



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** March 20, 2013
From: Cecilia Achiam, MCIP, BCSLA **File:**
 Director, Administration and Compliance
Re: **Energy Retrofit Program for Low-Income Households**

Staff Recommendation

That Council endorse the strategy outlined in the report from the Director, Administration and Compliance, titled "Energy Retrofit Program for Low-Income Households" dated March 20, 2013.

Cecilia Achiam, MCIP, BCSLA
 Director, Administration and Compliance
 (604-276-4122)

REPORT CONCURRENCE			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Affordable Housing	<input checked="" type="checkbox"/>		
REVIEWED BY DIRECTORS	INITIALS:	REVIEWED BY CAO	INITIALS:

Staff Report

Origin

The initiative described in this report supports the following Council Term Goal:

- 8.1. *Continued implementation and significant progress towards achieving the City's Sustainability Framework, and associated targets.*

Background

As part of the Official Community Plan and the Sustainability Framework, Council has adopted the following community-wide targets:

- Reduce greenhouse gas (GHG) emissions 33% below 2007 levels by 2020 and 80% by 2050; and
- Reduce energy use 10% below 2007 levels by 2020

Further, as a signatory of the BC Climate Action Charter, Richmond is committed to creating a more compact and energy efficient community.

Significant improvements have been made to reduce emissions related to buildings, transportation and solid waste in the community. Although it is anticipated that these efforts will support durable, long-term reductions in emissions, additional effort is required to increase energy efficiency and reduce emissions in the short term.

While the City's own operations contribute a small amount (1%) of community-wide emissions, it has led by example through its corporate energy management programs and is recognized by BC Hydro as a Power Smart Leader. The City has achieved a 2% reduction (1,800,000 kWh) in electrical use from 2011 levels, the annual energy used by 50 BC homes. Meeting the City's Climate Action Charter commitments for corporate GHG emissions, Council has endorsed the "Making Progress" option outlined in the staff report titled "Carbon Neutral Progress Update", dated October 15, 2012.

The purpose of this report is to introduce a new municipal effort to encourage energy retrofits for low-income households.

Analysis

The City's commitment to building a more compact and energy efficient community is leading to more efficient buildings and greater transportation options. Richmond's per capita energy use and GHG emissions are decreasing. However, to meet the community-wide targets, improvements to the existing building stock are necessary. The City's continuous energy reduction efforts for its own facilities inform these programs, but different tools that encourage energy efficient behaviour are required to address emissions over which the City does not have direct control.

Richmond has identified partners to maximize the effectiveness of community energy efficiency efforts for existing buildings and has prioritized opportunities that concurrently support additional

Council objectives. As a result, the City is partnering with BC Hydro and FortisBC to offer Energy Saving Kits (ESK) specifically designed to assist low-income households¹.

Council has adopted term goals and OCP objectives related to affordable housing. Energy efficiency programs targeting low-income households support these goals and objectives by decreasing utility costs and insulating residents from rising energy prices. BC Hydro and FortisBC deliver programs that support low-income households as part of their conservation efforts. These programs are important not only due to the number of households affected, but also since these households are understood to face barriers to participation in other incentive programs.

Richmond is one of three Lower Mainland municipalities, along with the City of New Westminster and Township of Langley, involved in direct engagement of residents through this program. Staff are currently distributing 4,000 ESK vouchers and plan to distribute another 2,000 once received. Vouchers direct residents to sign up online or via phone to have a kit delivered to their homes. Each ESK is valued at \$75, although there is no cost to the City or participating residents since the program cost is borne by the sponsoring utilities.

The ESK is a package of basic, low-cost energy savings measures easily installed by both renters and owners. Each kit contains a fridge thermometer, compact fluorescent lightbulbs, night light, weatherstrip, window insulation, outlet sealer, hot water gauge, tap aerators, low-flow showerhead, and foam pipe wrap. BC Hydro has surveyed high levels of satisfaction among program participants.²

It is estimated that approximately one in five Richmond households will qualify for the program by having a total household income less than the Low Income Cut-Off (LICO) as developed by Statistics Canada.³ The measure determines income thresholds beneath which households may be unable to meet basic needs. Richmond currently utilizes LICO for a range of programs including the Recreation Fee Subsidy Program. The 2011 LICO thresholds range from \$20,373 for a 1-person household to \$53,916 for a household of 7 or more.

BC Hydro and FortisBC estimate that the average household can save \$100 per year through the use of these items. They regularly evaluate the success of this program and have not imposed an expiry date for the ESK offer at this point in time. Although participation rates are not yet known, staff believe that the City and its partners can meaningfully increase participation in Richmond above what the utilities have realized independently. Since the ESK is a voluntary program, it cannot be assumed that every household receiving a voucher will follow through with the redemption and installation of the kit. At full participation (all 6,000 vouchers are redeemed and installed), the program represents \$450,000 of direct investment in energy efficiency measures for low-income Richmond residents and a potential on-going annual community energy savings of \$600,000. Even a 25% uptake of the vouchers (1,500 participants) would direct \$112,000 of investment and on-going annual energy savings of \$150,000. This level of

¹ Additional information about the program is available on the BC Hydro website:
http://www.bchydro.com/powersmart/residential/ps_low_income/energy_saving_kits.html

² 89% combined top box score. BC Hydro F2011 Demand Side Management Milestone Evaluation Summary Report

³ Details about LICO thresholds in Richmond can be found on the City website:
http://www.richmond.ca/_shared/printpages/page8776.htm

uptake would have the potential to lower energy use by 2,100 GJ and related GHG emissions by over 70 tonnes CO₂e per year, the same impact as removing 22 vehicles from the road.⁴ At the request of City staff and in order to evaluate the level of participation, BC Hydro has agreed to report the uptake by municipality. Staff will report back on any reported benefits to Richmond once they are determined.

To maximize community participation of the ESK program, Sustainability and Affordable Housing staff are coordinating efforts with the Richmond Homelessness Coalition, Richmond Community Services Advisory Committee, Richmond Seniors Advisory Committee, Richmond Poverty Response Committee and Rental Connect initiatives in order to connect as many qualifying families as possible with the program. In addition, vouchers will be distributed at City Hall, Seniors Centre, community centres and libraries and be available at community events such as the Richmond Earth Day Youth Summit (REaDY) in April.

The program sponsors provide an additional benefit when working with subsidized Housing Providers through direct installation funding, which covers the labour and administration costs to install the ESK contents. Since the ESK program is intended to increase energy-efficient behaviours and technologies, the program can further increase the energy savings for residents in dwellings constructed through the Richmond Affordable Housing Strategy such as the Kiwanis Towers under development.

Financial Impact

None.

Conclusion

Richmond has demonstrated leadership in increasing energy efficiency and reducing GHG emissions. However, in order to meet the community-wide targets, new programs targeting existing buildings are required. The ESK program provides a very cost effective means of energy savings by packaging basic, low-cost measures that can be used by both renters and owners. Since the program is sponsored by BC Hydro and FortisBC, there is no cost to the City or participants.

By reducing the monthly energy bills directly of residents that are at greater risk of being unable to fund basic needs, the program supports City objectives related to energy efficiency, GHG reduction and affordable housing provision.



Courtney Miller
Sustainability Project Manager
(604-276-4267)



Cecilia Achiam, MCIP, BCSLA
Director, Administration and Compliance
(604-276-4122)

⁴ Assumptions informing estimated cost savings are from the FortisBC website and estimated energy savings from the respective filings listed below:

<http://www.fortisbc.com/NaturalGas/Homes/Offers/EnergySavingKit/Pages/default.aspx>

British Columbia Utilities Commission. FortisBC 2011 Capital Expenditure Plan IR2. October 1, 2010.
BC Hydro F2011 Demand Side Management Milestone Evaluation Summary Report.