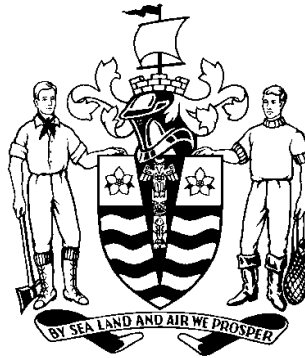


CITY OF VANCOUVER BRITISH COLUMBIA



ANNUAL GREENHOUSE GAS AND ENERGY LIMITS BY-LAW NO. 13472

This By-law is printed under and
by authority of the Council of
the City of Vancouver

July 20, 2022

BY-LAW NO. 13472

A By-law to establish greenhouse gas emission and heat energy intensity limits

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts the following:

SECTION 1 INTERPRETATION

Name of By-law

1.1 The name of this By-law, for citation, is the “Annual Greenhouse Gas and Energy Limits By-law”.

Intent and application

1.2 This By-law establishes greenhouse gas emission and heat energy intensity limits for large existing buildings, to help reduce carbon pollution from buildings by 50% by 2030 and 100% before 2050.

1.3 This By-law does not apply to residential buildings that are less than 4 storeys tall.

Responsibility of the Owner of a Building

1.4 Every owner of a building, or part of a building, must comply with the provisions of this By-law.

Definitions

1.5 In this By-law:

“Building” means any structure with a gross floor area equal to or larger than 4,645 m² used or intended to support or shelter any use or occupancy that is listed in Table 1;

“Building By-law” means the Building By-law of the City;

“City” means the City of Vancouver;

“Director of Planning” means the person appointed by Council under section 560 of the Vancouver Charter and any person authorized to act on behalf of the Director of Planning;

“Energy and carbon reporting” means providing to the City the total energy consumed, separated by fuel type, for the previous calendar year and other descriptive information for a building in a form established by the Director of Planning for an ongoing review of a building’s energy and greenhouse gas emissions performance;

“Existing buildings” means buildings lawfully constructed and completed under a building permit, if a building permit was required;

“Greenhouse gas (GHG) emissions” means carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) gases emitted as a result of energy consumption in a building, and expressed in carbon dioxide equivalent (CO₂e), a unit of measure that combines the three gases by multiplying each by their global warming potential and adding them together;

“Gross floor area” or “GFA” means the sum of the area of every floor in a building, measured between the outside surface of the exterior walls, including all areas inside a building, other than crawl spaces or exterior spaces such as balconies, patios, parking and covered walkways;

“Heat energy” means the total gas used in a building operation plus district heat that is consumed inside the building (excluding the electricity portion), measured in gigajoules of energy equivalent per square meter of gross floor area per year (GJ/m²/year);

“Lessee” means a person or organization occupying a building, or part of a building or premises under a rental or lease agreement;

“Major occupancy” means the principal occupancy for which a building or part thereof is used or intended to be used as classified in Table 1 of this By-law, and must comprise at least 50% of the building GFA to be considered the major occupancy;

“Mixed Use Building” or “MUB” means a building that contains multiple occupancies set out in Table 1, none of which are greater than 50% of the total GFA, including parking GFA;

“Owner” means a registered owner, a holder of an agreement for sale and purchase and, in the case of Crown-owned lands, owner shall mean the occupier;

“Site energy” means electricity, natural gas, steam, or other fuel types including renewable on-site electricity generation that are used directly by the building and reflected on the utility bills; and

“Utility provider” means a person or organization that distributes or sells natural gas, electric, water, district heating and cooling or thermal energy services for buildings.

SECTION 2 ENERGY AND CARBON REPORTING

2.1 Every owner of a building, or part of a building, with a GFA equal to or exceeding 9,290 m² for major occupancies A1, A2, A3, A4, D, E F1, F2, F3 and MUBs in which the sum of the floor area for these occupancies is 50% of the building’s GFA must:

- (a) submit to the City an energy and carbon report for the 2023 calendar year by June 1, 2024; and
- (b) submit to the City an energy and carbon report annually by June 1 for each subsequent calendar year.

2.2 Every owner of a building, or part of a building, with a GFA equal to or exceeding 4,645 m² but less than 9,290 m² for major occupancies A1, A2, A3, A4, D and E , F1, F2, F3 and MUBs in which the sum of the floor area of these occupancies is 50% or greater of the building's GFA must:

- (a) submit to the City the initial energy and carbon report for the 2024 calendar year by June 1, 2025; and
- (b) submit to the City an energy and carbon report annually by June 1 for each subsequent calendar year.

2.3 Every owner of a building, or part of a building, with a GFA equal to or exceeding 9,290 m² for major occupancies B3, C and MUBs in which the sum of the floor area of these occupancies is 50% or greater of the building GFA must:

- (a) submit to the City an energy and carbon report for the 2024 calendar year by June 1, 2025; and
- (b) submit to the City an energy and carbon report annually by June 1 for each subsequent calendar year.

2.4 Every owner of a building, or part of a building, with a GFA equal to or exceeding 4,645 m² and less than 9,290 m² for major occupancies B3, C and MUBs in which the sum of the floor area of these occupancies is 50% or greater of the building GFA must:

- (a) submit to the City an energy and carbon report for the 2025 calendar year by June 1, 2026; and
- (b) submit to the City an energy and carbon report annually by June 1 for each subsequent calendar year.

Content of Energy and Carbon Report

2.5 Every energy and carbon report must include, separately for each building:

- (a) descriptive information, as follows:
 - (i) building address;
 - (ii) building's primary occupancy;
 - (iii) other occupancies;
 - (iv) gross floor area for each building occupancy;
 - (v) percentage of building occupied;
 - (vi) name of person submitting the report;
 - (vii) owner(s) of the building;
 - (viii) year of construction;
 - (ix) number of storeys; and
 - (x) number of active energy meters by fuel type; and
- (b) building performance information, as follows:

- (i) annual site energy use for each energy/fuel type;
- (ii) annual site energy use intensity;
- (iii) annual weather normalized site energy use intensity,
- (iv) annual greenhouse gas emissions;
- (v) annual greenhouse gas emissions by energy/fuel type;
- (vi) monthly site energy use and greenhouse gas emissions by energy fuel type;
- (vii) individual monthly fuel consumption in their respective units; and
- (viii) proof of amount of energy use by fuel type.

2.6 Every energy and carbon report may include general comments, to explain the building's site energy use and GHG emissions calculation and performance.

Owner to ensure data reported

2.7 Every owner of a building, or part of a building, must ensure that all data required by this By-law is reported for all parts of a building they own.

2.8 Each owner may submit an energy and carbon report for the building or part of a building they own.

2.9 One or more owners of a building may agree to submit a joint energy and carbon report that sets out the required data for all parts of the building they collectively own.

Compiling Data

2.10 Data for energy and carbon reports may be compiled using one or more of the following:

- (a) obtaining data through utility provider web services integration with ENERGY STAR Portfolio Manager;
- (b) obtaining aggregated whole-building data for all 12 calendar months from a utility provider; and
- (c) collecting site energy data from all lessees.

Exemption from reporting

2.11 The owner of a building, or part of a building, is exempt from filing an energy and carbon report for the current reporting year if a demolition permit for the entire building was issued during the calendar year for which an energy and carbon report is required, provided that the demolition work had commenced and occupancy of the building was no longer possible prior to the end of that year.

2.12 The Director of Planning may grant an owner of a building, or part of a building, one extension of 2 months annually to complete and submit the required energy and carbon report, provided the owner of a building, or part of a building, seeks an extension before the report was due and the owner sets out in writing why the extension is needed.

2.13 Before granting an extension, the Director of Planning must consider whether an extension is reasonable based on:

- (a) the complexity of the required report;
- (b) the reasons for the request; and
- (c) the frequency of extension requests.

Record keeping and release of information

2.14 Every owner of a building, or part of a building, must maintain all records necessary to establish compliance with this By-law for a period of five years.

2.15 The City and its inspectors may inspect records and perform an audit, including on-site inspections, as is considered necessary to verify any information provided.

2.16 Every owner of a building, or part of a building, must present records for inspection and audit, within 10 days of a written request by the Director of Planning.

2.17 The Director of Planning may make available to the public the anonymized information and analysis for the previous calendar year for all buildings whose owners are required to report, but individual building site energy use and greenhouse gas emissions information will not be publically disclosed, unless the owner of a building, or part of a building, chooses to do so voluntarily.

2.18 The Director of Planning may determine if any energy and carbon reporting information should be excluded from public disclosure.

2.19 If an owner of a building, or part of a building, learns that any information reported as part of an energy and carbon report is inaccurate or incomplete, the owner must amend the report and provide the Director of Planning with an update within 30 days of learning of the inaccuracy or incompleteness.

2.20 If an energy and carbon report for a building, or part of a building, is flagged for information errors, the owner of the building, or part of the building, that has been flagged must complete and submit an information verification checklist as ordered by the Director of Planning, which may include certification of the information by a registered professional.

2.21 This By-law does not authorize an owner of a building, or part of a building, to use lessee energy usage data for purposes other than compliance with this By-law.

2.22 Compliance with this By-law does not excuse owners of a building, or part of a building, from compliance with regional, provincial or federal energy and carbon reporting requirements.

2.23 A person must not submit information required by this By-law that is false or incorrect.

**SECTION 3
BUILDING OPERATIONAL GHG EMISSION AND HEAT ENERGY LIMITS**

GHG Emission Limits

3.1 Every owner of a building, or part of a building, with a GFA equal to or exceeding 9,290 m² of the major occupancies listed below, and MUBs in which the sum of the floor area of these occupancies is 50% or greater of the building GFA, must not cause, permit or allow the building to operate so that the total GHG emissions from metered natural gas and district energy used in a calendar year exceeds:

- (a) 25 kg CO₂e/m² of GFA for D Major Occupancies after January 1, 2026;
- (b) 14 kg CO₂e/m² of GFA for E Major Occupancies after January 1, 2026; and
- (c) 0 kg CO₂e/m² of GFA for D Major Occupancies, E Major Occupancies and MUBs in which the sum of the floor area of these occupancies is 50% or greater of the building GFA, effective January 1, 2040.

Heat Energy Limits

3.2 Every owner of a building, or part of a building, with a GFA exceeding 9,290 m² of the major occupancies listed below and MUBs in which the sum of the floor area of these occupancies is 50% or greater of the building GFA must not cause, permit or allow the building to operate so that the total heat energy used in a calendar year exceeds:

- (a) 0.09 GJ/m² of GFA for D Major Occupancies without a connection to a district energy utility provider, after January 1, 2040;
- (b) 0.09 GJ/m² of GFA for D Major Occupancies connected to a district energy utility provider, after January 1, 2040;
- (c) 0.09 GJ/m² of GFA for E Major Occupancies without a connection to a district energy utility provider, after January 1, 2040; and
- (d) 0.09 GJ/m² of GFA for E Major Occupancies connected to a district energy utility provider, after January 1, 2040.

**SECTION 4
CARBON EMISSIONS OPERATING PERMIT**

4.1 An owner of a building, or part of a building, that is subject to section 3 must apply for and obtain an annual carbon emissions operating permit, and pay an annual permit fee as set out below for the emissions from the previous calendar year.

4.2 An application for a carbon emissions operating permit must show the amount of carbon in excess of the allowed amount that the building emitted in the previous calendar year.

Permit Issuance

4.3 The Director of Planning must issue a carbon emissions operating permit to an applicant when the requirements of this By-law are met.

Permit Refusal

4.4 The Director of Planning may refuse to issue a carbon emissions operating permit if any required documents:

- (a) are incomplete, or do not comply with the provisions of this By-law; or
- (b) contain false or incorrect information.

4.5 If requested by the applicant, the Director of Planning must provide reasons for the refusal to issue a permit.

Conditions on Permits

4.6 The Director of Planning may impose conditions on carbon emissions operating permits including conditions regarding:

- (a) notifications and notices;
- (b) deadlines for completion;
- (c) responsibilities of the owner of the building and registered professionals; and
- (d) compliance with this By-law and other enactments.

Requirement for New Permit

4.7 Except as otherwise permitted in this By-law, an owner of a building, or part of a building, must annually apply for a new permit prior to the expiry of the previous year's permit.

Permit Expiry

4.8 A permit shall expire and the rights of a permit holder under the permit shall terminate on the expiry date noted on the permit.

Permit Revocation

4.9 The Director of Planning may revoke a permit if:

- (a) there is a contravention of any permit condition;
- (b) the permit was issued in error; or
- (c) the permit was issued on the basis of false or incorrect information.

Fees for permit

4.10 In order to apply for a permit, an owner of a building, or part of a building, must pay \$500 to the City for an annual carbon emissions operating permit fee for the whole building, plus additional fees per building due to sections 4.11 and 4.12.

4.11 An owner of a building, or part of a building, that exceeds the GHG emissions limit for the previous calendar year in section 3 must pay an additional permit fee of \$350 per tonne of CO₂e for the GHG emissions that exceed the limit for an annual carbon emissions operating permit, according to the following calculation:

$$\left(\frac{\text{building GHG emissions } \left(\frac{\text{kg-CO}_2\text{e}}{\text{m}^2} \right) \times \text{GFA}}{1000} - \frac{\text{GHG emissions limit } \left(\frac{\text{kg-CO}_2\text{e}}{\text{m}^2} \right) \times \text{GFA}}{1000} \right) \times \$350.$$

4.12 An owner of a building, or part of a building, that exceeds the heat energy limit for the previous year in section 3 must pay an additional permit fee of \$100 per GJ for the heat energy that exceeds the limit for an annual carbon emissions operating permit, according to the following calculation:

$$\left(\text{building Heat Energy } \left(\frac{\text{GJ}}{\text{m}^2} \right) \times \text{GFA} \right) - \left(\text{Heat Energy limit } \left(\frac{\text{GJ}}{\text{m}^2} \right) \times \text{GFA} \right) \times \$100.$$

SECTION 5 AUTHORITIES OF THE DIRECTOR OF PLANNING

Administrator

5.1 The Director of Planning is authorized to administer this By-law, and may create such forms or applications as are necessary to do so.

Filing Documents and Inspection of Records

5.2 The Director of Planning may keep copies of applications received, permits and orders issued, inspections and papers and documents connected with the administration of this by-law, for such time as is necessary to administer this By-law.

Proof of Compliance

5.3 The Director of Planning may issue an order in writing to an owner or owners requiring them to:

- (a) submit sufficient evidence to the City, at the expense of the owner of the building, or portion of the building, to determine the validity of the energy and carbon report submitted by the owner; and
- (b) take any other step necessary to comply with this By-law.

Data Sharing

5.4 If permitted under the Freedom of Information and Protection of Privacy Act, the Director of Planning may disclose any data from energy and carbon reports to a third party for academic or other non-commercial research purposes provided that such data is anonymized, unless it is shared with a government in which case it may be non-anonymized.

SECTION 6 VIOLATIONS AND AUTHORITY

Offences

6.1 Every owner of a building, or portion of a building, is guilty of an offence against this By-law and liable to penalties if they:

- (a) violate any of the provisions of this By-law;
- (b) suffer or permit any act or thing to be done in contravention or in violation of any of the provisions of this By-law;
- (c) neglect to do or refrain from doing anything required to be done by any of the provisions of this By-law; or
- (d) fail to comply with an order or notice given under this By-law.

SECTION 7 ENACTMENT

Severability

7.1 A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

Force and effect

7.2 This by-law is to come into force and take effect on January 1, 2023.

ENACTED by Council this 20th day of July, 2022

Signed _____ "Kennedy Stewart"
Mayor

Signed _____ "Katrina Leckovic"
City Clerk

Table 1
Major Occupancy Classification
in accordance with the Building By-law

Group	Division	Description of Major Occupancy
A	1	Assembly occupancies intended for production and viewing of performing arts
A	2	Assembly occupancies not elsewhere classified in Group A
A	3	Assembly occupancies of the arena type
A	4	Assembly occupancies in which occupants are gathered in the open air
B	3	Care occupancies
C	-	Residential occupancies
D	-	Business and personal services occupancies
E	-	Mercantile occupancies
F	1	High-hazard industrial occupancies
F	2	Medium-hazard industrial occupancies
F	3	Low-hazard industrial occupancies