City of Kingston
Report to the Environment, Infrastructure and Transportation Policies Committee
Report Number EITP-17-013

To:	**Chair and Members of EITP Committee**
From:	**Denis Leger, Commissioner, Corporate & Emergency Services**
Resource Staff:	**Speros Kanellos, Director, Facilities Management & Constructions Services**
Date of Meeting:	**November 14, 2017**
Subject:	**Amendments to Municipal Green Building Policy**

Executive Summary:

In 2004 the City first adopted a Municipal Green Building Policy, which has since guided the design and construction of numerous municipal building projects.

The purpose of this report is to update the Municipal Green Building Policy to reflect current standards and best practices in building design and construction for City owned and operated facilities.

Recommendation:

That the Environment, Infrastructure and Transportation Policies Committee recommend to Council that the amended Municipal Green Building Policy, attached as Exhibit A to this report, be approved.

Authorizing Signatures:

ORIGINAL SIGNED BY COMMISSIONER

Denis Leger, Commissioner, Corporate & Emergency Services

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

Gerard Hunt, Chief Administrative Officer

Consultation with the following Members of the Corporate Management Team:

Lanie Hurdle, Commissioner, Community Services

Mark Van Buren, Acting Commissioner, Transportation & Infrastructure Services Not required

Desirée Kennedy, Chief Financial Officer & City Treasurer Not required

Options/Discussion:

The purpose of this update to the Municipal Green Building Policy is to reflect current standards and best practices in building design and construction of City owned and operated facilities.

The current policy, adopted in 2004 and revised in 2008, focused on obtaining certification under the Leadership in Energy and Environmental Design (LEED) program and achieving energy targets in relation to the Model National Energy Code (MNEC). The proposed policy amendments enclosed reference the current version of the LEED certification program (LEED v4), which in turn references updated building codes and standards. The energy efficiency requirements in the Ontario Building Code (OBC) and National Energy Code for Buildings (NECB) are significantly more stringent than they were in 2008 when the City's policy was last revised. The OBC has some of the most progressive requirements in North America for greenhouse gas (GHG) emissions and energy conservation in buildings. LEED v4 has a new emphasis on maintaining energy performance of buildings over time and an added focus on lighting management systems and daylight harvesting.

The previous policy required that building projects target "Silver" level certification for large new construction and major renovation projects (over 1,000 square metres) subject to a feasibility review. However, the updated LEED program is significantly more progressive and the new "Silver" level certification under LEED v4 is approximately equal to platinum under the 2009 version. The proposed amendments require projects to target the new "Silver" level certification, while acknowledging that this may be more challenging for projects to achieve.

The City's Corporate Climate Action Plan (2015) targets an 8% reduction in corporate GHG emissions by 2020 compared to a baseline year of 2011[1]. In order to meet our corporate GHG reduction targets, our new buildings and major renovations need to incorporate deep energy efficiency and a shift to low carbon energy sources.

Accordingly, the proposed amendments to the policy also introduce the following:

- This policy introduces the concept that a project may identify an alternate strategy to achieve carbon/GHG emission reductions and energy efficiencies in a more progressive fashion than may result from application of the LEED certification program, and allows for the flexibility for this to be pursued. This would be determined through a comprehensive analysis, and if deemed to substantiate the greater reductions in carbon and energy consumption, it will be implemented and presented in an information report to council.

- This policy also includes new minimum requirements for all projects to assist in the current or future reduction of carbon/GHG emissions and energy consumption, regardless of whether the projects are pursuing LEED certification and/or what level of

[1] The 8% reduction target does not include reductions obtained due to the anticipated "greening" of Ontario's electricity supply. If the benefits electrical generation supply are included the City's target becomes 18% below 2011 levels by 2020.

certification. These include studying the feasibility of and if feasible incorporating on-site renewable energy, accommodating for future rooftop solar photovoltaic (solar panel systems), and equipping new facilities with the basic infrastructure to allow for the installation of Electric Vehicle (EV) charging stations, to the extent that is feasible within the constraints of the project.

It is recommended that the Corporation review this policy at a minimum of every two years to continue its efforts towards ensuring its buildings are as environmentally conscious with added focus on energy efficiency and GHG reductions and incorporate any evolutions in future updates to the Municipal Green Building Policy.

The policy has been reformatted into the new policy template to ensure consistency of appearance and content.

Existing Policy/By-Law:

Municipal Green Building Policy

Notice Provisions:

None

Accessibility Considerations:

None

Financial Considerations:

None

Contacts:

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Other City of Kingston Staff Consulted:

Peter Huigenbos, Director, Real Estate & Environmental Initiatives

Paul MacLatchy, Environmental Director, Real Estate & Environmental Initiatives

Luke Follwell, Director, Recreation & Leisure Services

Marissa Mascaro, Manager, Realty Construction Projects

Exhibits Attached:

Exhibit A – Draft amended Green Municipal Building Policy

Municipal Green Building Policy

Policy Number	
Effective Date	
Status	DRAFT
Final Approver	Council

1.0 Purpose

This policy provides for municipally owned or funded new building and renovation projects to be built in accordance with established sustainable design principles. Certification in the Leadership in Energy and Environmental Design (LEED) program as administered by the Canada Green Building Council (CaGBC) is intended to ensure that operational energy costs are minimized, indoor air quality is protected, waste is minimized and greenhouse gas (GHG) emissions are reduced.

2.0 Persons Affected

2.1 This policy applies to all municipally owned or funded construction or renovation projects that:

2.1.1 are owned or significantly funded by the City and,

2.1.2 are new building projects or renovation or restoration projects.

2.2 This policy is to be applied as a condition of municipal funding for any building construction project as defined above.

3.0 Policy Statement

3.1 It is the policy of the City to ensure that:

3.1.1 Unless it can be shown by a comprehensive analysis to be infeasible to construct to LEED certification;

3.1.1.1 All new building projects over 1,000 square metres (major construction) shall target “Silver” level certification under the LEED Rating System most appropriate for the project (LEED BD+C, LEED ID+C or LEED-ND).

3.1.1.2 All building renovation, restoration or retrofit projects and new buildings under 1,000 square metres (minor construction) shall target

certification under the LEED Rating System most appropriate for the project (LEED BD+C, LEED ID+C or LEED-ND).

3.1.1.3 Where a project has identified a strategy to target a percentage of carbon/greenhouse gas (GHG) emission reductions and energy efficiencies that are verified to be more substantial and sustainable than the scale of carbon reductions and energy efficiencies that may be achieved through application of the LEED Rating System certification for that project, and it has been demonstrated to be feasible to apply to the project site, the project may seek to implement the carbon reduction and energy efficiency strategy in lieu of LEED certification. The strategy must identify requirements for measurements and verification. This will be determined through a comprehensive analysis and if deemed to substantiate the greater reductions in carbon and energy consumption, this strategy will be implemented and presented to council in an information report.

3.1.2 For all projects pursuing LEED certification, the following additional requirements shall be met, to the extent that they are feasible within the constraints of the project:

3.1.2.1 Optimize the number of points achievable under 'Energy & Atmosphere' Credit: Optimize Energy Performance, and

3.1.2.2 Qualify for 'Energy & Atmosphere' Credit: Enhanced Commissioning (LEED BD+C), and

3.1.2.3 Qualify for 'Energy & Atmosphere' Credit: Advanced Energy Metering (LEED BD+C).

3.1.3 The following requirements shall also be met to assist in the current or future reduction of carbon/GHG emissions consumption and energy efficiency. These requirements apply to all new buildings and renovation projects regardless of whether or not the project is pursuing LEED certification.

3.1.3.1 Study the feasibility of generating a minimum of 5% of the building's energy needs by means of on-site renewable energy. If feasible, incorporate this into the project.

3.1.3.2 Unless the rooftop is shaded by adjacent structures, design the building to accommodate the possibility of a future rooftop solar photovoltaic (PV) array.

3.1.3.3 All new facilities shall be equipped with the basic infrastructure (e.g. conduits) to allow for the current or future installation of Electric Vehicle (EV) charging stations, to the extent that is practical or feasible within the constraints of the project and subject to legislated requirements.

4.0 Responsibilities

4.1 Council is responsible for approving this policy and any project-specific alternative that may be recommended by staff.

4.2 CMT members are collectively and individually responsible for directing compliance with this policy.

4.3 The Director of Facilities Management is responsible for:

4.3.1 Ensuring compliance with this policy on new construction and renovation projects as defined as applicable herein; and

4.3.2 Reviewing and verifying alternative building strategies within the context of this policy and presenting or supporting the presentation of said alternative strategy for Council's endorsement.

4.4 Project Managers are responsible for adhering to this policy for new construction and renovation projects as defined as applicable herein, including ensuring that all members of a project team including consultants, sub-consultants, contractors and sub-contractors are aware of, and perform their work in accordance with the terms of this policy.

4.5 Supervisors/Managers/Directors are responsible for adhering to and for providing assistance to project managers in implementing this policy and monitoring the impact of the policy on construction and renovation projects.

Breach of Policy

4.6 Employees are responsible for compliance with this policy and shall be aware that any employee who breaches this policy may be subject to discipline up to and including dismissal.

5.0 Approval Authority

Role	Position Date	Approved
Subject Matter Expert	Appropriate Directors	

Legal Review	Senior Legal Counsel
Management Review	Appropriate Directors
CMT Review	CMT
Committee Approval	Environment, Infrastructure & Transportation Committee
Final Approval	Council

6.0 Revision History

Effective Date	Revision #	Description of Change

Definitions

CaGBC	Canada Green Building Council
GHG	Greenhouse gas emissions, expressed in tonnes of CO_2e/year
LEED	Leadership in Energy and Environmental Design Program as administered by the CaGBC
LEED BD+C	LEED for Building Design and Construction including LEED BD+C: New Construction and Major Renovation, Core and Shell Development, Schools, Retail, Data Centers, Warehouses and Distribution Centers, Hospitality, Healthcare, Homes and Multifamily Lowrise and Multifamily Midrise
LEED ID+C	LEED for Interior Design and Construction including LEED ID+C: Commercial Interiors, Retail and Hospitality
LEED ND	LEED for Neighborhood Development including LEED ND: Plan and Built Project
Solar PV	Solar Photovoltaic, meaning a system of solar panels that produce electricity from sunlight