBtu/sq ft/month) | Fuel Oil (kBtu/sq ft/month) | District heat (kBtu/sq ft/month) | District Cooling (kBtu/sq ft/month) | If all energy uses are unknown (kBtu/sq ft/month) |
|------------------------------|---|---|--|---|--|--|
| Assembly | 6.629 | 5.448 | 0.104 | 1.554 | 0.317 | 13.659 |
| College/ University | 6.493 | 6.730 | 0.104 | 3.045 | 0.720 | 17.011 |
| Education | 2.220 | 7.065 | 0.104 | 2.131 | 0.317 | 9.292 |
| Food Sales & Service | 22.530 | 11.468 | 0.104 | 2.131 | 0.317 | 33.998 |
| Healthcare | 11.369 | 5.744 | 0.104 | 12.822 | 2.415 | 32.366 |
| Lodging | 5.121 | 5.632 | 0.104 | 0.894 | 0.144 | 11.833 |
| Manufacturing/ Industrial | 3.152 | 50.196 | 0.327 | 2.131 | 0.317 | 53.675 |
| Multifamily housing | 2.802 | 4.786 | 0.238 | 0.221 | 0.317 | 8.047 |
| Office | 6.734 | 1.468 | 0.076 | 1.115 | 0.317 | 9.394 |
| Retail | 4.698 | 2.031 | 0.104 | 0.140 | 0.317 | 6.869 |
| Services | 5.321 | 6.623 | 0.104 | 2.930 | 0.072 | 14.946 |
| Storage | 2.268 | 1.447 | 0.104 | 0.166 | 0.317 | 3.921 |
| Technology/ Science | 15.419 | 9.653 | 0.104 | 7.376 | 1.029 | 33.477 |

APPENDIX C: QUALIFIED ENERGY PROFESSIONAL CREDENTIALS

| Profession | Credential | Organization |
|----------------------------|--|--|
| Engineer | Professional Engineer (PE) | National Society of Professional Engineers (NSPE) |
| Architect | Licensed Architect | National Council of Architectural Registration Boards (NCARB) |
| Architect | Registered Architect (RA) | American Institute of Architects (AIA) |
| Energy Modeler | Passive House | Passive House Institute US (PHIUS) |
| Energy Auditor | Building Energy Assessment Professional (BEAP) | American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) |
| Energy Auditor | Certified Energy Auditor (CEA) | Association of Energy Engineers (AEE) |
| Energy Auditor | Building Energy Modeling Professional (BEMP) | American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) |
| Energy Auditor | RPA/FMA High Performance Designation (RPA/FMA-HP) | BOMI International |
| Energy Auditor | Certified Measurement and Verification Professional (CMVP) | Association of Energy Engineers (AEE) |
| Energy Auditor | LEED Advanced Professional (AP) Building Design + Construction | U.S. Green Building Council (USGBC) |
| Commissioning Professional | Commissioning Process Management Professional Certification (CPMP) | American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) |
| Commissioning Professional | Certified Commissioning Professional (CCP) | Building Commissioning Association (BCA) |

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| Profession | Credential | Organization |
|----------------------------|---|--|
| Commissioning Professional | Associate Commissioning Professional (ACP) | Building Commissioning Association (BCA) |
| Commissioning Professional | Certified Building Commissioning Professional (CBCP) | Association of Energy Engineers (AEE) |
| Commissioning Professional | Existing Building Commissioning Professional (EBCP) | Association of Energy Engineers (AEE) |
| Commissioning Professional | Certified Commissioning Authority (CxA) | AABC Commissioning Group (ACG) |
| Energy Manager | Operations and Performance Management Professional (OPMP) | American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) |
| Energy Manager | Certified Energy Manager (CEM) | Association of Energy Engineers (AEE) |
| Energy Manager | Energy Management Professional (EMP) | Energy Management Association (EMA) |