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# Expanded Bylaw: Brookline Building Emissions Reduction and Disclosure Bylaw (BERDO)

## Preamble

### Purpose and Findings

**Whereas** buildings are the single largest source of greenhouse‑gas emissions in Brookline, accounting for more than forty percent of the community’s climate footprint; **Whereas** climate change is already harming our community through heat, flooding, and air‑quality impacts, and disproportionately burdens low‑income residents and people of colour; **Whereas** Brookline has committed through Warrant Article 37 to achieve community‑wide net‑zero emissions by 2040; **Whereas** the Commonwealth of Massachusetts has adopted ambitious emissions‑reduction targets and is developing a statewide **Large Building Energy Reporting** program to complement local initiatives; **Whereas** other Massachusetts municipalities, including Boston, Cambridge and Newton, have enacted Building Emissions Reduction and Disclosure ordinances to reduce emissions from large buildings; **Whereas** Brookline seeks to build upon these precedents, tailor requirements to its building stock, and center equity in its climate policies; **Now, Therefore,** the Town of Brookline hereby **adopts** the following **Building Emissions Reduction and Disclosure By‑law (BERDO)**. As a town rather than a city, Brookline’s legislative body is its Town Meeting, where all qualified inhabitants meet, deliberate, act and vote in their personal capacities. Town Meeting enacts local laws in the form of bylaws, whereas cities enact ordinances through councils. Accordingly, this by‑law shall be submitted to and shall take effect only after approval by the Massachusetts Attorney General and publication as required by law.

### Objectives

This bylaw is intended to:

1. Eliminate on‑site fossil‑fuel combustion in large buildings and achieve net‑zero emissions from covered properties no later than 2040.
2. Protect public health by reducing air pollution and improving indoor air quality.
3. Promote environmental justice by ensuring equitable distribution of benefits and preventing displacement.
4. Foster local economic development by creating green jobs, supporting workforce training, and investing in climate‑resilient infrastructure.
5. Align Brookline’s policies with state and regional decarbonization efforts while preserving flexibility for local implementation.

## Section 1 – Definitions

For the purposes of this bylaw, the following terms shall have the meanings set forth below. These definitions draw upon best practices from Boston’s BERDO and Cambridge’s BEUDO amendments. Citations are provided to comparable definitions in those ordinances for reference.

**Alternative Compliance Payment (ACP).** A per‑metric‑ton payment made by a Covered Building Owner to satisfy part of the emissions requirement when direct reductions are infeasible. Each payment corresponds to one metric ton of carbon dioxide equivalent (CO₂e). Cambridge’s ordinance sets the initial price of an Alternative Compliance Credit at $234 per ton and directs revenue exclusively to city projects that reduce greenhouse‑gas emissions.

**Alternative Compliance Plan / Hardship Plan.** A temporary plan approved by the Brookline Emissions Review Board that allows a Covered Building Owner to meet emissions requirements through alternative means (including deferrals, interim measures, or partial compliance) due to documented financial hardship, technical limitations, or construction sequencing. The plan must demonstrate good‑faith efforts to comply and protect tenant rights.

**Baseline.** The average annual greenhouse‑gas emissions of a Covered Building for two consecutive calendar years used as the starting point for calculating required reductions. Owners may select any two consecutive years between 2018 and 2024 to establish the baseline, subject to third‑party verification.

**Benchmarking Information.** Data submitted by Covered Building Owners via a Benchmarking Tool that includes, at a minimum, property address, primary use type, gross floor area, site energy use intensity (EUI), weather‑normalized source EUI, annual greenhouse‑gas emissions, water use and, where available, an energy performance score comparing the building’s energy use to similar buildings.

**Benchmarking Tool.** The **Building Energy Asset Management (BEAM) platform** used by Massachusetts’ **Large Building Energy Reporting (LBER)** program shall serve as the primary Benchmarking Tool for Brookline. BEAM collects utility‑reported electricity, gas and steam usage and allows owners to self‑report other energy sources. When LBER data is unavailable or insufficient to compute greenhouse‑gas emissions, owners shall use **ENERGY STAR Portfolio Manager** or a successor platform designated by regulation to input additional data, calculate emissions and track performance. Cambridge’s ordinance identifies Portfolio Manager as its Benchmarking Tool, and Brookline will continue to support Portfolio Manager as a supplemental tool for emissions calculation and reporting until LBER provides robust emissions‑calculation guidelines.

**Building.** Any structure used or intended for supporting or sheltering any occupancy or use. Within this bylaw, the following sub‑categories apply:

* **Non‑Residential Building:** A building or group of buildings on a single parcel with a total gross floor area of 20 000 square feet or more that is used for commercial, institutional, industrial, educational, laboratory or mixed uses. This definition parallels Boston’s treatment of Non‑Residential Buildings.
* **Residential Building:** A building or group of buildings containing 15 or more dwelling units or having 20 000 square feet or more of gross floor area used for residential purposes. Condominium associations shall aggregate dwelling units to determine coverage. Cambridge’s ordinance defines “Covered Properties” with similar thresholds.
* **Large Building:** A Non‑Residential Building with 100 000 square feet or more of gross floor area. Large Buildings are subject to accelerated emissions schedules.

**Building Portfolio.** Two or more Buildings held in common ownership or control that elect to comply with emissions requirements on an aggregated basis. Boston’s ordinance allows portfolios provided all buildings have the same Owner or are part of an approved Institutional Master Plan.

**Building Use.** The primary activity for which a given space is utilized, as defined by the Benchmarking Tool or by regulation. Examples include office, retail, laboratory, lodging, warehouse, education and multifamily uses.

**Campus.** A minimum of five Covered Buildings owned by the same owner, or any number of Affordable Housing properties owned by the same owner. Campuses may submit combined reports and comply under a single emissions schedule.

**Compliance Period.** A defined set of years during which Covered Buildings must meet specific emissions reductions. Cambridge’s BEUDO establishes six Compliance Periods: 2026–2029, 2030–2034, 2035–2039, 2040–2044, 2045–2049 and 2050 onward. Brookline’s compliance periods are described in Section 5 and align with its phased implementation.

**Covered Building.** A Building that meets or exceeds the square‑footage or unit thresholds defined above and is therefore subject to the reporting and emissions requirements of this bylaw.

**Covered Property.** A parcel containing one or more Covered Buildings as described in municipal records. Where multiple buildings are on a single parcel, they shall be treated collectively for determining coverage.

**Dwelling Unit.** A single residential unit consisting of one or more habitable rooms used for residential purposes and not primarily for professional or commercial purposes. Cambridge’s ordinance provides a similar definition.

**Emission Factors.** Multipliers used to convert energy consumption by source into greenhouse‑gas emissions (CO₂e), established by regulation prior to each compliance period. Emission Factors for electricity shall reflect regional grid decarbonization projections.

**Large Building Energy Reporting (LBER).** The Massachusetts state law, codified at **M.G.L. c. 25A § 20**, requiring public disclosure of energy usage for buildings greater than or equal to **20,000 square feet**. LBER obligates electric, gas and steam utilities to report energy usage on behalf of covered buildings and requires owners to report usage of additional energy sources such as fuel oil, propane, wood or on‑site renewable generation. The Department of Energy Resources (DOER) publishes energy‑usage data through a **Building Energy Asset Management (BEAM)** platform and accepts reports submitted under Boston’s BERDO and Cambridge’s BEUDO as satisfying state reporting requirements.

**Emissions (Greenhouse‑Gas Emissions).** The release of greenhouse gases—carbon dioxide, methane, nitrous oxide and others—measured in carbon dioxide equivalent units (CO₂e) associated with the generation and transmission of energy used by a building.

**Energy.** Electricity, heating and cooling from any fuel source, including natural gas, oil, propane, and district energy, and power used to generate steam or chilled water.

**Environmental Justice (EJ) Population.** Residents located in census blocks meeting state criteria for minority population, English‑language isolation, low income, or other factors that indicate heightened vulnerability to environmental burdens. EJ designations shall be consistent with Massachusetts state law and updated as necessary.

**Equitable Emissions Investment Fund (EEIF).** A fund established by this bylaw (Section 7) to receive revenues from Alternative Compliance Payments, penalties and appropriations and to finance emissions‑reduction projects that prioritize EJ populations and affordable housing.

**Gross Floor Area (GFA).** The sum of the horizontal areas of the floors of a building measured from the exterior faces of exterior walls, excluding uninhabitable spaces such as attics and crawl spaces, unless otherwise specified by regulation.

**Net‑Zero Emissions.** Achieving zero annual greenhouse‑gas emissions from on‑site fossil‑fuel combustion and purchased energy, after accounting for renewable energy procurement and allowable offsets.

**Owner.** The person, firm, corporation or entity with legal title to a Covered Building or Covered Property, including any agent authorized to act on the owner’s behalf.

**Portfolio.** A collection of Covered Buildings under common ownership that chooses to meet emissions standards by aggregating emissions across those buildings (see Section 6.3).

**Tenant.** The occupant or lessee of a residential or commercial unit within a Covered Building. Tenants may be asked to provide energy use information but shall not be held responsible for compliance.

**Verified Carbon Credit (VCC).** A certified emission reduction credit representing one metric ton of CO₂e from projects that meet strict additionality and verification requirements. Owners may apply a limited quantity of VCCs toward compliance (Section 7.3).

**Verification Year.** A calendar year in which Covered Buildings are required to submit third‑party verified benchmarking and emissions reports. Verification Years occur every five years beginning in 2026 unless otherwise specified by regulation.

## Section 2 – Applicability and Coverage

### 2.1 Covered Buildings

This bylaw applies to all Covered Buildings as defined above, located within the geographic boundaries of the Town of Brookline. Coverage is determined by gross floor area or number of dwelling units. Buildings below the coverage threshold may voluntarily participate.

### 2.2 City Buildings

Town‑owned buildings (including those owned or managed by the Brookline Housing Authority) are considered **City Buildings** and are subject to the same reporting and emissions requirements as private Covered Buildings. However, the Select Board may authorize accelerated compliance schedules for City Buildings to demonstrate leadership and set best practices.

### 2.3 Exemptions

The following categories of buildings are exempt from the requirements of this bylaw:

1. **Government Facilities.** Buildings owned by the Commonwealth of Massachusetts, the Federal Government or other state and federal entities not under the jurisdiction of the Town.
2. **Temporary Structures.** Buildings scheduled for demolition within 12 months of the reporting deadline or temporary structures with a planned lifespan of less than three years.
3. **Critical Infrastructure.** Facilities such as emergency operations centers, hospitals and emergency shelters where compliance with emissions standards would compromise public safety. The Review Board shall issue guidance on qualifying criteria.
4. **Hardship Plans.** Buildings covered by an approved Alternative Compliance Plan or Hardship Plan (Section 6.5) for the duration of the plan’s term.

### 2.4 Phased Implementation

Brookline shall implement this bylaw in four phases to provide a manageable transition and allow owners to plan capital improvements. Each phase covers additional building cohorts and introduces progressively stricter emissions standards. A summary is provided below.

| **Phase** | **Years** | **Buildings Covered** | **Notes** |
| --- | --- | --- | --- |
| Phase 1 | 2026 – 2028 | Non‑Residential Buildings ≥ 20 000 ft² | Owners must benchmark and report energy use and emissions; standards not yet enforced. |
| Phase 2 | 2029 – 2031 | Adds Residential Buildings ≥ 20 000 ft² or 15+ dwelling units; Large Buildings (≥ 100 000 ft²) begin meeting standards | Owners must comply with the first set of emissions standards; portfolios and compliance schedules become available. |
| Phase 3 | 2032 – 2035 | Lowers threshold to buildings ≥ 15 000 ft² (2032), ≥ 10 000 ft² (2033) and ≥ 5 000 ft² (2034) | Emissions standards apply to all newly covered buildings; Renewable energy procurement and offset limits tighten. |
| Phase 4 | 2036 – 2040 | All Covered Buildings; standards tighten toward net‑zero by 2040 | Final phase; electricity emissions may be included; Verified Carbon Credits are phased out. |

Implementation of each phase requires a vote by the Select Board and Town Meeting, following a public hearing and equity impact assessment. The Town may adjust timelines through regulation to align with state policy changes or to address unforeseen circumstances.

## Section 3 – Benchmarking, Reporting and Data Management

### 3.1 Annual Benchmarking and Reporting

1. **Reporting Deadline and Primary Reporting Mechanism.** Covered Building owners shall satisfy Brookline’s benchmarking and reporting requirements by complying with the Commonwealth’s **Large Building Energy Reporting (LBER)** program. Energy usage data reported to DOER via the BEAM platform shall constitute compliance with this section, provided that owners also supply any supplemental information required to calculate greenhouse‑gas emissions. Owners shall submit additional data, such as building use, occupancy and on‑site renewable production, through Portfolio Manager or another tool designated by regulation. Reports must be submitted by **May 1** of each year or by the deadline established by DOER for LBER reporting, whichever is later. The first reporting year for buildings covered in Phase 1 remains calendar year 2026; however, if DOER modifies LBER reporting timelines, the Select Board may adjust Brookline’s deadline accordingly.
2. **Whole‑Building Data.** Reports must include whole‑building energy use (gas, electric, steam and delivered fuels) and associated emissions. Because electric, gas and steam utilities report customer usage directly to DOER under LBER, owners are responsible for reporting only those energy sources not captured by utilities, such as fuel oil, propane, wood and on‑site renewable generation. Owners shall make good‑faith efforts to obtain tenant energy data for delivered fuels and must enter this information into the designated Benchmarking Tool. Water use reporting is optional but encouraged.
3. **Data Accuracy and Verification.** Owners shall review data for completeness and accuracy. In Verification Years, data must be certified by an Approved Verification Body (Section 8.2) to ensure that reported emissions and baselines are accurate. Verification includes review of energy bills, meter data, LBER reports and emissions calculations. Only organizations accredited to conduct greenhouse‑gas inventory verification may serve as Approved Verification Bodies.
4. **Electricity Emissions.** During Phases 1 and 2, electricity consumption shall be reported through LBER but will **not** be counted toward compliance with emissions standards. This mirrors Newton’s approach of excluding electricity emissions in the early years to prioritize on‑site fossil‑fuel reductions. The Review Board may incorporate electricity emissions in later phases based on grid decarbonization progress and equity considerations.
5. **Baseline Establishment.** Owners shall establish a baseline by averaging two consecutive calendar years between 2018 and 2024. The selected baseline must be documented, and baseline emissions must be verified in the first Verification Year. Owners may request an alternative baseline if the default baseline would result in an undue burden; such requests must include documentation and are subject to approval by the Review Board.
6. **Public Disclosure.** The Town shall publicly disclose aggregated Benchmarking Information, compliance status and investment fund distributions via an online dashboard. Data will be presented at the building level but may be aggregated or anonymized to protect confidential business information. Annual reports shall highlight progress toward community‑wide emissions goals and equity outcomes.

### 3.2 Data Sharing, State Reporting and LBER Integration

1. **Utility Cooperation.** The Town shall work with electric, gas and steam utilities to facilitate automated, aggregated data sharing with Covered Building owners and with the Town. Utilities shall provide LBER‑required consumption data directly to DOER and, where feasible, make that data available to the Town for emissions‑calculation purposes. The Town shall also coordinate with municipal lighting plants to ensure that energy data for Covered Buildings in municipal‑utility territories is reported in accordance with LBER guidelines.
2. **Primary Use of LBER Data.** Brookline will rely on the LBER BEAM platform as the primary repository of energy‑usage data. Owners who comply with LBER’s reporting requirements will automatically satisfy Brookline’s benchmarking obligations, provided that any supplemental information needed to calculate greenhouse‑gas emissions (such as building use type, occupancy, renewable generation details and non‑utility fuels) is submitted through the designated Benchmarking Tool. Reports generated for Boston’s **BERDO** and Cambridge’s **BEUDO** count as LBER reporting and therefore also satisfy Brookline’s reporting requirements.
3. **Supplemental Data and Emissions Calculation.** Because LBER currently requires only the disclosure of energy usage and does not calculate greenhouse‑gas emissions, the Town will use Emission Factors (Section 1) to convert energy usage into CO₂e and will require owners to provide any additional data necessary for this conversion. The Town may prescribe forms or spreadsheet templates to collect supplemental data not captured in BEAM. Once DOER develops guidelines for emissions calculation under LBER, the Town shall update its regulations to harmonise methodologies.
4. **Data Access and Privacy.** The Town shall enter into agreements with DOER as necessary to access LBER data for covered buildings. To protect privacy, the Town shall follow state guidelines on confidentiality and use aggregated or anonymised data where appropriate.

## Section 4 – Emissions Performance Standards and Compliance Periods

### 4.1 General Standard

Covered Buildings must reduce greenhouse‑gas emissions from on‑site fuel use and purchased energy over time in accordance with this section, culminating in **net‑zero emissions by 2040**. Emissions performance shall be measured in kilograms of CO₂e per square foot per year and compared to each building’s baseline.

### 4.2 Sector‑Specific Standards

The Town Administrator, in consultation with the Review Board, shall adopt sector‑specific emissions standards via regulation. Standards shall reflect differences in energy use intensity among building types (e.g., offices, laboratories, hospitals, schools, residential buildings). Sector‑specific standards may also account for occupancy schedules, space heating intensity, and other variables. Standards must be updated at least every five years to reflect technological advances and state decarbonization pathways.

### 4.3 Compliance Periods and Interim Reduction Targets

Compliance Periods define when emissions reductions must be achieved. Inspired by Cambridge’s structure of four‑year periods, Brookline will use the following periods:

| **Compliance Period** | **Years** | **Applicable Buildings** | **Emissions Reduction Targets** |
| --- | --- | --- | --- |
| CP 1 | 2030 – 2033 | Large Buildings (≥ 100 000 ft²) | Reduce emissions by ≥ 40 % from baseline; meet performance standard set by regulation. |
| CP 2 | 2034 – 2036 | All Non‑Residential Buildings ≥ 20 000 ft² | Reduce emissions by ≥ 50 % from baseline; adopt electrification measures; use portfolios/renewables to meet remaining gap. |
| CP 3 | 2037 – 2039 | Residential Buildings ≥ 20 000 ft² or 15+ units; buildings added in Phase 3 | Reduce emissions by ≥ 60 % from baseline; incorporate electricity emissions if grid decarbonization progress warrants. |
| CP 4 | 2040 onwards | All Covered Buildings | Achieve net‑zero emissions; no offsets permitted except for limited VCCs approved under Section 7.3. |

The specific numerical standards and reduction percentages shall be established via regulation before the start of each Compliance Period. Owners who achieve reductions earlier than required may bank or transfer credits to other buildings within a portfolio (subject to Review Board approval) to encourage early action.

### 4.4 Treatment of Electricity and District Energy

Electricity consumption shall be converted to emissions using Emission Factors published by the Town (Section 5.3). District heating and cooling emissions shall be calculated using factors for steam, hot water and chilled water supplied by district energy systems. The Town may adjust factors to reflect improvements in grid or district energy carbon intensity.

### 4.5 Adjustments for Innovative Projects

The Review Board may approve adjusted performance standards for innovative pilot projects that deliver substantial community benefits (e.g., zero‑carbon district energy, large‑scale heat pump networks) but do not fit neatly into the standard compliance framework. Approved projects must demonstrate measurable emissions reductions and align with Brookline’s climate and equity goals. Adjustments shall be transparent and limited to the duration of the pilot.

## Section 5 – Compliance Pathways

### 5.1 Direct Compliance

Owners may meet emissions standards through direct reductions of on‑site fossil‑fuel consumption and improvements in energy efficiency. Compliance measures may include, but are not limited to:

1. **Heating System Electrification.** Installing air‑source or ground‑source heat pumps, electrifying domestic hot water, and replacing fossil‑fuel boilers or furnaces.
2. **Envelope Improvements.** Upgrading insulation, windows and air sealing to reduce heating and cooling loads.
3. **Mechanical Systems Upgrades.** Installing high‑efficiency ventilation, heat‑recovery systems, variable refrigerant flow systems and energy management controls.
4. **On‑site Renewable Energy.** Installing solar photovoltaic, solar thermal or other renewable energy systems to reduce reliance on purchased energy.
5. **Demand Management and Energy Storage.** Implementing battery storage, thermal storage, demand‑response technologies and smart controls to manage peak demand and reduce emissions during high‑carbon grid hours.

### 5.2 Renewable Energy Procurement

Owners may procure off‑site renewable electricity to meet part of their emissions obligations. Qualifying procurement methods include power‑purchase agreements (PPAs), virtual PPAs, community solar subscriptions, or purchase of renewable energy certificates (RECs) with verifiable additionality. To count toward compliance, renewable procurement must:

* Demonstrate **additionality** (i.e., the procurement results in new renewable generation beyond existing projects);
* Be located within ISO‑NE or another jurisdiction approved by regulation;
* Be **bundled** with energy procurement (stand‑alone RECs are only eligible if accepted by regulation);
* Not exceed limits on off‑site renewable procurement that may be set to encourage local retrofits.

### 5.3 Portfolios

Owners of multiple Covered Buildings may elect to form a **Portfolio**. Portfolios allow aggregation of emissions across buildings, so long as the combined emissions of all buildings meet the performance standard. Portfolio rules include:

1. **Eligibility.** Buildings must be under common ownership or control. Campuses (as defined above) automatically qualify. Affordable Housing properties may be grouped regardless of number if under the same owner.
2. **Equity Requirements.** Portfolios must demonstrate that investments and benefits are prioritized for EJ populations and affordable housing. Proposals shall include plans for distributing financial savings, health improvements and resilience benefits.
3. **Transfer of Credits.** Emissions reductions achieved at one building may be credited toward other buildings within the portfolio, subject to rules established by regulation. Banking of credits across compliance periods is permitted for early reductions but is subject to depreciation factors.
4. **Portfolio Reporting.** Owners must still benchmark and report each building’s performance; aggregated emissions data and compliance calculations must be provided.

### 5.4 Individual Compliance Schedules

Owners may request an **Individual Compliance Schedule** if they can demonstrate that achieving the standard according to the default schedule would impose undue hardship or conflict with planned capital improvements. Individual schedules must:

1. Show a clear trajectory toward meeting emissions standards by the required deadline;
2. Include interim milestones and actions (e.g., heat‑pump installation by year X, envelope upgrades by year Y);
3. Be approved by the Review Board following a public hearing;
4. Include protections for tenants, including guarantees that rent increases will not be used to recover compliance costs.

### 5.5 Hardship Compliance Plans

Owners experiencing financial or technical hardship may apply for a **Hardship Plan**. To qualify, owners must demonstrate one or more of the following: (a) documented inability to finance upgrades despite pursuing available incentives; (b) building systems reaching end of useful life after the relevant compliance period; (c) technical constraints that make electrification infeasible without major structural changes. Hardship Plans may:

* Extend compliance deadlines by up to five years;
* Require owners to implement interim measures that reduce emissions to the extent feasible (e.g., energy audits, operational improvements);
* Prohibit distribution of compliance costs to tenants beyond allowable limits;
* Require periodic progress reports and re‑evaluation. Approved Hardship Plans shall be posted publicly.

## Section 6 – Alternative Compliance Mechanisms and Equitable Emissions Investment Fund

### 6.1 Establishment of the Equitable Emissions Investment Fund (EEIF)

1. **Creation and Purpose.** The EEIF is hereby established as a special revenue fund to finance emissions‑reduction, energy‑efficiency and resilience projects that benefit Brookline residents, with priority for EJ populations and affordable housing. The fund shall be separate from the Town’s general fund and may only be used for the purposes described herein.
2. **Sources of Revenue.** The EEIF shall receive: (a) Alternative Compliance Payments; (b) administrative penalties collected under Section 10; (c) grants or appropriations approved by Town Meeting; and (d) donations or other revenues accepted by the Select Board.
3. **Use of Funds.** The Review Board, in partnership with relevant Town departments, shall distribute EEIF funds through a transparent grant or rebate program. Eligible uses include electrification and energy‑efficiency upgrades in affordable housing; community solar installations; resilience hubs and cooling centers; workforce training in electrification and building science; and technical assistance for owners and tenants. Projects must demonstrate measurable emissions reductions and equitable benefits.
4. **Reporting.** An annual report on EEIF revenues, expenditures and project outcomes shall be published and presented to Town Meeting. The report shall include demographic and geographic distribution of benefits.

### 6.2 Alternative Compliance Payments (ACP)

1. **Pricing.** The Town shall set the price of ACPs by regulation prior to the start of each Compliance Period. The initial ACP price shall be **no less than $234 per metric ton of CO₂e**, mirroring Cambridge’s first compliance period pricing. Prices may increase over time to reflect inflation and rising decarbonization costs.
2. **Eligibility for ACP Use.** Owners may satisfy up to a maximum percentage of their emissions obligation through ACPs, as determined by regulation. The cap may decline over time to encourage direct emissions reductions. ACPs are intended as a last resort for residual emissions that cannot reasonably be abated.
3. **Payment Process.** ACPs shall be calculated based on the remaining emissions (after accounting for direct reductions, renewable procurement and VCCs) multiplied by the ACP price. Payments are due at the same time as annual emissions reports. Failure to pay ACPs constitutes a violation subject to penalties (Section 10).
4. **Revenue Allocation.** ACP revenues shall be deposited into the EEIF and may not be used for general governmental purposes.

### 6.3 Verified Carbon Credits (VCCs)

1. **Eligibility.** Owners may use VCCs to offset a portion of emissions during Compliance Periods 1 through 3. VCCs must be sourced from projects that (a) are located in New England or approved jurisdictions; (b) meet rigorous additionality, permanence and verification standards; and (c) are certified by recognized registries (e.g., VCS, Gold Standard) and approved by the Review Board.
2. **Caps on VCC Use.** The maximum percentage of emissions that may be offset with VCCs shall decline over time: up to **10 %** in CP 1, **5 %** in CP 2 and **0 %** in CP 3 and beyond. These caps mirror Cambridge’s declining allowance for offsets.
3. **Reporting.** Owners using VCCs must submit documentation demonstrating the source, vintage and certification of credits. The Review Board shall maintain a registry of approved VCC projects.

### 6.4 Deferrals and Exceptions

1. **Deferral Requests.** Owners may request a deferral of up to five years when compliance is infeasible due to planned major renovations, delays in utility upgrades (e.g., insufficient electrical capacity) or other circumstances beyond the owner’s control. Requests must include a detailed plan and schedule for compliance and are subject to Review Board approval. Approved deferrals may require interim emissions reductions.
2. **Exceptional Projects.** The Review Board may approve alternative compliance mechanisms for exceptional projects that demonstrably achieve equivalent or greater emissions reductions (e.g., zero‑carbon district heating systems, municipal renewable energy projects) and provide community benefits. Approved mechanisms shall be documented and subject to conditions.

## Section 7 – Verification, Transparency and Accountability

### 7.1 Verification

1. **Third‑Party Verification.** In Verification Years, all Benchmarking Information and emissions calculations must be verified by an Approved Verification Body. The Review Board shall maintain a list of accredited verifiers, which may include professional engineers, certified energy auditors, and commissioning professionals. Verifiers may not have financial or managerial ties to the building being verified.
2. **Additional Verification.** The Review Board may require additional verification outside Verification Years for buildings with inconsistent data, suspected non‑compliance or upon owner request.
3. **Verification Reports.** The verifier shall submit a report certifying the accuracy of the data and identifying any discrepancies. Owners remain responsible for correcting errors and resubmitting data.

### 7.2 Transparency and Public Reporting

1. **Public Dashboard.** The Town shall maintain an online dashboard displaying Covered Buildings’ compliance status, emissions performance relative to standards, ACP payments, and distributions from the EEIF. Data shall be updated annually and shall include summary statistics by building type and neighbourhood.
2. **Annual Program Report.** The Review Board shall prepare an annual report summarizing program implementation, overall emissions reductions achieved, funds collected and disbursed, equity outcomes, workforce development, challenges encountered, and recommendations for policy adjustments. The report shall be presented to the Select Board and Town Meeting and made publicly available.
3. **Meeting Transparency.** All Review Board meetings shall be open to the public, with agendas, minutes and materials posted in accordance with state open‑meeting laws. Board members shall disclose potential conflicts of interest and recuse themselves where appropriate.

## Section 8 – Governance and Administration

### 8.1 Brookline Emissions Review Board

1. **Establishment.** A **Brookline Emissions Review Board** (the “Review Board”) is hereby established to oversee implementation of this bylaw. The Review Board shall be an advisory body to the Select Board and Town Administrator but shall have authority to review and approve compliance submissions, Hardship Plans, deferrals and distributions from the EEIF.
2. **Membership.** The Review Board shall consist of **nine members** appointed by the Select Board, with the following representation:
3. One member nominated by an Environmental Justice or community‑based organisation;
4. One member from an affordable housing organisation or the Brookline Housing Authority;
5. One member with expertise in building science or engineering (e.g., architect, engineer, commissioning professional);
6. One member with expertise in energy policy or climate mitigation;
7. One member representing real‑estate owners or property managers;
8. One member representing tenants or renters;
9. One member with experience in workforce development or labour unions;
10. One at‑large member appointed by the Select Board;
11. One member designated by Town Meeting.

Members shall serve staggered three‑year terms and may be reappointed. The Review Board shall elect a chair and vice‑chair annually.

1. **Compensation.** Members shall serve without compensation but may receive reimbursement for reasonable expenses incurred in the performance of their duties.

### 8.2 Powers and Duties

The Review Board shall:

1. Adopt rules of procedure, including meeting schedules, quorum requirements and conflict‑of‑interest policies.
2. Review and approve or deny Individual Compliance Schedules, Portfolios, Hardship Plans and deferral requests.
3. Recommend emissions standards and ACP pricing to the Town Administrator based on data analysis, market conditions and equity considerations.
4. Administer the EEIF, including soliciting grant proposals, evaluating projects, and overseeing disbursements and reporting.
5. Maintain a list of Approved Verification Bodies and establish verification protocols.
6. Conduct hearings to adjudicate appeals of penalties or enforcement actions (Section 10).
7. Collaborate with Town departments, utilities, state agencies and community organisations to facilitate implementation and outreach.
8. Prepare and publish annual reports and program evaluations (Section 7.2).

### 8.3 Program Administration and Staffing

1. **BERDO Program Manager.** The Town Administrator shall designate a program manager responsible for day‑to‑day administration, data management, stakeholder engagement and coordination with other Town departments. The program manager shall support the Review Board and oversee staff.
2. **Staffing.** The Town shall provide staff for data analysis, compliance review, equity program management, technical assistance and public communications. Staffing levels shall be reviewed annually to ensure adequate capacity. Funding for staff may come from ACP revenues, grants and appropriations.
3. **Technical Assistance.** The Town shall offer technical assistance to building owners, particularly small owners and non‑profits, to help with benchmarking, energy audits, financing and procurement of renewable energy. The Town may contract with external organisations to provide such assistance.

## Section 9 – Equity, Community Benefits and Tenant Protections

### 9.1 Equity Impact Assessments

Before finalising regulations or policy changes under this bylaw, the Town Administrator and Review Board shall conduct an **Equity Impact Assessment**. The assessment shall evaluate the potential benefits and burdens on EJ populations, low‑income residents and small property owners and propose strategies to mitigate adverse impacts.

### 9.2 Equitable Portfolios and Plans

Owners seeking Portfolio approval or Individual Compliance Schedules must submit an **Equity Plan** detailing how benefits (cost savings, improved indoor air quality, resilience and job opportunities) will accrue to EJ populations and affordable housing residents. Equity Plans shall be reviewed by the Review Board and may be a condition of approval.

### 9.3 Anti‑Displacement Protections

1. **Cost Pass‑Through Restrictions.** Owners may not increase rents, condominium fees or service charges to recover costs associated with ACPs, penalties or non‑compliance. Violations constitute unlawful acts subject to enforcement.
2. **Tenant Rights and Engagement.** Owners shall provide tenants with advance notice of planned upgrades, potential construction impacts and opportunities for input. Tenant engagement shall include multilingual outreach and accommodations for persons with disabilities.
3. **Tenant Assistance Fund.** A portion of the EEIF shall be allocated annually for tenant assistance programs, including utility‑bill relief, grants for energy‑efficiency improvements in tenant spaces, and legal support for tenants facing eviction or displacement related to compliance work.

### 9.4 Workforce Development

The Town shall coordinate with local educational institutions, unions and workforce development organisations to create training and apprenticeship programs for electricians, HVAC technicians, energy auditors and other building trades. Preference shall be given to programs serving EJ populations and under‑represented groups.

## Section 10 – Enforcement and Penalties

### 10.1 Violations

The following constitute violations of this bylaw:

1. Failure to submit Benchmarking Information by the annual deadline;
2. Submission of false, incomplete or misleading data;
3. Failure to comply with emissions standards or interim reduction targets;
4. Failure to implement an approved Compliance Schedule, Portfolio, Hardship Plan or deferral plan;
5. Failure to make required ACP or VCC payments;
6. Unauthorized cost pass‑throughs or tenant harassment in connection with compliance activities;
7. Obstruction of verification or inspection activities.

### 10.2 Penalty Structure

1. **Reporting Violations.** Failure to submit Benchmarking Information by the deadline results in a written notice and 30‑day cure period. If the owner fails to cure, fines shall accrue at a daily rate established by regulation (e.g., $100 per day). All references to fines in this bylaw shall be construed as non‑criminal disposition penalties under Massachusetts law.
2. **Data Falsification.** Submission of false or misleading data may result in a fine up to $5000 per violation and suspension of eligibility for ACPs. The Town may refer egregious cases to state or federal authorities for further action.
3. **Emissions Exceedance.** Exceeding emissions standards results in penalties calculated per metric ton of CO₂e above the allowable level, in addition to required ACP payments. Penalties may be adjusted based on building size and prior compliance history. Penalties shall be suspended during a grace period for newly imposed standards.
4. **Failure to Implement Approved Plans.** Owners who fail to meet milestones in an approved schedule, portfolio or Hardship Plan may be subject to daily fines and revocation of plan approval.
5. **Cost Pass‑Through Violations.** Unlawful rent or fee increases aimed at recovering compliance costs are subject to restitution to affected tenants and fines.

### 10.3 Appeals and Due Process

1. **Notice of Violation.** The Town shall issue written notice of any violation, specifying the nature of the violation, the amount of any penalty and the right to appeal.
2. **Appeals to the Review Board.** An owner may appeal a penalty or enforcement action by filing a written request within 30 days of receiving notice. The Review Board shall conduct a hearing and issue a written decision. The decision may uphold, reduce or waive penalties or require corrective action.
3. **Further Appeals.** Decisions of the Review Board may be appealed to the Massachusetts Land Court or another court of competent jurisdiction. Filing an appeal does not stay the obligation to comply with standards or pay ACPs unless a stay is granted by the court.

### 10.4 Enforcement Authority

1. **Authority of Officials.** The Town Administrator, acting through designated officials (e.g., the Director of Public Health, Building Commissioner, Fire Chief), is authorized to enforce this bylaw, issue citations, and collect penalties. Officials may inspect buildings and records to assess compliance.
2. **Lien for Unpaid Penalties.** Unpaid penalties and ACPs shall constitute a municipal lien on the property, collectible as real estate taxes in accordance with state law.
3. **Coordination with Other Codes.** Compliance with this bylaw does not relieve owners of obligations under other building, fire, health or zoning codes. Conversely, compliance with other codes does not guarantee compliance with BERDO.

## Section 11 – Rulemaking and Implementation

### 11.1 Regulatory Authority

The Town Administrator, with advice from the Review Board and subject to approval by the Select Board and Town Meeting where required, shall promulgate regulations to implement this bylaw. Regulations may include:

* Emissions performance standards by building type and compliance period;
* Detailed methodologies for calculating emissions, baselines and reductions;
* Procedures for verification, portfolios, compliance schedules, Hardship Plans and deferrals;
* Pricing, caps and rules for ACPs, VCCs and renewable procurement;
* Equity impact assessment frameworks and thresholds;
* Roles and qualifications for Approved Verification Bodies;
* Penalty schedules and enforcement procedures;
* Data reporting formats and record‑keeping requirements.

### 11.2 Public Participation

1. **Notice and Comment.** Draft regulations shall be published with at least 30 days’ notice prior to adoption. The Town shall hold public hearings and provide opportunities for written comment. The Review Board shall evaluate comments, with particular attention to EJ stakeholders and small property owners.
2. **Periodic Review.** Regulations shall be reviewed at least every five years to incorporate technological advances, state policy changes and lessons learned from implementation. Revisions shall follow the same public process.

### 11.3 Technical Advisory Committee

The Review Board may establish a Technical Advisory Committee composed of subject‑matter experts in building science, energy modelling, renewable energy, finance and equity to provide non‑binding recommendations on standards, methodologies and pilot projects.

## Section 12 – Amendments and Severability

### 12.1 Amendments

This bylaw may be amended by Town Meeting upon recommendation of the Select Board or by citizen petition. Proposed amendments shall undergo an Equity Impact Assessment and public hearing. Amendments shall not weaken emissions targets or equity protections without express findings of necessity.

### 12.2 Severability

If any provision of this bylaw or its application to any person or circumstance is held invalid, the remainder of the bylaw and the application of the provisions to other persons or circumstances shall not be affected and shall continue in full force and effect.

### 12.3 Effective Date

This bylaw shall take effect immediately upon approval by the Attorney General and publication according to law. Phase 1 reporting obligations shall begin with calendar year 2026, and emissions standards shall take effect at the start of the first Compliance Period for each building cohort.

*This expanded draft bylaw provides a detailed framework for Brookline to reduce building emissions, modeled on the length and complexity of Boston’s BERDO and Cambridge’s BEUDO. It incorporates comprehensive definitions, phased implementation schedules, compliance pathways, alternative compliance mechanisms, equity provisions, governance structures and enforcement procedures, with cross‑references to relevant sections of other ordinances.*