

NO: R186

COUNCIL DATE: September 13, 2010

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **September 13, 2010**

FROM: **Sustainability Manager
Deputy City Manager**

FILE: **0512-02**

SUBJECT **Sustainability Charter Actions Update**

RECOMMENDATION

The City Manager's Department recommends that Council receive this report as information.

INTENT

The purpose of this report is to advise Council of sustainability initiatives completed to date in 2010.

BACKGROUND

On March 22, 2010, Council received Corporate Report No. R046, which outlined 2009 accomplishments in the sustainability work plan and key elements of the 2010 work program, particularly the corporate energy and emissions plan, the sustainability indicators and targets dashboard, and the work related to community energy and emissions.

On June 21, 2010, Council received Corporate Report No. R139, which provided an update on the work of the Sustainability Indicators and Targets Task Force and included a draft list of proposed sustainability indicators.

DISCUSSION

With the 2010 sustainability work plan in progress, key deliverables from across the City at the mid-way point are presented in this report as information.

Critical facilities upgrades completed

The Civic Facilities Division working with the Parks, Recreation and Culture Department has completed a number of key facilities upgrades to reduce electricity and natural gas usage at City facilities and lower greenhouse gas emissions.

At the Newton Wave Pool a project is being completed that will reduce energy consumption and improve indoor air quality. This project that will have a total cost of over \$1 million includes:

- A new dehumidification system;
- Mechanical system replacement and upgrades;
- Two new high efficiency boilers; and
- Installation of a UV filtration system.

The results of these efforts at Newton Wave Pool will be:

- A 53% reduction in energy consumption at the facility;
- \$175,000 annual savings in energy costs;
- A 600 tonne annual reduction in CO₂ emissions, the equivalent of taking 120 cars off the road; and
- Improved indoor air quality.

Similar upgrades were completed at the South Surrey Indoor Pool with similar results.

Alternative vehicle technologies piloted

The Engineering Department has established a pilot program to review the viability of various new technologies as alternatives to gas and diesel run vehicles.

The new technologies include:

- a) Compressed Natural Gas (CNG) Garbage Truck: In partnership with Terasen Gas, the City has acquired a CNG garbage truck that will be delivered in early 2011. This vehicle will be assigned to the City's Pilot Organics Collection Program.
- b) Hydrogen Fuel Cell Vehicles (HFCV): The City has leased two Ford Focus hydrogen fuel cell vehicles in partnership with the Vancouver Fuel Cell Vehicle Program and the Canadian Hydrogen and Fuel Cell Association (CHFCA). The vehicles are being utilized by Engineering Inspections and Realty staff under various conditions. At this time, the Engineering Department is working with the CHFCA to relocate a hydrogen fuelling station unit to the Central Works Yard. In the interim, these vehicles are being fuelled at the PowerTech facility located on 88 Avenue at 123 Street.
- c) 100% Electric Vehicles (EV): Under two separate partnerships, the first with PowerTech and the second with Rapid Engine Vehicles (REV), the City will be acquiring a number of EV's. This initiative is being supported in part by funding from the Innovative Clean Energy (ICE) Fund. A decision by the BC government with respect to the amount of funding that will be available for this initiative is pending. The pilot will allow staff to assess issues such as the vehicle's range under various loads, applications and weather conditions, reliability, maintenance costs, and fuel offset costs.

The new vehicle technology pilot program will be expanded as new vehicle technologies expand and evolve.

The data gathered for each of the above technologies will be compared to both the City's existing gas/diesel run vehicles as well as the City's current alternative fuel vehicles, which include CNG

small utility and passenger vehicles, gas/electric hybrid cars and SUV's and biodiesel tandems and "right-sized" gas vehicles. Ultimately, the data gathered from the pilot program will allow staff to establish the optimum use ("best fit") for each of the vehicle technologies being tested.

Sustainability integrated at major City events

The Special Events Section of the Parks Division in conjunction with the Sustainability Office has introduced a number of initiatives to better integrate sustainability practices into City of Surrey events such as Fusion Festival and Canada Day. Recycling and composting stations have been implemented at these events, building on the success of these practices at the 2010 Olympic Celebration Site. At each of the Canada Day and Fusion Festival waste sorting stations were overseen by summer students who helped people sort their waste properly. This assisted in reducing contamination of the waste stream making it easier to dispose properly.

The City partnered with Surrey Urban Mission staff and residents to sort and collect refundable bottles and cans on these event sites. Mission staff commented that their residents had a sense of belonging to the community as a result of this partnership effort and appreciate the opportunity to be involved in this way.

The City has hosted a "green" sustainability zone at each of these events with participation from environment groups, BC Hydro and other organizations. The "community way" component of this zone focused on social sustainability issues such as housing, food (through a farmer's market) and multiculturalism.

Community Greenhouse Gas emissions work

A number of projects have been completed in 2010 with respect to community energy and emissions.

In May 2010, the Official Community Plan was amended to include a target for City-wide greenhouse gas emission (GHG) reductions. The targets adopted by the City were to reduce GHG emissions by 33% per capita by 2020 (from 2007 levels) and by 80% by 2050.

The City, in partnership with BC Hydro, hired a Community Energy Manager. The Community Energy Manager will focus on community energy and emissions issues, including district energy opportunities and the promotion of Power Smart energy conservation programs to residents and businesses.

The City partnered with the BC Sustainable Energy Association to deliver a total of 33 "Climate Change Showdown" workshops to 10 Surrey elementary schools. The Showdown game encourages team work as students collaboratively move around the game board, learning about positive and negative environmental consequences that result from individual and societal actions and behaviours. A presentation was made to each of the winning Surrey class and the overall individual winner of the game at the July 2010 Council meeting.

The Climate Smart training program for local Surrey businesses has been undertaken. This program was partially funded by the City and Metro Vancouver and co-hosted with the Surrey Board of Trade (SBOT). The workshops took participating organizations through the process of creating a GHG emissions inventory and developing reduction strategies with a focus on cost

savings, operational efficiency, and brand lift. A total of 13 Surrey-based businesses participated and are demonstrating leadership in relation to reducing energy usage and greenhouse gas emissions in their operations and our community. These businesses include:

- Surrey Board of Trade
- Friction Fit Insulation Inc.
- Tri-Arrow Industrial Recovery Inc.
- Russell Brewing Co.
- PDQ Post Group Inc.
- Cobra Electric
- Hazelmere Organic Farm
- Blackwood Partners Management Corporation
- Blue Pine Enterprises Ltd
- Emterra Environmental
- 99 Truck Parts & Industrial Equipment Ltd
- Corporate Images
- Surrey Arts Centre Theatre

A recognition event in support of these businesses is planned as part of the SBOT Environmental Awards luncheon being held on September 16, 2010. More details about the participants' energy and cost savings will be reported in the next Sustainability report to Council.

Paperless pay advices now implemented

Effective August 13 2010, a critical step was taken towards the greening of City Hall with the implementation of paperless employee pay advices (stubs). Pay advices (stubs) are now delivered on-line to employees. This initiative was a joint project between the Finance and IT Department, HR Department, Surrey Public Library, and Surrey Fire Department.

By going on-line, the City is saving energy, greenhouse gas emissions and costs linked to printing, folding, stuffing and distributing the pay advices. Additional reductions in emissions and cost savings are achieved from reductions in printer and toner use. The goal is to reduce the greenhouse gas emissions and the environmental "footprint" of the City.

As a result of this initiative, the City will save approximately 42,000 sheets or 0.22 tons of paper per year. This is equivalent to saving 4 trees and 1,132 lbs of CO₂. It also avoids 372 lbs of solid waste and over 4,000 gallons of wastewater (*Source: Environmental Defence Fund, papercalculator.org*).

Other Projects

Building on the emissions inventory completed in 2009, a **Corporate Energy and Emissions Action Plan** is being finalized for consideration by Council in October 2010.

The **sustainability indicators and targets** project will be forwarded to Council for consideration in November. This project will lead to a sustainability "dashboard" on the City

website early in 2011. The City's annual report on sustainability progress will be forwarded to Council in early 2011.

Through the Sustainability Office, staff will continue to pursue sustainability initiatives that further the goals of the City's Sustainability Charter. Implementation of the Sustainability Charter will advance the City towards its 2058 sustainability vision. The development of indicators and targets in particular, will set a critical baseline against which to monitor future progress.

CONCLUSION

Council has approved a Sustainability Charter that sets out a vision for sustainability in Surrey and acts as an overarching policy document for the City. Several Charter implementation deliverables have been completed in 2010 and others, including a corporate energy and emissions action plan and the creation of sustainability indicators and targets to monitor progress, are in the final stages of completion. This report provides an update on the sustainability initiatives currently underway in the City.

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