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COUNCIL DATE: **September 10, 2012**

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## REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **September 5, 2012**

FROM: **Manager, Sustainability**

FILE: **0512-02**

SUBJECT: **City of Surrey Carbon Neutral Strategy for 2012**

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## RECOMMENDATION

The City Manager's Department recommends that Council receive as information the 2012 Carbon Neutral Strategy for the City of Surrey as generally described in this report.

## INTENT

The purpose of this Report is to:

- provide information regarding the status of the Province's "carbon neutral" framework; and
- describe the 2012 Carbon Neutral Strategy for the City of Surrey.

## BACKGROUND

In September 2007 the City of Surrey signed the BC Climate Action Charter (the "Charter"), voluntarily committing to become carbon neutral by 2012 with respect to corporate greenhouse gas (GHG) emissions. In addition to the "carbon neutral" component, the Charter commits the each signatory local government to measuring and reporting on their community's greenhouse gas emissions and to creating complete, compact, more energy-efficient communities.

Achieving carbon neutrality involves:

- measuring total GHG emissions from corporate operations;
- reducing these emissions where possible;
- "balancing" the remaining emissions through the purchase of carbon offsets and / or through investments in local GHG reduction projects; and
- reporting to the public on the actions that are taken.

Since signing the Climate Action Charter, the City of Surrey has taken several significant steps toward monitoring and reducing its corporate GHG emissions. These actions are outlined in detail in the City of Surrey Corporate Emissions Action Plan, which was adopted by Council in October 2010.

UBCM and the Province's Climate Action Secretariat have been working with local governments through the Green Communities Committee (GCC) on a number of issues related to the carbon

neutral framework. As well, through Metro Vancouver's Regional Engineers Advisory Committee (REAC) Climate Protection Sub-Committee, several concerns have been brought forward for resolution. In response, the Province has shown flexibility by introducing in 2011 an alternative "making progress" designation for communities that are investing in energy and emission-reduction projects but *not* meeting the carbon neutral test as detailed in the carbon neutral framework.

The GCC has developed guidance documents to assist local governments in achieving carbon neutrality. The draft *'Becoming Carbon Neutral Guidebook'* provides guidance on how to bring corporate emissions to zero. One means is to invest carbon offset funding in certain GCC pre-approved emission reduction initiatives in the community. The GCC has approved four types of projects as follows:

- Option 1A. The purchase of Low Emission Vehicles;
- Option 1B. Energy Efficient Building Retrofits and Fuel Switching;
- Option 1C. Solar Thermal (Hot Water) Retrofits; and
- Option 1D. Household Organic Waste Composting

## DISCUSSION

With a view to complying with the City's commitment to carbon neutrality under the Climate Action Charter, it is proposed for 2012 the City move forward under the "making progress" category as articulated above and invest funding that it would otherwise spend in buying carbon offsets in City-based GCC-approved projects that will reduce carbon emissions in Surrey. The following is a brief review of projects that will be pursued in 2012 and beyond:

### ***Organics Waste Collection***

The City of Surrey has collected yard trimmings for composting for many years. In October 2011 the City is introducing a City-wide residential household organics collection program. This program will reduce the amount of organic waste that is directed to the (Cache Creek) landfill. Landfills are not very efficient at decomposing organic matter and the natural digestion processes result in considerable methane (GHG) emissions. As such, a reduction of organic waste in a landfill means a reduction of methane (GHG) emissions from that facility. The residential organics collection program qualifies under Option 1D and fulfils all seven eligibility criteria. In addition the GCC allows for the City to count annual yard trimming collection increases over the 2006 baseline volume.

### ***District Energy System***

The City of Surrey is currently constructing a district energy (DE) system in City Centre. The system will employ a geothermal heat exchanger to heat and cool connected buildings and act to reduce emissions compared to buildings serviced by conventional heating and cooling infrastructure.

Phase 1 of the City Centre DE project will service the City Centre library, new City Hall, and a high-rise mixed use building. Future significant GHG reductions in comparison to the business as usual approach are expected as the DE network builds out.

### ***Electric Vehicle Infrastructure***

The GCC has indicated that it is open to changes in the Option 1A project profile with respect to counting emission reductions from EV charging infrastructure. This is consistent with the objectives of the current round of EV infrastructure-related funding from the Province. By providing electric vehicle charging stations, municipalities are enabling citizens to switch to electric vehicles. The amount of electricity consumed replaces an equivalent amount of fossil fuel combustion that would otherwise occur. There is no current standard methodology for converting the electricity utilization into emission reductions but this issue will be investigated further as the City proceeds with installing public EV charging stations.

### ***Green Homes Initiative***

The City of Surrey is currently developing a Community Energy and Emissions Plan (CEEP) that will provide a strategy for reducing community energy use and emissions and will include tactics such as retrofitting the existing building stock. Energy retrofits reduce energy usage in buildings and lower their utility costs allowing for the recovery of the initial investment over time. The initial investment can, however, be high and act as a barrier to widespread investment in retrofits among building owners.

A number of governmental organizations and municipalities have successfully identified this impediment and developed targeted policies and programs, which staff will be exploring as part of the CEEP. Currently the Province, BC Hydro and FortisBC are funding the Live Smart BC program that assists in addressing this problem by offering rebates for certain energy-efficiency upgrades. The Ministry of Energy and Mines is also working on a PAYS-BC (“Pay as you save”) program will enable homeowners to finance eligible retrofits on their utility bill. These ideas will be further explored in the CEEP and if appropriate, integrated into the City’s carbon neutral strategy in future years. Such mechanisms could come under Options 1B or 1C.

### ***Wetlands Conservation***

Given recent developments surrounding wetland conservation and restoration and carbon sequestration protocols, the GCC may develop a related Option 1 project profile. Such projects could result in a considerable number of emission reduction credits. It would be beneficial for the City to identify suitable sites for such an undertaking; the Biodiversity Conservation Strategy that is currently under development will identify wetland sites in this regard. Staff will further explore this option once the biodiversity inventory process is completed and the GCC has clarified its approach.

### **CARIP Funding**

The funds the City currently receives from the Climate Action Rebate Incentive Program (CARIP) related to carbon tax paid by the City in relation to its operations are being kept aside to address carbon reduction initiatives in the future. A further report will be provided to Council in this regard in due course.

## **SUSTAINABILITY CONSIDERATIONS**

The actions contained in this report support Action EN11 of the Sustainability Charter: *Surrey’s Commitment to the Climate Action Plan*, and is consistent with the Sustainability Charter’s vision of reducing the use of fossil fuels and achieving carbon neutrality in relation to the City’s corporate operations and as a community.

## CONCLUSION

In September 2007 the City of Surrey signed the BC Climate Action Charter (the “Charter”), voluntarily committing to become carbon neutral by 2012 with respect to corporate greenhouse gas (GHG) emissions. In addition to the “carbon neutral” component, the Charter commits the each signatory local government to measuring and reporting on their community’s greenhouse gas emissions and to creating complete, compact, more energy-efficient communities. This report outlines the actions that are proposed for the City of Surrey for 2012 in relation to the City’s commitments under the Charter.



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