

Attachment 1

Updated Green Buildings Policy



Policy Title:	Green Building Policy – New Civic Facilities	Council Approved: Yes <input type="checkbox"/> No <input type="checkbox"/>
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Revised Date:	July, 2021	
Document #:	1269983 v.7	

1.0 PURPOSE

The purpose of a corporate policy on green buildings is to demonstrate environmental, economic, and social leadership through reducing and eliminating greenhouse gas (GHG) emissions, reducing energy consumption, protecting environmental resources, providing healthy work environments for staff and visitors and yielding cost savings to City taxpayers through reduced operating costs. The Policy is a revision to the City’s LEED Gold policy that was adopted in 2009. It is designed to achieve outcomes supportive of the goals of the 2020 Corporate Energy and Emissions Reduction Strategy (CEERS).

2.0 APPLICABILITY

All City departments, their consultants and contractors that are responsible for financing, planning, designing, developing, constructing and managing City-owned facilities and buildings.

3.0 DEFINITIONS

Full Life Cycle Cost Analysis

Full Life Cycle Cost Analysis is a comprehensive approach to costing a facility that encompasses planning, design, construction, operation and maintenance costs over the useful life of the facility, including the cost of carbon. The analysis compares the net present value of design options as a factor in investments decision. The goal is to achieve the highest, most cost-effective environmental performance possible over the life of the building.

Green Building

A green building – also known as a sustainable or high performance building – is a building that, in its design, construction or operation, reduces or eliminates negative impacts, and can create positive impacts, on our climate and natural environment¹. A green building must demonstrably reduce impacts on human health and the environment throughout a building's lifecycle from siting to design, construction, operation, maintenance and deconstruction. The design of green buildings encompasses the following broad topics: efficient management of energy and water

¹ From website: WorldGBC.org

resources, management of material resources and waste, protection of indoor environmental quality and health.

LEED® Building Standard

LEED® stands for Leadership in Energy and Environmental Design, and is a comprehensive rating system that evaluates environmental performance from a "whole building" perspective. LEED projects require the building to meet a small number of prerequisites and then points are awarded from eight credit areas: Location & Transportation, Sustainable Sites, Energy Efficiency, Materials and Resources, Water Efficiency, Indoor Environmental Quality, Innovation, and Regional Priority. There are four rating levels: Certified, Silver, Gold, and Platinum. LEED is administrated by the Canadian Green Building Council (CaGBC).

Zero Carbon Building

A zero carbon building is defined as one that is highly energy-efficient and produces onsite energy, or procures carbon-free renewable energy, in an amount sufficient to offset the annual carbon emissions associated with operations.

Zero Carbon Building Standard

The CaGBC's Zero Carbon Building Standard (ZCBS) provides a path for both new and existing buildings to reach zero carbon, with unique requirements for each. New construction and major retrofit projects earn Zero Carbon Building – Design certification by modeling a zero carbon balance, highly efficient envelope and ventilation systems to meet a defined threshold for thermal energy demand intensity, and onsite renewable energy systems capable of providing a minimum of 5% of building energy consumption. Project teams are required to evaluate energy use holistically, including impacts on peak electricity, and determine the GHG emissions associated with structural and envelope materials.

Retrofitted buildings that achieve a zero carbon balance and meet the other requirements for existing buildings earn Zero Carbon Building - Performance certification. This certification is awarded based on a twelve month period of operations, and performance must be verified annually. Project teams are required to evaluate energy use holistically, including impacts on peak electricity, and determine the GHG emissions associated with structural and envelope materials. Recognizing the inherent challenges to retrofitting existing buildings, this certification does not require a minimum of onsite renewable energy or a minimum level of thermal energy demand performance.

4.0 POLICY

4.1 The design and construction of new City-owned buildings, or new additions/major building renovations with a floor space greater than 500 square metres (or a minimum site area of 5,000 square metres) or greater, shall:

- 4.1.1 Achieve a minimum LEED Gold certification through Canada Green Building Council (CaGBC) standard; and
- 4.1.2 Achieve CaGBC's Zero Carbon Building Standard certification for Design (in the case of a new building) or Performance (in the case of an existing building), where it is determined by the Energy Management Committee that a significant reduction in greenhouse gases (GHGs) can be achieved; and

- 4.1.3 Use the LEED rating system and accompanying Reference Guide as a design and measurement tool. Design and project management teams are encouraged to meet higher LEED rating levels, if feasible in a cost-effective manner.

- 4.2 In the case that the minimum requirements outlined in section 4.1 of this policy are not met or the pursuit of certification is not considered to be financially feasible upon review, the design and construction of new City-owned buildings, or new additions/major building renovations shall be built with the spirit of the aforementioned certifications in mind and strive to achieve the objectives they set forth.

5.0 EFFECTIVE DATE

Compliance shall be mandatory after September 1st, 2021 (for all projects that have not begun the design process).

6.0 PROCEDURES AND RESPONSIBILITIES

The Directors of all City Departments whose responsibilities include planning, designing, constructing or renovating City-owned facilities shall be responsible for ensuring that facilities and buildings comply with the Policy.

7.0 BUDGETING AND FINANCING

All capital construction which falls under this policy will be expected to align budget to meet the minimum requirements noted above. Budget planning and life cycle cost analysis to achieve a higher LEED rating is encouraged.

8.0 REFERENCES

- Livable City Strategy: An Economic Development Plan for New Westminster
- 2020 Corporate Energy and Emissions Reduction Strategy
- CAGBC LEED Reference Manual
- CAGBC Zero Carbon Building Standard