

2024 Thermal Energy Systems Emissions Factors Information Sheet (Existing Buildings)

Updated June 2025

Purpose

This document defines official Greenhouse Gas (GHG) emissions factors that the City of Vancouver will use to convert reported energy use to GHG emissions under the City of Vancouver [Annual Greenhouse Gas and Energy Limits By-law No. 13472](#). **These emission factors apply to energy consumed in 2024, as reported to the City in 2025.** This document will be updated annually.

2024 Emissions Factors

For all **fuel combustion emissions factors**, please reference the [BC Ministry of Energy and Climate Solutions Emissions Factors Catalogue for 2024 Reporting Year](#).

The table below provides **utility-specific emissions factors for thermal energy systems (TES)**, expressed in the units each utility uses for billing.

Thermal Energy System (TES)			
Utility	Delivery Type	Emission Factor ¹	Notes
Creative Energy Core TES	Steam	88.99 kg CO ₂ e/Mlbs ²	Provided by utility
City of Vancouver False Creek NEU	Hot Water	69.43 kg CO ₂ e/MWh	Provided by utility
River District Energy Utility	Hot Water	201.85 kg CO ₂ e/MWh	Provided by utility

1. Reflects emissions per unit of useful thermal energy delivered

2. For Creative Energy customers billed in MWh, the energy content of CE Steam is assumed to be 0.347 MWh/Mlbs

For **other utility-owned thermal energy systems** (e.g. *fixed-scale* or formerly *Stream A* systems regulated by the British Columbia Utilities Commission), please **contact your utility directly**.

How the City Uses Emissions Factors

These factors are used to calculate Greenhouse Gas Intensity in kg CO₂e/m²/year for buildings reporting to the City of Vancouver under the Annual Greenhouse Gas and Energy Limits By-law No. 13472.

For detailed reporting instructions, refer to the [Compliance Guide: Annual Energy & Carbon Reporting + GHGI Limits](#).

After a building submits its energy data, the City calculates its GHGI by:

1. Converting reported heat energy (in GJ) using the applicable emissions factors to determine total annual GHG emissions (kg CO₂e/year); then
2. Dividing the total emissions by the building's gross floor area (m²) to determine GHGI (kg CO₂e/m²/year).

For detailed methodology, refer to the **Greenhouse Gas Intensity and Heat Energy Intensity Limits Reference Manual**.

Note: Emissions factors in this document apply only to existing buildings. For new construction, please refer to the *City of Vancouver Energy Modelling Guidelines*.

Additional Resources & Supports

Visit [Energize Vancouver](#) for general information on reporting requirements, including covered buildings list, how-to guides, FAQs, webinars, and video resources.

Direct support: energycarbonreport@vancouver.ca | 604-330-3797 (9 am – 5 pm, Monday to Friday)