



REPORT

Report Date: November 2, 2020
Contact: Liz Jones
Contact No.: 604.871.6169
RTS No.: 14050
VanRIMS No.: 08-2000-20
Meeting Date: November 24, 2020
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TO: Vancouver City Council

FROM: General Manager of Finance, Risk and Supply Chain Management in consultation with the General Manager of Real Estate and Facilities Management

SUBJECT: Funding Application to Infrastructure Canada (Clean BC Communities Fund) – Queen Elizabeth Theatre Energy Retrofit

RECOMMENDATION

- A. THAT Council approve a funding application to the Investing in Canada Infrastructure Program (ICIP) – Green Infrastructure Stream - Clean BC Communities Fund for \$1.73 million contribution to a proposed \$2.50 million Queen Elizabeth Theatre Energy Retrofit project.
- B. THAT, subject to the successful application for funding, and in accordance with the City's Capital Budget Policy, Council direct staff to bring forward details of the eligible project scope and costs and a request for approval of the Multi-Year Capital Project Budget and related Annual Capital Expenditure Budget to be funded from the Energy Optimization Program funding approved in the 2019-22 Capital Plan.

REPORT SUMMARY

The City's recalibrated 2019-2022 Capital Plan funding strategy contemplates securing of senior government contributions toward a number of Council priorities, including the target of 100% of the energy used in Vancouver coming from renewable sources before 2050.

The proposed energy retrofits for the Queen Elizabeth Theatre is a step towards helping the City achieve its target (as part of its Climate Emergency Response) that by 2025, all new and replacement heating and hot water systems will be zero emissions.

This report seeks Council's approval for:

- a) a funding application for the Queen Elizabeth Theatre Energy Retrofit project (the "Project") to the second intake of the Investing in Canada Infrastructure Program (ICIP) – Green Infrastructure Stream - Clean BC Communities Fund; and
- b) up to \$0.64 million of the City's share of the funding, with the funds from the recalibrated 2019-2022 Capital Plan for the Energy Optimization Program.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

March 2005: Council endorsed the Community Climate Change Action Plan to reduce GHG emissions in the community to 6% below 1990 levels by 2012, which included a number of actions aimed at reducing emissions from existing buildings.

July 2011: Council adopted the Greenest City 2020 Action Plan, which included the target to reduce energy use and greenhouse gas emissions in existing buildings by 20% below 2007 levels by 2020 and emissions from all sources in Vancouver by 33% over the same period.

September 2013: Council approved updates to the Vancouver Building By-Law, which required energy efficiency improvements as a permit condition for building renovations and directed staff to develop recommendations for Council consideration on energy reporting requirements for larger buildings as part of a Building Retrofit Strategy.

March 2014: Council resolved to seek amendments to the Vancouver Charter to empower the City to require annual reporting of building energy use data for benchmarking energy performance.

June 2014: Council approved the Energy Retrofit Strategy for Existing Buildings, with 17 key actions aimed at reducing GHG emissions from existing detached and multifamily housing and approved a building energy-benchmarking program.

June 2015: Launched first Vancouver Heritage Foundation energy-retrofit pilot program to provide grants to owners of character homes to complete energy efficiency upgrades.

November 2015: Council approved the Renewable City Strategy, including target of 80% greenhouse gas (GHG) reduction of 80% below 2007 before 2050 and deriving 100% of the energy used in Vancouver from renewable sources before 2050.

November 2015: Council endorsed the **Renewable Energy Strategy for City Owned Buildings demonstrating leadership** with the target of deriving 100% of the energy used in city owned buildings (with 100% GHG reduction) from renewable sources before 2040, 10 years ahead of city-wide strategy.

November 2017: Council approved the Renewable City Action Plan, establishing interim targets of 50% reduction in GHGs and 55% renewable energy by 2030 as a part of the overall strategy to achieve 100% renewable energy before 2050.

January 16, 2019: Council approved a motion recognizing climate change as an emergency and directed staff to recommend new actions to accelerate the reduction of carbon pollution.

April 24, 2019: Council approved the Climate Emergency Response report, which identified six “big moves” to reduce Vancouver’s carbon pollution by building and expanding on our existing work to fight climate change. One of those six “big moves” is that by 2025, all new and replacement heating and hot water systems will be zero emissions.

April 24, 2019: Council approved a \$2.2 million increase to the existing \$1.2 million multi-year capital project budget and existing annual expenditure budget for the 2019 Energy Optimization Program for City-owned building from the 2019-2022 Capital Plan for Facility sustainability and resilience programs.

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

The City Manager, the General Manager of Finance, Risk and Supply Chain Management and the General Manager of Real Estate and Facilities Management recommend approval of the report.

REPORT

Background/Context

The Clean BC Communities Fund (the “Program”) is part of the Investing in Canada Infrastructure Program (ICIP) – Green Infrastructure Stream which provides funding through an Integrated Bilateral Agreement between Canada and British Columbia in four streams comprising (i) Green Infrastructure, (ii) Community, Culture and Recreation Infrastructure, (iii) Rural and Northern Communities Infrastructure; and (iv) Public Transit. The Clean BC Communities Fund program is a component in the aforementioned Green Infrastructure stream.

Canada and British Columbia’s governments announced in August 2020 that they are committing up to \$47 million towards the second intake of the CleanBC Communities Fund. The City was successful in its application to the first intake of the Program for a \$10.2 million grant for the Sewage Heat Recovery Expansion Project for the False Creek NEU. City staff have been advised by Provincial representatives that given our successful application in the first intake a smaller application will have greater probability of success in the second intake.

The Program supports public infrastructure, which is defined as tangible, capital assets that are primarily for public use and benefit. Eligible projects are those that will (i) increase capacity to manage renewable energy, (ii) increase access to clean-energy transportation, (iii) increase energy efficiency of buildings, or (iv) increase generation of clean energy.

The maximum grant available under the Program is 73.33% of eligible project costs (40% and 33.33% from the federal and provincial contributions, respectively). The application deadline is November 12, 2020 and requires a Council resolution, in support of the application and the Project, to be submitted within one month after the aforementioned November deadline.

Strategic Analysis

For each intake of the Program, there is a limit of ONE application per organization. City staff reviewed projects that meet the requirements of the Program and concluded that the Queen

Elizabeth Theatre Energy Retrofit project is most suitable because it will increase the energy efficiency of a tangible, capital asset that is primarily for public use and benefit.

Improving energy efficiency of City-owned buildings such as the Queen Elizabeth Theatre (QET) will advance on the goal under the Renewable City Strategy in general and the goal of the Renewable Energy Strategy for City-Owned Buildings more specifically, demonstrating leadership and meeting renewable energy targets of deriving 100% of the energy used in city owned buildings (with 100% GHG reduction) from renewable sources before 2040, 10 years ahead of city-wide strategy.

The QET is a stand-alone 3-storey, concrete structure building, built in 1957. SES Consulting carried out a feasibility study at the beginning of 2020 to evaluate options for improving the energy efficiency of the QET mechanical systems, including opportunity for the GHG reduction and use of renewable energy source. The study confirmed there is a significant opportunity for GHG reduction and the introduction of renewable energy source to contribute to the City’s targets. This opportunity combined with the fact that the existing mechanical equipment (two chillers, two roof top units and primary hot water pumps) is reaching end of life and need replacement, makes this project a perfect candidate for this application.

The study concluded that the use of an air-source heat pump plant to supply primary heating and primary cooling to QET appears technically feasible, and with potential to offset all, or nearly all of, the building’s greenhouse gas emissions.

Implications/Related Issues/Risk

Financial

Staff recommend pursuing a shared funding model between the Federal and Provincial governments and the City.

The estimated total project costs is \$2.50 million, of which \$2.37 million are considered eligible costs as defined by the Program. The City is seeking up to approximately \$1.73 million (73.33% of the total \$2.37 million of eligible project costs) in Federal and Provincial funding as follows:

Project Costs	
Eligible Costs	\$2.37 million
COV Project Management	\$0.13 million
Total Project Costs	\$2.50 million
Funding Sources	
Investing in Canada Infrastructure Program (73.33% of Eligible Costs)	\$1.73 million
City Share (26.67% of Eligible Costs) – funded from the recalibrated 2019-2022 Capital Plan for the Energy Optimization program	\$0.64 million
COV In-kind contribution for Project Management	\$0.13 million
Total Project Cost	\$2.50 million

The City's share is to be funded from the recalibrated 2019-2022 Capital Plan for the Energy Optimization Program.

Upon successful application for funding and as per the City's Capital Budget Policy, staff will bring forward to Council details of the eligible project scope and costs and a request for formal approval of the Multi-Year Capital Project Budget and related Annual Capital Expenditure Budget.

CONCLUSION

The proposed Queen Elizabeth Theatre Project is a priority because some of the existing heating and cooling plant infrastructure including the chillers are approaching end-of-life and require a replacement plan. The plan to install an air-source heat pump plant to supply primary heating and primary cooling to QET appears technically feasible, and with potential to offset all, or nearly all of QET's greenhouse gas emissions. Therefore, Council's support is sought for the City's application to the Program for funding the Project as described in this report.

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