

NO: R123

COUNCIL DATE: **JUNE 15, 2015**

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## REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **May 25, 2015**

FROM: **General Manager, Planning and Development  
General Manager, Engineering  
Fire Chief  
Sustainability Manager**

FILE: **0512-02**

SUBJECT: ***Empower Me* Peer-Based Mentoring Program to Support Energy Efficiency,  
Water Conservation and Safety in Single Family Homes**

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## RECOMMENDATION

The Planning and Development Department, Engineering Department, and Surrey Fire Service recommend that Council receive this report as information.

## INTENT

The purpose of this report is to provide information on the City's involvement in the *Empower Me* pilot program in Surrey.

## BACKGROUND

In 1998, the City of Surrey became a member of the Partners for Climate Protection Program (PCP) of the Federation of Canadian Municipalities (FCM), a national program that brings Canadian municipal governments together to act on climate change and reduce the local production of greenhouse gas (GHG) emissions.

In May 2010, to meet the provincial requirements of Bill 27, the *Local Government (Green Communities) Statutes Amendment Act*, the City included the following GHG reduction targets in the City of Surrey Official Community Plan (OCP):

- 33% per capita GHG reduction by 2020, excluding agriculture and industry; and
- 80% per capita GHG reduction by 2050, excluding agriculture and industry.

On November 25, 2013 Council considered Corporate Report No. R233;2013 titled "Community Climate Action Strategy" and approved the final Strategy. The Community Climate Action Strategy includes a Community Energy and Emissions Plan (CEEP) that includes targets, actions and implementation recommendations to reduce energy and emissions throughout the community. Strategies have been developed in the CEEP to redirect Surrey's energy and emission trajectory: by 2020, achieving a 22% per capita GHG reduction, increasing to a 47% per capita reduction by 2040 with the largest reductions being made within the transportation sector. Buildings comprise over 50% of the energy use in the community and nearly 40% of the

greenhouse gas emissions. As a subsector of the building stock, existing single family homes in Surrey account for over 80% of all buildings. Traditionally, the single-family home segment has been difficult to engage on issues related to energy and emissions, but is critical for achieving the City's energy and emissions targets.

Further, Surrey Fire Service has been engaged in an outreach program called "Homesafe", since 2008, where the homes were selected based on demography in this similar vein as the *Empower Me* cohort. The outcomes that have been observed are realized in declines of fire death and residential fire rates.

In terms of water conservation, single families consume approximately 65% of Surrey's total annual water consumption. Outdoor water use, such as lawn sprinkling in single-family households, is a major contributing factor to the peak demand of the water system.

Metro Vancouver's 2011 Drinking Water Management Plan stipulates that member municipalities are responsible to deliver education programs promoting behaviour change and sustainable use of water. Metro Vancouver has established a target to reduce peak day consumption per capita by 1% per year, and the City's Sustainability Dashboard also sets short and long-term targets for reducing per capita water consumption in Surrey. Public education is the key to achieving these targets. Education will help to reduce water use in single family households, which will reduce the annual water consumption and the peak water demand; the reduction in peak water demand in the water system will defer future water infrastructure capital investment. Water conservation efforts include reducing lawn sprinkling, installation of low flow shower heads and water saving appliances. The installation of low flow devices help to reduce both water consumption and energy use.

## DISCUSSION

Various initiatives have been introduced by the utilities or higher levels of government to address energy efficiency in existing family homes. However, information is typically provided exclusively in English or French and using media channels not familiar to recent immigrants or English-as-a-Second-Language demographics. Considering that over 30% of Surrey residents are of South Asian ethnic origin and that one quarter of Surrey residents' first language is Punjabi or Hindi, a need and opportunity exist for designing energy outreach programs that directly target these audiences.

*Empower Me* is an energy conservation program designed by Fortis BC and its partners for members of the South Asian and Chinese communities in the Lower Mainland. The program focuses on three key messages to:

- encourage energy saving actions;
- reduce utility bills; and
- improve natural gas safety in the home.

The premise of *Empower Me* is that many people from these communities who have immigrated to Canada have been raised in climates where it is uncommon to have appliances like furnaces and thermostats in their homes. Being unfamiliar with these appliances can make it difficult to understand the relationship between energy use and associated impacts, such as financial and environmental costs. This lack of foreknowledge, coupled with cultural and language barriers,

often means these customers elude more mainstream campaign efforts and, therefore, represent a sizable, unreached market.

*Empower Me* utilizes a peer-based strategy, training and employing influential role models from within the communities to reach these underserved markets in a culturally relevant way. These 'Energy Mentors' are the main force behind direct community involvement, initiating contact and providing appropriate support, translation, and one-on-one assistance. Participants are educated on and encouraged to adopt energy saving behaviours, install energy saving measures, and understand natural gas safety concerns around their home.

The *Empower Me* program has demonstrated success in reaching South Asian and Chinese communities in Surrey. During the pilot phase, 300 Surrey residents participated as "champion" households, engaging with Energy Mentors to reduce household energy use. The average energy reduction per participant is approximately 290 GJ, which translates into lifetime household energy savings of over \$3,000 and mitigates approximately 14 tonnes CO<sub>2</sub> per household.

The *Empower Me* program launched an initial pilot phase in January 2013 and has now been extended until December 31, 2015. FortisBC is the lead partner and, more recently, BC Hydro, City of Vancouver, Kambo Green Solutions, VanCity Credit Union and the City of Surrey have joined as program partners. The City of Surrey has committed \$35,000 to support the mentoring of 120 households within the City by the end of 2015. VanCity has partnered to support an additional 155 households this year in Surrey, for a total of 275 households in the final phase of the pilot project.

Building on the opportunity of directly engaging with households, this year the mentors will also be trained in water conservation and fire safety. The alignment of outreach on energy and water conservation, as well as fire safety, will ensure that a wide range of messages are communicated to program participants. It should also be noted that while the *Empower Me* targets South Asian and Chinese communities, the program is open to anyone who wishes to participate. Furthermore, data analysis from this second pilot phase will identify learnings that can later be applied within Surrey more broadly as the implementation of the Community Energy and Emissions Plan moves forward.

## **SUSTAINABILITY CONSIDERATIONS**

The City continues to move forward with collaborative initiatives that support the vision and goals of the Sustainability Charter. Partnering with the *Empower Me* program addresses the following Actions that are identified in the Sustainability Charter:

- SC 7: Municipal Outreach, Public Education and Awareness;
- SC 15: Literacy, Education and Training;
- EC 7: Sustainable Building and Development Practices;
- EC 8: Energy Security, and
- EN 14: Public Education and the Sharing of Information.

## CONCLUSION

Single-family homes account for the majority of building energy use and GHG emissions in Surrey; however, this subsector has traditionally been difficult to engage in energy efficiency programs. At the same time, the City has large ethnic populations and recent immigrant households, many of whom reside in single-family homes. The *Empower Me* pilot program offers a unique opportunity to work with partners to engage the South Asian and Chinese communities on energy efficiency issues through an innovative peer-based education model. Additional City objectives around water conservation and fire safety in the home will also be integrated and addressed. Moreover, the *Empower Me* program has demonstrated its ability as a community building endeavor.

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