

# Energy Reporting Policy for Green Buildings

*Developed January 2019, amended June 2019*

*The policy supersedes the “Performance Monitoring and Reporting Requirements for Low Carbon Energy Systems” developed in 2011.*

## 1. Introduction and Intent

This document summarizes the minimum energy reporting requirements for development projects subject to energy reporting requirements, including those in the *Green Buildings Policy for Rezonings* (2016 or later). Reports to the City must be provided via the free online ENERGY STAR Portfolio Manager benchmarking tool. Using Portfolio Manager can allow for automated downloading of BC Hydro, FortisBC, and other energy utility data with electronic data exchange (EDX), user-friendly benchmarking of building performance against comparable buildings, and electronic energy reporting to the City.

The collection and synthesis of energy data is of benefit to both the building owner/operator and the City of Vancouver. The rationale for requiring energy reporting is to collect building energy performance information to allow for:

1. The Building owner/operator(s) to understand and potentially improve the on-going energy efficiency of their building(s), thereby reducing operational costs, energy use and greenhouse gas emissions and
2. The City of Vancouver to better understand actual building energy use in the city, thereby providing data to understand if current policies are meeting their intent and informing potential future City policies on buildings.

## 2. Definitions

- (a) **“Energy Reporting”** means the collection, verification, and sharing of total annual energy consumption, for each energy utility, using an online ENERGY STAR Portfolio Manager account. Energy reporting shall take place separately for each building in the development.
- (b) **“Low Carbon Energy System”** means a system to supply heat energy primarily derived from highly efficient and renewable sources, as further defined in the *Low Carbon Energy Systems Policy*<sup>1</sup> and the Building By-law.
- (c) **“Low Carbon Energy System equipment”** means on-site equipment used for the function of and provision of energy by the Low Carbon Energy System for the building. This may refer to, but is not limited to, equipment such as heat exchangers, storage tanks, heat pumps, boilers, and other equipment.

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<sup>1</sup> <https://guidelines.vancouver.ca/L009.pdf>

### **3. Minimum Instrumentation Requirements**

The energy reporting requirements of this agreement rely only on utility-level metering data for each building. Therefore at least one meter for each utility to each building is required to meet these requirements. These meters may be the same as those required by a utility for billing purposes.

### **4. Minimum Information Requirements**

#### ***4.1 Establishing a Portfolio Manager Account***

To establish a Portfolio Manager account requires the following information:

1. Building size, address, year built, building owner or property manager;
2. The primary use of the building (for example: multifamily, office, warehouse, etc.);
3. The gross floor area of the building, not including parking area;
4. The floor area of parking that is metered with other building uses (for example, parking area lights may be on a common 'house' meter);
5. The floor area of any other uses of the building;
6. For buildings eligible for an ENERGY STAR score, other details like operating hours, number of workers, etc. are required for benchmarking; and
7. Information on what energy utilities are used for both the common area and tenant spaces. For energy utilities where electronic data exchange enables automatic update of energy consumption data, additional utility account information may be needed to establish this link.

Note: it is recommended to establish one account per building, so account administration can easily be transferred to a new employee, manager, or owner.

#### ***4.2 Annual Energy Reporting***

Annual energy use data reporting to the City requires the following information:

1. Total monthly energy consumption of each building from each utility (electricity, gas, steam, solar, etc.); and  
Note: Automatic update may be available from the energy utilities.
2. A unique building ID for energy reporting purposes, to be provided by the City.

#### ***4.3 Additional Reporting for Low Carbon Energy Systems Equipment***

Where the building is connected to a Low Carbon Energy System, the following additional information shall be provided to the City regarding the Low Carbon Energy System equipment:

1. Total monthly energy input by utility (electricity, natural gas, hot water, steam, etc.);
2. Total monthly thermal output by end use (heating, cooling, domestic hot water);
3. Average annual carbon intensity of the energy inputs;
4. Average annual coefficients of performance of heating, cooling, and domestic hot water production.

## 5. Reporting Requirements

Energy reporting for the calendar year in which the occupancy permit is issued and each subsequent calendar year is required annually by April 1<sup>st</sup> of the following year in each case. Reporting is to be via the online Portfolio Manager tool, by sharing read-only access to the building's Portfolio Manager account with the City.

Additional energy reporting required for Low Carbon Energy Systems equipment as described 4.3 is not compatible with Portfolio Manager. Reports are to be formatted using Appendix A or similar, and sent directly to [energybenchmarking@vancouver.ca](mailto:energybenchmarking@vancouver.ca).

Note: This information may be provided directly from the Low Carbon Energy System utility provider to the City, with the consent of the building owner(s).

## 6. Responsibility

Energy reporting is the responsibility of the building owner(s). The *Green Buildings Policy for Rezoning* (last amended May 2, 2018) requires the Developer provide for a service provider to establish an accurate and complete Portfolio Manager account for each building, and assist the building owner with energy reporting for the first three years after occupancy.

# Appendix A: Energy Reporting Template for Low Carbon Energy Systems Equipment

Low Carbon Energy System (LCES) Project Information	
Date	
Project Name	
Project Address	
Gross Floor Area (m <sup>2</sup> , excluding parkade)	
LCES Type (1, 2a, 2b, 3, or 4)	
LCES Owner	
LCES Contact Name	
LCES Contact Email	

Energy Inputs	LCES Energy (MWh)												Carbon Intensity of Energy Input (kgCO <sub>2</sub> /MWh)	Energy Use Intensity (kWh/m <sup>2</sup> )	Greenhouse Gas Intensity (kgCO <sub>2</sub> /m <sup>2</sup> )	Annual Average Coefficient of Performance of the LCES (COP) <sup>2,3,4</sup>		
	January	February	March	April	May	June	July	August	September	October	November	December					TOTAL	
Electricity																		
Natural Gas																		
District Energy																		
TOTAL																		
Thermal Outputs <sup>3,4</sup>																		
Heating																		
Cooling																		
Domestic Hot Water (DHW)																		

- Notes:
- 1) Use the carbon intensities referenced in the CoV Energy Modelling Guidelines, unless a long-term agreement is in place to provide energy at a different carbon intensity. Where this is the case, please provide more information in the 'Project Notes' section below.
  - 2) Cooling COP is not tracked for the purposes of this sheet
  - 3) For buildings with LCES that are distributed rather than centralized (for example, air-source heat pumps in each unit), data from a sample of the LCES equipment may be accepted by the City. Where this is the case, please provide more information in the 'Project Notes' section below.
  - 4) For buildings with LCES that include a Variable Refrigerant Flow (VRF) system or similar, a description of the proposed metering methodology for approximating thermal outputs and COP must be appended to this form and submitted to the City.