

NO: **R020**

COUNCIL DATE: **February 6, 2012**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **February 1, 2012**

FROM: **Manager, Sustainability**

FILE: **0512-02**

SUBJECT: **Climate Action Revenue Incentive Program (CARIP) Report**

RECOMMENDATION

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

INTENT

The purpose of this report is to provide an update on progress that has been made by the City toward meeting the climate action goals contained within the BC Climate Action Charter and to provide information about the Climate Action Revenue Incentive Program (CARIP) and a related application for a grant that is being submitted by the City this month for a rebate of carbon taxes paid by the City in 2011.

BACKGROUND

At the 2008 UBCM Convention, Premier Campbell announced the Climate Action Revenue Incentive Program (CARIP) that is focused on offsetting the carbon tax paid by local governments who have committed under the BC Climate Action Charter to the goal of becoming carbon neutral in their corporate operations by 2012. To be eligible for grant under the CARIP Program, local governments were required to:

- Sign on to the BC Climate Action Charter, and by doing so commit to the goal of becoming carbon neutral in their corporate operations by 2012; and
- Report publicly on their plans and progress toward meeting their climate action goals, using a defined template.

The City's Sustainability Charter that was approved by Council in 2008 includes under Action item EN11 a commitment by the City to develop strategies and take action to achieve the goals of the BC Climate Action Charter to which Surrey is an original signatory.

In 2010 Council approved a Corporate Emissions Action Plan which outlines priority actions for the City to reduce corporate GHG emissions and energy use and sets the target of a 20% reduction in GHG emissions by 2020. In 2010 Council also included community-wide greenhouse gas (GHG) reduction targets in the City's OCP, targeting a 33% per capita reduction in such emissions by 2020. In 2011, Council approved the preparation of a community energy and emissions plan

under the “EnergyShift” banner, which when completed will provide a more defined framework for achieving the community GHG reduction target.

DISCUSSION

A simple reporting template has been designed for local governments to use in fulfilling the reporting requirements for the CARIP Program, beginning in December 2010.

Staff has filled out the reporting template for 2011 and attached a copy as Appendix “A” to this report. The report outlines key actions that have been taken by the City to reduce GHG emissions in 2011. It also documents actions that the City intends to take in 2012 in each of the corporate and community spheres, respectively.

By completing the reporting template and making it public by way of this report, the City is fulfilling the annual CARIP Program grant requirements. An electronic version of this report will form part of the application that staff will submit to the Province for the purpose of obtaining a rebate of carbon taxes that the City paid on its corporate operations in 2011. It is estimated that the grant will amount to approximately \$400,000. This amount has been included as anticipated revenue in the 2012 Operating Budget as approved by Council.

SUSTAINABILITY CONSIDERATIONS

Implementation of the recommendations of the City’s Sustainability Charter will advance the City towards the 2058 sustainability vision as contained in the Charter. This public report on the City’s progress toward the goals contained in the BC Climate Action Charter in support of an application for a grant under the CARIP Program supports the objectives of the Sustainability Charter including Action item EN11, which commits the City to developing strategies and taking action to achieve the goals of the BC Climate Action Charter. The funds that are received as a result of the application will be targeted towards sustainability initiatives that are planned for 2012.

CONCLUSION

The Surrey Sustainability Charter sets out a vision of sustainability for the City of Surrey and acts as an overarching policy document for decision-making. The Corporate Emissions Actions Plan now being implemented includes key actions to reduce corporate GHG emissions and to minimize energy use in the City’s corporate operations. A community energy and emissions planning process is currently underway that will develop key strategies to reduce community GHG emissions and energy use. The attached report outlines the actions taken by the City in 2011 to achieve the commitments that it made in signing the BC Climate Action Charter and will form a fundamental part of the City’s application to the Province under the CARIP Program for a rebate of carbon taxes paid by the City in 2011.

Anna Mathewson
Manager, Sustainability

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Appendix “A”: CARIP Report 2011 – City of Surrey

APPENDIX A

CLIMATE ACTION REVENUE INCENTIVE PROGRAM (CARIP) PUBLIC REPORT

FOR REPORTING YEAR: 2011

GENERAL INFORMATION	
Name of Local Government	<i>City of Surrey</i>
Member of Regional District (RD)	<i>Metro Vancouver</i>
Regional Growth Strategy (RGS) in region	<i>Yes</i>
Population	<i>478,000</i>
Report Submitted by	
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**COMMUNITY WIDE ACTIONS
REPORTING YEAR: 2011**

1.1 MEASURE		
Community Wide Measurement Actions	ANSWER	ADDITIONAL INFORMATION
Have you been using the <i>Community Energy and Emissions Inventory</i> (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?	Yes	<i>CEEMap Tool</i>
1.2 PLAN		
Community Wide Targets	ANSWER	ADDITIONAL INFORMATION
Do your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act</i> (LGA)? If yes, please identify the targets set. If no or in progress, please comment.	Yes	<i>33% per capita reduction below 2007 levels by 2020; 80% per capita reduction by 2050; excluding agriculture and industry</i>
1.3 REDUCE		
Supportive Community-Wide Actions <i>Supportive actions refer to activities that provide a framework or foundation for direct actions to be implemented.</i>	Actions Taken in 2011	Proposed Actions for 2012
<i>Broad Planning</i> (e.g. creation/revision of OCPs, CEPs, transportation plans)	<ul style="list-style-type: none"> * <i>Initiation of the Community Energy and Emissions Plan (CEEP), using detailed modelling based on alternate policy pathways and input from public and stakeholders</i> * <i>Development of a new OCP with integration of energy and emissions policy</i> 	<ul style="list-style-type: none"> * <i>Completion and adoption of the CEEP and initiation of implementation</i> * <i>Completion and adoption of the new OCP</i>
<i>Building and Lighting</i> (e.g. developed green building policy, increased density in the downtown)	<ul style="list-style-type: none"> * <i>Approval of the Sustainable Development Checklist</i> * <i>Continued planning for developments in City Centre that will increase densities and support rapid transit and a district energy system</i> 	<ul style="list-style-type: none"> * <i>Will establish appropriate policies as directed by the CEEP and OCP</i>
<i>Energy Generation</i> (e.g. signed on to provincial 'solar ready' regulation, explored options for bio-heating for buildings)	<ul style="list-style-type: none"> * <i>Approval of a city-owned District Energy Utility</i> 	<ul style="list-style-type: none"> * <i>Continued work to connect new developments in City Centre to the DE network</i>
<i>Green Space</i> (e.g. developed urban forestry policy, adopted park acquisition policy)	<ul style="list-style-type: none"> * <i>Completion of the Tree Canopy Study to better understand trends and projections for tree cover in Surrey</i> * <i>Completion of the Ecosystem Management Study</i> 	<ul style="list-style-type: none"> * <i>Development of a Biodiversity Conservation Strategy</i>

<p><i>Transportation</i> (e.g. developed sustainable transportation plan, completed bicycle master plan)</p>	<ul style="list-style-type: none"> * Adoption of the Surrey Walking Plan to improve active transportation options in Surrey * Initiation of the Rapid Transit Study in partnership with TransLink 	<ul style="list-style-type: none"> * Adoption of the Greenways plan * Adoption of Cycling Plan
<p><i>Waste</i> (e.g. introduced composting and recycling education programs)</p>	<ul style="list-style-type: none"> * Approval and contract awarded for City-wide organics collection program * Endorsement of FCM's National Zero Waste Marketing Council, advocating for cradle-to-cradle product and packaging design * Implementation of the 2011 Waste Reduction Challenge * Public education on reduction of junk mail through the 2012 Waste Collection Calendar, with the provision of "no admail" sticker *Approval of the Illegal Dumping Abatement Strategy 	<ul style="list-style-type: none"> *Release of "My-Waste" app for smart phones to help residents access information about waste collection services and schedules for their area *Continued implementation of the Waste Reduction Challenge and other educational programs
<p><i>Water/Sewer</i> (e.g. participated in water smart initiatives, implemented Water Action Plan, introduced rebates on low flush toilets)</p>	<ul style="list-style-type: none"> * Continued development of Integrated Storm water Management Plans for all watersheds in Surrey. Goal to complete all of Surrey by 2014 	<ul style="list-style-type: none"> * Continued development of Integrated Storm water Management Plans for all watersheds in Surrey. Goal to complete all of Surrey by 2014
<p><i>Other Actions</i></p>	<ul style="list-style-type: none"> * New Sustainability Planning Technician position within the Sustainability Office *Development and launch of an EnergyShift portal on the City's website, dedicated to all the work the City is doing on energy and emission reductions, and clean energy * Co-funded (with Metro Vancouver) 10 Surrey businesses for the second cohort of the Climate Smart training program; businesses learn to inventory their emissions and develop strategies to reduce them * Development of a web-based "dashboard" to publicly track the progress of our sustainability indicators, including those on climate and energy * Funded High School Climate Challenge workshops in Surrey high schools, via the Clean Air Champions organization. The program worked with student leaders in 5 schools who took on initiatives related to water, waste, transportation and energy use 	<ul style="list-style-type: none"> * Continue to support the Climate Smart training program for Surrey businesses * Launch of the Sustainability Dashboard, to public track our progress on sustainability, including on energy and emissions *Continue to support the High School Climate Challenge

Community-Wide Direct Actions <i>Direct actions</i> refer to activities that can be directly implemented by local government.	Actions Taken in 2011	Proposed Actions for 2012
<i>Buildings</i> (e.g. implement use of sustainability checklists and development permit guidelines for new buildings)	* Implemented first phase of the Sustainable Development Checklist for Land Use Development Applications	* Implement stage 2 of the Sustainable Development Checklist for Building Permit Applications
<i>Energy Generation</i> (e.g. implement district energy, geothermal, solar)	* Creation of the City-owned district energy utility * Initiation of the New City Hall development, which will utilize geothermal and provide base load for the district energy system in City Centre.	* Continue working with Solar BC to implement initiatives related to the Solar Communities program
<i>Transportation</i> (e.g. implement bike lanes, pedestrian paths, upgrade transit service and infrastructure, improve roads, parking fees etc.)	*Continued installation of new transit shelters *Continued implementation of bike route network at planned rate of approximately 24 km of on-street and 8km/year of pathways/year	*Continued installation of new transit shelters *Continued implementation of bike route network at planned rate of approximately 24 km of on-street and 8km/year of pathways/year
<i>Waste</i> (e.g. introduce composting and recycling programs)	* Organics collection pilot project undertaken and found to be successful	* Implementation of the City-wide organics collection program
<i>Water/Sewer</i> (e.g. implement water conservation and reduction initiatives)	* Continued implementation of the City's water metering program, including voluntary meters for community residents and mandatory meters on new buildings. * Continuation of "Operation Save H2O", which raises awareness of high water usage and impacts, and expanded the program to include multi-family residential properties. * Continued implementation of water sprinkling restriction over summer months.	* Continued implementation of the City's water metering program, including voluntary meters for community residents and mandatory meters on new buildings. * Continuation of "Operation Save H2O", which raises awareness of high water usage and impacts. Expand the program to include industrial, commercial and institutional properties.
<i>Green Space</i> (e.g. plant trees, conserve forest etc.)	* Ongoing tree planting including through Green Streets Program.	* Ongoing tree planting including through Green Streets Program.
<i>Other Actions</i>	* Funded 27 Climate Change Showdown workshops in classes from Grades 4-7 through the BC Sustainable Energy Association (BCSEA). Program reached 671 students and reduced 436 tonnes of GHGs.	*Continue to fund BCSEA's Climate Change Showdown program in Surrey's schools
1.4 COMMUNITY-WIDE INNOVATION		
Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments?	Answer *Development of our District Energy Utility and planned district energy network: http://www.surrey.ca/plans-strategies/3475.aspx	

2.1 MEASURE		
Corporate Measurement Actions	Answer	
What steps has your local government taken toward completing its corporate emissions inventory (e.g. corporate assets gathered related to energy and fuel data and calculated GHG emissions from energy use)?	<i>The City of Surrey established a corporate energy and emissions inventory in 2009, including data from the years 2005 through 2009. For this, the City worked with the Pembina Institute and used their "Cool Tool" Excel-based inventory tool. The Surrey corporate energy and emissions inventory was updated in 2010, and will soon be completed for 2011. The focus of the inventory is on Buildings and Fleet, and the data is input based on the "traditional service areas" identified by the Province.</i>	
What tool are you using to measure, track and report on your corporate emissions (e.g. SMARTtool, other tools including excel spreadsheets)?	<i>The City is currently using the Pembina Institute's CoolTool, and is working on integrating carbon accounting and reporting capabilities into a new financial accounting system that is being developed for the City</i>	
2.2 REDUCE		
Supportive Corporate Actions	Actions Taken in 2011	Proposed Actions for 2012
<i>Supportive actions refer to activities that provide a framework or foundation for direct actions to be implemented.</i>		
<i>Broad Planning (e.g. developed corporate climate action plan)</i>	<i>* The City of Surrey is working on implementing its Corporate Emissions Action Plan that has set a corporate target of a 20% emissions reduction by 2020 from a baseline level averaged from 2005-2009.</i>	<i>* Continue to implement the Corporate Emissions Action Plan and track progress on emission reductions over time</i>
<i>Building and Lighting (e.g. developed energy reduction plan for all corporate buildings)</i>	<i>*The Surrey Animal Care facility, designed in 2011, targets LEED certification and includes a geothermal heating and cooling system. * The City worked closely with BC Hydro to get grants for the following projects: energy study for New City Hall project design; energy study for City Centre Library design; lighting upgrades at various facilities * Research undertaken on a policy to support electric car ready residential buildings</i>	<i>* The Facilities Division is currently entering into a contract with a vendor to complete an energy audit of all City facilities including all high energy use facilities. Audits will be done in conjunction with full building condition audits so there is significant savings on the predicted audit costs. * Design of 2 high energy performance aquatic complexes and additions to several recreation centres are scheduled in 2012.</i>
<i>Energy Generation (e.g. undertook feasibility study of green energy generation for civic buildings)</i>	<i>* Completed studies have explored the feasibility of distributed electrical generation, district energy, micro-hydro and pico-hydro, heat recovery from sanitary sewer</i>	<i>* Continue to undertake studies on viable energy alternatives for Surrey, and develop plans to integrate the positive outcomes from this research</i>

<p><i>Transportation (e.g. created anti-idling policy for city vehicles, bike to work week promotion)</i></p>	<p><i>* Implemented the employee commute survey to better understand staff travel patterns and develop programs to support sustainable commuting</i> <i>* Development of a clean energy systems modeling tool in partnership with SFU's School of Mechatronics. The tool will better assess the benefit of low carbon alternatives to gas and diesel municipal fleet vehicles from a triple bottom-line perspective.</i></p>	<p><i>* Continue to undertake employee commute surveys to track changes in travel patterns and support the development of programs</i> <i>* Planning for a staff carpool program that will utilize the City's fleet of electric and other green vehicles will move forward in 2012.</i></p>
<p><i>Waste (e.g. completed waste audit of City Hall)</i></p>		
<p><i>Water/Sewer (e.g. completed study of sewer and water energy use)</i></p>		
<p><i>Other Actions</i></p>		<p><i>* Draft Sustainable Purchasing plan to be further developed in 2012</i> <i>* Continue the Workplace Conservation Awareness Program. Next program phases include the development of toolkits and communications, as well as the implementation of events and initiatives to reduce energy consumption. Energy use metrics will be compared to previous year.</i></p>

Direct Corporate Actions <i>Direct actions refer to activities that can be directly implemented by local government.</i>	Actions Taken in 2011	Proposed Actions for 2012
<p><i>Building and Lighting</i> (e.g. energy efficiency retrofits to municipal buildings)</p>	<p><i>* New City facilities built to high energy standards, including LEED Silver Certified City Centre Library and Fire Hall #14 with energy efficiency features</i></p> <p><i>* Design of a geo-exchange system to provide heating to the New Library, and heating and cooling to the New City Hall and an additional 400,000 square feet of private development.</i></p> <p><i>*Energy audits and retrofits undertaken in a number of City facilities, including boiler and chiller replacements in RCMP headquarters and chiller replacements in City Hall. A heat recovery system was installed between the pool and arena in the Surrey Sports and Leisure Complex (SSLC), to recover heat from exhaust air from the pool area as well as heat from the ice plants from the arenas and re-use the heat for the pool systems (hot water and HVAC systems). This will reduce gas consumption.</i></p> <p><i>* Also at SSLC, two very large boilers (at 75% efficiency) were replaced with a system of four small boilers (96% efficiency) that are managed on a demand basis and result in a much more efficiency use of energy.</i></p> <p><i>*The City installed a Pulse Energy monitoring system for electricity and gas metering at Surrey Sports & Leisure Complex. The system established some baseline data prior to the construction of the heat recovery systems. After completion of commissioning the new mechanical systems in late 2011, the City will be able to monitor changes in energy consumption in detail to measure the impact of the upgrades and heat recovery.</i></p> <p><i>* Green wall demonstration project on Semiahmoo Library</i></p> <p><i>* The City has installed 320 traffic signals equipped with LED signal heads since 2002. Engineering Department has conducted studies on the cost/benefit of implementing LED street lighting and</i></p>	<p><i>* Construction of a geo-exchange system to provide heating to the New Library, and heating and cooling to the New City Hall and an additional 400,000 square feet of private development.</i></p> <p><i>* Continue to build high energy performance buildings, including the Animal Care Facility and the New City Hall</i></p> <p><i>* Encouraging the development of energy monitoring solutions by the vendor of our existing DDC control systems. The current systems have the capability to monitor energy use without more capital investment. The software development for collection of the data and reporting is under way but not complete.</i></p> <p><i>* Recommendation on the installation of new LED streetlight poles based on final testing of brands. Will be doing pilot projects with new LED streetlight poles and proceeding with retrofits where it is financially viable. Developers will be required to install new LED lights in NCP Grandview Heights #2.</i></p> <p><i>* 2 new user-controlled lighting systems for athletic parks planned for 2012</i></p>

	<p><i>adaptive LED roadway lighting in place of high pressure sodium (HPS) cobra heads. Currently testing different LED streetlight brands; currently down to final four brands.</i></p> <p><i>* 4 new user-controlled lighting systems installed in 2011: two systems at Tamanawis Park, one at North Surrey Community Park and one at Newton Athletic Park.</i></p>	
<p><i>Energy Generation</i> (e.g. implemented heat recovery systems, solar)</p>	<p><i>* Completion of the City's first Solar Water Heating System on Fire Hall #14</i></p> <p><i>* Completion of LEED Silver Certified City Centre Library, planned to connect to district energy system</i></p>	<p><i>* Continued work on a number of projects in 2012 that are scheduled to be online in 2013 or 2014, including the bio-fuel production plant and the geo-exchange district energy system for the new City Hall.</i></p>
<p><i>Fleet</i> (e.g. anti-idling policies for fleet vehicles, purchasing of hybrid)</p>	<p><i>* E3 Fleet Gold Rating Award for Vehicle Fleet Management practices</i></p> <p><i>* Procurement of the City's first 100% OEM (Original Equipment Manufacturing) electric vehicle, and the first 100% electric vehicle conversion. The City also acquired 4 hydrogen fuel trucks, and 3 zero-emission hydrogen fuel-cell passenger vehicles. A Compressed Natural Gas (CNG) refuse collection vehicle was procured for the curb side organics collection pilot.</i></p> <p><i>* 2 fully operational hydrogen fuelling stations established in City including one at City Works Yard</i></p> <p><i>* The City's first publically accessible Electric Vehicle (EV) charging station at City Hall.</i></p>	<p><i>* Exploration of different idling reduction technologies</i></p> <p><i>* Full fleet of Compressed Natural Gas waste collection trucks with implementation of organics collection initiative in 2012</i></p> <p><i>* Continue to move forward with alternative fuel vehicle procurement, with the aim of acquiring up to 5 new 100% electric vehicles.</i></p>
<p><i>Waste</i> (e.g. introduction of composting and recycling programs and education)</p>	<p><i>* The City is continuing to expand the availability of composting receptacles for staff</i></p> <p><i>*Pilot project underway to remove full sized garbage bins from staff offices and replace with small garbage receptacles set within larger recycling bins</i></p>	
<p><i>Water/Sewer</i> (e.g. initiated water conservation and reduction initiatives)</p>	<p><i>* One new artificial turf field at Tamanawis Park reduces water use for irrigation</i></p>	<p><i>* One new artificial turf field planned for 2012.</i></p>
<p><i>Green Space</i> (e.g. planting of trees)</p>		
<p><i>Other Actions</i></p>		

2.3 CORPORATE INNOVATION

Answer

Is there any activity that you have been engaged in over the past year that you are particularly proud of and would like to share with other local governments?

**Creating the foundation for a vibrant downtown, as well as our district energy system through the newly opened LEED certified City Centre Library and the New City Hall, currently under construction*

**Continued investment in alternative fleet vehicles, and contract for full fleet of CNG waste collection trucks in 2012*