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**TO:** CITY MANAGER **DATE:** 2019 December 11

**FROM:** DIRECTOR PLANNING AND BUILDING **FILE:** 41500 20

**SUBJECT:** **BC BENCHMARKING PILOT PROGRAM TO REDUCE ENERGY USE AND EMISSIONS FROM BUILDINGS**

**PURPOSE:** To inform Council about the British Columbia Benchmarking Pilot Program (BCBPP) and to request Council endorse the City of Burnaby's participation in this program.

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**RECOMMENDATIONS:**

1. **THAT** Council endorse the City of Burnaby's participation in the BC Benchmarking Pilot Program.
2. **THAT** this report be forwarded to the Environment Committee for information.

**REPORT****1.0 INTRODUCTION**

The City of Burnaby has an opportunity to participate in the BC Benchmarking Pilot Program (BCBPP), an energy benchmarking and disclosure program. Energy benchmarking is the process of regular tracking, reporting and disclosure of the energy use of a building, so that it can be compared to that building's historical energy use, and also to the energy use of other similar buildings. This information can help building managers identify opportunities to improve the efficiency of a building's operation and make informed decisions for retrofit projects. From a community planning perspective, energy benchmarking can provide data that informs the development of new policies and regulations. Emissions from buildings account for nearly half of Burnaby's greenhouse gas emissions. Programs such as this pilot that track and report on energy use are important in understanding ways in which buildings can use energy more efficiently.

This report provides background information about the BCBPP, discusses the potential benefits to Burnaby, and makes a recommendation that Council endorse Burnaby's participation in the pilot program.

**2.0 CITY POLICY SECTION**

Energy benchmarking and participation in this pilot program aligns with the City of Burnaby's Corporate Strategic Plan by supporting the following goals and sub-goals of the Plan:

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### **Connected Community**

- Partnership – Work collaboratively with businesses, educational institutions, associations, other communities and governments

### **A Healthy Community**

- Enhance our environmental health, resilience and sustainability

### **A Dynamic Community**

- Economic Opportunity – Foster an environment that attracts new and supports existing jobs, businesses and industries
- Community Development – Manage change by balancing economic development with environmental protection and maintaining a sense of belonging
- City Facilities and Infrastructure – Build and maintain infrastructure that meets the needs of our growing community

### **A Thriving Organization**

- Financial Viability – Maintain a financially sustainable City for the provision, renewal and enhancement of City services, facilities and assets

Energy benchmarking is also supported by **Burnaby's Environmental Sustainability Strategy (ESS)** and **Community Energy and Emissions Plan (CEEP)**, under the 'Build' goal.

The CEEP Build strategy and suggested action (C3.3) focuses on improving building energy efficiency as follows:

*Strategy C3.3: Develop policies and programs to measure and communicate how much energy a building uses, for example using energy audits and EnerGuide labels and/or building benchmarking.*

*Suggested action c) Consider developing policy to encourage energy benchmarking (measuring and comparing energy performance) for new and existing commercial and institutional buildings.*

Energy benchmarking and this pilot program is an action that supports the Climate Emergency Declaration made by Council on September 9, 2019. This pilot program and its activities would support the upcoming Climate Action Framework report that will outline actions the City can take to demonstrate its commitment to meeting newly adopted community carbon pollution reduction targets.

## **3.0 BC BENCHMARKING PILOT PROGRAM BACKGROUND**

### **3.1 Overview of the Pilot Program**

The BCBPP is a project developed by various parties who share an interest in supporting green buildings and climate action to reduce GHG emissions. The various parties, their roles and interests in the BCBPP are summarized below:

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Organization	Role	Interest
<u>OPEN Green Building Society</u>	Non-profit society, responsible for project coordination; manage funding and reporting	Support green buildings and transparency
OPEN Technologies	Affiliated with OPEN Green Building Society, provide software tools and program services	
Natural Resources Canada	Federal government entity, provide project funding for BCBPP	Federal government climate action
Province of BC	Participant	Aligns with Clean BC – a provincial plan to transition to a low carbon future
BC Hydro	Funding contribution; data and program liaison	Aligns with goals of Sustainable Communities program – a plan to help local governments improve energy efficiency and reduce GHG emissions
Metro Vancouver*	Participating government; possible future project coordination post-pilot	Regional climate action; exploring future GHG regulation for buildings
Core participating local governments in Metro Vancouver*	Recruit participants; in-kind support to program	Climate action; build support for coordinated benchmarking program

\*Core participants include Metro Vancouver; the cities of Vancouver, Richmond, Surrey, New Westminster, and Burnaby (pending Council endorsement of this report). Other municipalities may be recruited to join the program.

The pilot program is funded by NRCAN and BC Hydro; funding from municipal partners has not been requested.

The objective of the BC Benchmarking Pilot Project (BCBPP) is to test and demonstrate the feasibility and benefits of energy benchmarking by various stakeholders, in a coordinated manner that provides consistency among local governments, while building the case for a provincial scale program.

The BCBPP was initiated in the fall of 2019 and will finish in the spring of 2021. Outreach and communication to recruit volunteer participants in the program and to collect information about civic buildings that are participating in the program will begin in January 2020.

The specific goals of the BCBPP are to:

1. support energy benchmarking and disclosure of energy use in British Columbia as a driver for reducing building energy use and emissions, as well as provide a pathway and compliance tool for future regulations that could be streamlined province-wide; and,
2. promote an understanding and appreciation of benchmarking and disclosure by stakeholders, increase its acceptance by building owners and build overall industry capacity.

A main outcome of the pilot program will be a report documenting lessons learned for designing and operating an energy benchmarking program, with specific consideration given to building recruitment and participation, data validation, and strategies for overcoming barriers to participation and disclosure of building operation and energy use data.

### **3.2 How Does the BCBPP Work?**

The core activity of the pilot program is the recruitment of building owners and managers to voluntarily participate in the program. Each participating municipality is responsible for recruitment within their jurisdiction and the target is to recruit twenty (20) privately owned buildings. The program will target large high-rise multi-family, commercial, industrial or institutional buildings. Each municipality is required to also include thirty (30) civic buildings in the pilot program. The program can be described in six steps, as shown below.

**Step 1a.** Municipal staff identify privately owned buildings for recruitment into the pilot program. Recruitment takes the form of a letter or email to the building manager, with information about the program and encouragement to the building manager / owner to visit the pilot project website.

**Step 1.** Building manager / owner visits website to learn more about the pilot program.

**Step 2.** Building manager / owner registers to indicate interest in joining the pilot program.

**Step 3.** OPEN reaches out to the registered party to help them set up an account with Energy Star Portfolio Manager<sup>1</sup> (ESPM), link the account to the building's utility provider(s) and provide specifications about building operation, size and design, among other parameters. In turn, ESPM will give the owner / manager valuable information about their building and its energy usage and GHG emissions.

**Step 4.** OPEN requests that the registered party share their building's data via ESPM to a secure database developed by OPEN so that the pilot program can understand energy usage throughout the region.

**Step 5.** Once the data is shared, OPEN sends the registered party a scorecard benchmarking their building against the region's other buildings that have also joined the program.

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<sup>1</sup> Energy Star Portfolio Manager (ESPM) is a commonly used online tool used by building managers to measure and track energy consumption and greenhouse gas emissions. The tool is free to use.

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**(Optional) Step 6.** The registered party consents to be included on a public disclosure map.

The inclusion of civic buildings by a participating municipality would involve Steps 3 to 6.

### **3.3 What is the City of Burnaby's Role in the BCBPP?**

As a participating local government, the City of Burnaby will provide in-kind staff resources, primarily to recruit owners and managers of Burnaby buildings to voluntarily join the program. Staff will identify and reach out to key developers and owners of large commercial, office and/or industrial properties to seek their participation, following the steps described above. City staff may also reach out to the Burnaby Board of Trade to recruit participants from their membership.

Approximately thirty (30) civic buildings and up to twenty (20) privately owned buildings in Burnaby are proposed to be targeted for enrollment. City Facilities Management has confirmed that including this number of civic buildings in the program is feasible.

Staff will also be required to coordinate amongst the various participating project partners to develop consistent messaging and outreach materials for building recruitment. The total required in-kind staff time anticipated will be manageable within existing work programs for green buildings and building operations.

### **3.4 What are the Benefits of Participating in the Pilot Program to Burnaby?**

The BCBPP offers significant funding, intellectual capital and technical support to the City of Burnaby in exchange for a reasonable and modest investment of staff time to support our participation in the program. In turn, the program will help to raise the profile and support for energy benchmarking in our community, building capacity for benchmarking amongst staff and in the community. The pilot program also directly aligns with the goals, objectives and strategies of the City's ESS and CEEP to improve building energy performance and reduce GHG emissions.

A longer term goal of the BCBPP is to normalize programs for energy benchmarking and disclosure, which may lead to province wide development and adoption of such a program. In this regard, a reasonable and modest level of staff resources invested in the BCBPP may help catalyze a broader program that aligns with Council's direction as expressed in the ESS/CEEP and updated community GHG targets and 'climate emergency'.

### **3.5 How does this Pilot Program Differ from the City's Green Building Policy?**

The City of Burnaby has a requirement for energy benchmarking for new Part 3 buildings within its recently adopted green building policy<sup>2</sup>, which is aligned with the City's ESS and CEEP. Burnaby's recent climate emergency declaration and updated community emission reduction targets further strengthen the imperative to reduce GHG emissions in new and existing buildings.

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<sup>2</sup> [www.burnaby.ca/greenbuildings](http://www.burnaby.ca/greenbuildings)

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The BCBPP provides a coordinated and scalable effort to reduce emissions in existing buildings, which is a difficult market segment for the City to address on its own.

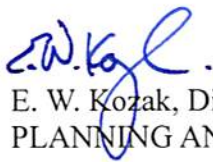
The City's policy requires a developer to register an account with ESPM and to make this data viewable by City staff (not the public), as a condition of a building permit for a new building (Part 3 building). This data can then be analyzed by the City as new buildings are constructed, but there is no provision to provide regular benchmarking data back to the building owner / manager. However, the BCBPP is different from the City's Green Building policy because the pilot program aims for a higher level of public disclosure in the form of the scorecard and optional public map display on the program's website.

#### 4.0 CONCLUSION AND RECOMMENDATION

The BC Benchmarking Pilot Program (BCBPP) presents a significant opportunity for the City of Burnaby to promote energy benchmarking and disclosure to improve the operating performance of existing buildings and reduce greenhouse gas (GHG) emissions in Burnaby. The pilot program will also help to grow the City's and the community's knowledge and capacity in this area. Energy benchmarking aligns with goals, strategies and actions in the City's Environmental Sustainability Strategy and Community Energy and Emissions Plan and is also consistent with Council's direction recently expressed by the declaration of a 'climate emergency' and adoption of new GHG reduction targets.

Participation in the program will require modest amounts of time from staff, primarily to undertake outreach to recruit building owners and managers to participate in the program and to report building specifications and energy use to the OPEN team for select civic buildings. The staff time required can be accommodated as part of existing work programs focused on green buildings and building operations management.

It is recommended that Council endorse Burnaby's participation in the BC Benchmarking Pilot Program. With Council's endorsement, staff will notify the program partners, and coordinate the City's involvement in the program.



E. W. Kozak, Director  
PLANNING AND BUILDING

MS:sa

cc: Director Engineering  
Director Parks, Recreation and Cultural Services  
Director Corporate Services  
Director Finance  
Chief Librarian  
Assistant Director Engineering Facilities Management  
City Clerk