

NO: R130

COUNCIL DATE: **July 21, 2014**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **July 16, 2014**

FROM: **Manager, Sustainability**

FILE: **1855-04**

SUBJECT **Climate Action Revenue Incentive Program (CARIP) Final 2013 Reporting Requirements and 2013 Corporate Greenhouse Gas Emissions Inventory**

RECOMMENDATION

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

INTENT

The purpose of this report is to:

- Fulfil the annual CARIP grant requirement to report publicly on the City's plan and progress toward the City's climate action goals; and
- Provide information on the City's 2013 corporate greenhouse gas (GHG) emissions inventory.

BACKGROUND

At the 2008 UBCM Convention, Premier Gordon Campbell announced the Climate Action Revenue Incentive Program (CARIP) that would act to offset the carbon tax paid by local governments who have committed to the goal of becoming carbon neutral in their corporate operations under the BC Climate Action Charter. To be eligible for the CARIP conditional grant, local governments are required to:

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

The Carbon Neutral Local Government framework developed by the provincial government establishes a common approach for local governments to become carbon neutral in four steps: measure emissions, reduce emissions, offset or "balance" those emissions through investments in local GHG reduction projects, and report to the public on actions taken.

At its Regular meeting on October 14, 2010 Council considered Corporate Report No. R214; 2010 titled "City of Surrey Corporate GHG Emissions Action Plan", and approved the City's Corporate

Emissions Action Plan (CEAP). The CEAP includes a target to reduce corporate GHG emissions by 20% by 2020 and 13 actions to reduce emissions in the areas of buildings, fleet and infrastructure and with respect to leadership and public engagement. Since 2010, the City has taken significant steps toward monitoring and reducing corporate emissions; a summary of the status of CEAP implementation is attached as Appendix I. To support the emissions reduction work, the City completes an annual inventory of corporate fuel use and emissions related to fleet and building operations.

At the Council meeting of September 10, 2012, Council considered Corporate Report No. 187; 2012 that described the carbon neutral strategy for the City, namely that the City will “make progress” towards corporate carbon neutrality and invest funding that it would otherwise spend in buying carbon offsets in City-based projects that will reduce carbon emissions in Surrey. The City then completed its 2012 CARIP reporting year requirements.

At the Council meeting of February 24, 2014, Council considered Corporate Report No. R023; 2014, and received the City’s 2013 Interim CARIP Public Reporting Template. Interim CARIP Public Reports for 2013 were accepted by the Province in cases where the local government needed more time to conduct their corporate GHG inventories and complete the Carbon Neutral Progress section of the Template. In early June, the final reporting deadline was further extended by the Province to July 31, 2014 to allow additional time for Metro Vancouver-area local governments to finalize carbon offset calculations from the Vancouver Landfill gas capture project.

Data collection to finalize the Carbon Neutral Progress section of the CARIP Public Reporting Template has now been completed and staff have prepared the City of Surrey’s Final CARIP Public Reporting Template for 2013, which is attached as Appendix II. The Reporting Template outlines key actions undertaken by the City in 2013 to reduce GHG emissions and actions that are planned for 2014, both in the corporate and community spheres. A summary of the 2013 corporate GHG emissions inventory is also presented below.

DISCUSSION

Corporate Greenhouse Gas Emissions Inventory 2013

The City produces an annual inventory of corporate fuel usage and resulting GHG emissions. Following provincial guidelines, fuel use is divided into six Service Areas:

- Fire Protection;
- Solid Waste Collection, Transportation and Diversion;
- Arts, Recreation, Parks and Cultural Services;
- Road and Traffic Operations;
- Drinking, Storm and Waste Water; and
- Administration and Governance.

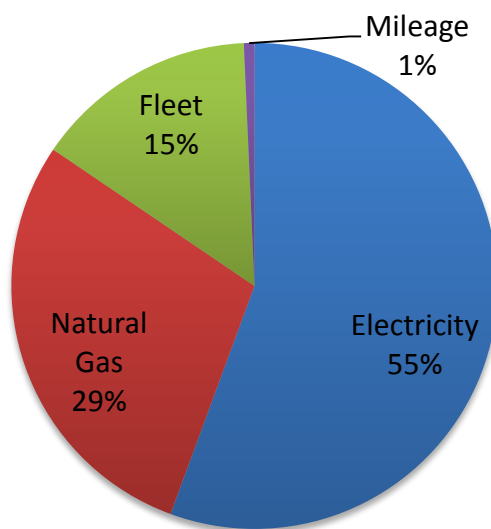
An Excel tool (called the “Cool Tool”) from the Pembina Institute has been used since 2009 for tracking purposes¹. The City’s emissions inventory, which is summarized in the Final CARIP

¹ In 2014, corporate fuel use and the GHG emissions inventory will also be tracked in the City’s new Financial Management System.

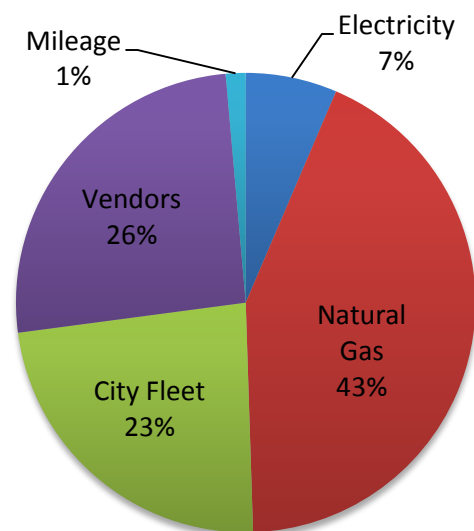
Public Reporting Template, includes GHG emissions from vendors who are contracted to provide traditional services to the City, such as waste collection and streetlight maintenance.

Figure 1 shows a breakdown of 2013 City energy use by source, with 55% of energy use from electricity, 29% from natural gas, 15% from fleet fuels such as gasoline, and 1% from employee mileage for business travel. In 2013, corporate GHG emissions were 15,635 t CO₂e (tonnes of carbon dioxide equivalent). As shown in Figure 2, 43% of these emissions are from natural gas used to heat City buildings, 7% are from electricity, 24% are from City fleet vehicles and mileage claimed for staff travel, and 26% are from the fuel used by the City's vendors.

**Figure 1: City of Surrey 2013
Energy Use by Source**



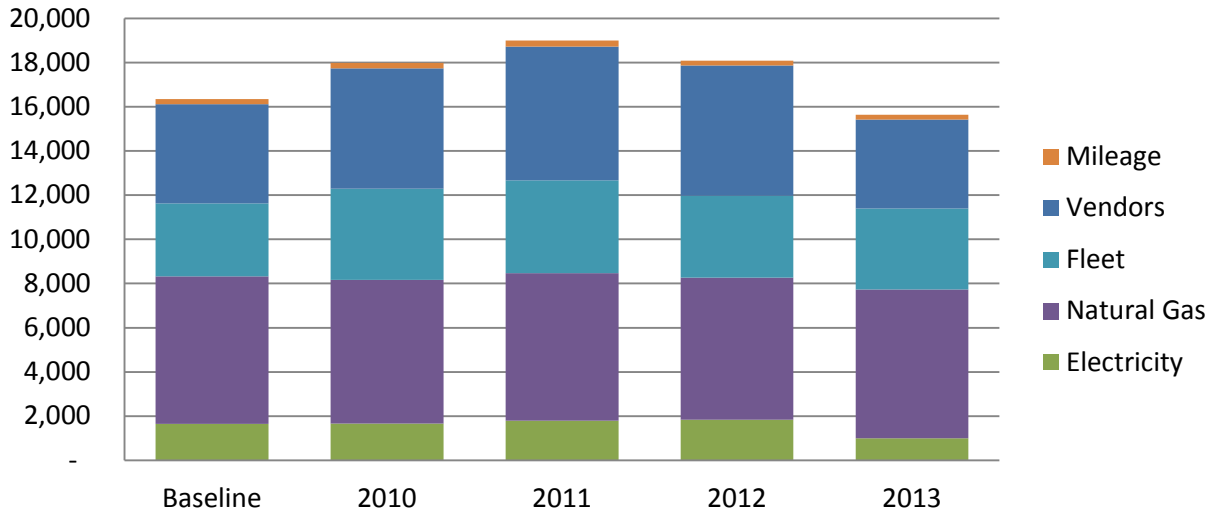
**Figure 2: City of Surrey 2013
GHG Emissions by Source**



Total emissions in 2013 decreased by 4% from the baseline (2005-2009 average) of 16,347 t CO₂e to 15,635 t CO₂e in 2013 (see Figure 3). The City's year-over-year achievement was also notable, with a 14% reduction from 18,081 t of CO₂e in 2012². The greatest contribution to the City's decreasing carbon footprint was from the City's fleet of new compressed natural gas (CNG) waste collection trucks, which led to a 32% reduction in vendor emissions when compared to 2012. The City's fleet vehicles saw a modest decrease of 1% from 2012 to 2013, and emissions from mileage claims increased by 2% over 2012. GHG emissions from electricity decreased by 45% from 2012 due to the decreasing carbon intensity of BC Hydro's grid, while natural gas increased slightly by 5%.

² The GHG emissions totals have been revised from Corporate Report No. R103; 2012 as it was determined that the diesel fuel use from the City's contracted fleet of waste collection trucks was under-reported up to and including 2012. This data was revised for prior years in order to allow for greater accuracy and better comparison between years. With these data corrections, the baseline – which is an average of the years 2005 through 2009 – was modified to 16,347 t CO₂e.

Figure 3: GHG Emissions Trend



Final CARIP Reporting Template 2013

The City of Surrey's Final CARIP Public Reporting Template for 2013 is completed and attached for information as Appendix II; it outlines key actions undertaken by the City to reduce GHG emissions in 2013 and intended actions for 2014, both in the corporate and community spheres. Among the outcomes from 2013 are the following:

At a community level:

- Council approval of the Community Climate Action Strategy, which includes a Climate Adaptation Strategy to plan for the expected impacts of climate change and a Community Energy and Emissions Plan to address greenhouse gas and energy reductions;
- Plans proceeded for the new biofuel facility that will process Surrey's organic waste into compressed natural gas;
- The King George node District Energy Feasibility study was completed;
- The Surrey Rapid Transit Study, led by TransLink and the Government of BC in partnership with the City of Surrey, the City of Langley, and Metro Vancouver, was completed in March 2013;
- The City continued to support sustainable transportation for schools through the Safe and Active Schools Program, the School Travel Planning program, and new "bike to school" training;
- Council approved in principle a draft energy efficiency density bonusing policy for the West Clayton Stage 1 Neighbourhood Concept Plan;
- A DC Fast Charge electric vehicle charging station was installed at Surrey Museum; and
- Modo car share vehicles were made available to the public at City Centre (City Hall) and Gateway Skytrain Station.

At a corporate level:

- Staff supported the development of sustainable transportation modes to get to work at the new City Hall. Incentives include personalized commute planning, preferred carpool parking, end-of-trip facilities for cyclists, car sharing program with Modo Car Co-op, transit rebates on monthly passes, and introduction of pay parking at New City Hall;
- Implementation continued for the Corporate Emissions Action Plan;
- The City continued to participate in BC Hydro's Workplace Conservation Awareness program to reduce electricity consumption in Surrey's indoor pools and libraries;
- The City continued to partner with SFU's School of Mechatronics to refine a lifecycle assessment tool that compares the economic and environmental costs and benefits of conventional and alternative fuel vehicles;
- Continued energy retrofits were undertaken in civic facilities, including boiler and lighting upgrades;
- The Building Division's mobile inspector program was launched, helping building inspectors do more work from the road, plan efficient trips, and reduce the number and length of trips made; and
- Organics bins were distributed to key City facilities in 2013.

The Final CARIP Public Reporting Template includes the 2013 corporate emissions total, along with a section on Carbon Neutral Progress Reporting. In this section, a calculation is made of allowable GHG reductions being claimed for 2013 against the carbon footprint. In this case, the City is receiving allowable GHG reductions based on the City's portion of carbon credits from the Vancouver Landfill (VLF) Gas Capture Upgrade project and the City's collection of yard waste. These calculations indicate that the City's 2013 footprint of 15,635 tonnes CO₂e is reduced by 13,214 tonnes, leaving an emissions balance of only 2,420 tonnes for the 2013 reporting year.

Using the available "making progress towards carbon neutrality" designation, Council has previously opted not to purchase carbon offsets to bring the carbon balance to zero, but instead instructed staff to continue to focus ongoing efforts and resources on reducing both corporate and community emissions. It is not recommended that the City purchase carbon offsets for the 2013 reporting year. For the 2014 reporting year, projects including the VLF gas capture, yard waste collection, and a newly-available avoided forest conversion protocol will bring the City very close to carbon neutrality.

By completing the Template and making it public through this Corporate Report, the City is fulfilling the annual CARIP grant requirement to report publicly on the City's plan for, and progress toward, the City's climate action goals. The Template is to be made public on or before July 31, 2014.

SUSTAINABILITY CONSIDERATIONS

The City continues to focus on sustainability initiatives that assist in achieving the goals of the City's Sustainability Charter. Implementation of the actions in the Sustainability Charter will advance the City towards the sustainability vision for the City. The Corporate Emissions Action Plan (CEAP), the Community Climate Action Strategy (particularly the Community Energy & Emissions Plan), and the commitments under BC's Climate Action Charter address the following actions that are identified in the Sustainability Charter:

- EC 8: Energy Security;
- EC 16: Increased Transit and Transportation to Support a Sustainable Economy;
- EN 1: Energy Efficiency;
- EN 2: Waste Reduction;
- EN 3: Vehicle Fleet Programs;
- EN 4: Employee Trip Reduction Program;
- EN 5: Green Procurement Policies and Practices;
- EN 9: Sustainable Land Use Planning and Development Practices;
- EN 10: Integrated Community Energy Master Plans; and
- EN11: Commitment to the Climate Change Action Plan.

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 attached Template outlines the actions taken by the City in 2013 to achieve the commitments that it made in signing the BC Climate Action Charter. Key projects to reduce the City's corporate carbon footprint included workplace energy conservation outreach and sustainable commuting programs. At a community-wide level, climate-related work included district energy implementation in City Centre, the completion of an innovative Community Climate Action Strategy, and completion of the Surrey Rapid Transit Study. The City's 2013 corporate carbon footprint of 15,635 t CO₂e less the allowable GHG emissions calculations under the Carbon Neutral Local Government framework leads to a carbon balance of 2,420t. In this way, the City continues to move towards its carbon neutrality goals. Providing this public report on the City's climate action progress supports the City's CARIP grant application and the related commitments under the Carbon Neutral framework.

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Sustainability Manager

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Appendix I: City of Surrey Corporate Emissions Action Plan – Progress on Implementation 2013
Appendix II: Final CARIP Public Report Template 2013 – City of Surrey

Appendix I: City of Surrey Corporate Emissions Action Plan – Progress on Implementation 2013

Corporate Emissions Action Plan Actions	CEAP Sub-Actions	General Description of 2013 Activities	2014 Priority Activities
1) Ensure high energy performance of new facilities (Facilities Division, Planning & Buildings Dept)	Continue its practice, for all new facilities and major expansions, of evaluating the capital cost requirements and operating energy and carbon savings from constructing to the most current energy standard in ASHRAE 90.1 (where applicable).	Design for Grandview Aquatic Centre and new City Hall are targeting LEED Gold. Designs for Guildford Pool and South Surrey Recreation Centre are shadowing LEED. The new works yard is being designed to LEED Silver.	Continue to design new facilities and major expansions for high energy and environmental performance when applicable. 2014 grand openings include New City Hall and Guildford Pool.
	Consider the development of a corporate policy that would require all new buildings to go beyond the building code and achieve a certain level in the LEED rating system or meet the performance standards of the <i>most recent version</i> of ASHRAE 90.1 (currently 2007).	All facility designs meet ASHRAE 90.1 energy standard, as per the new provincial Building Code. When feasible, designs aim to go beyond the Building Code.	
2) Conduct audit and retrofit activities in City facilities (Facilities Division, Planning & Buildings Dept)	Conduct audits on all identified facilities within 5 years (see Appendix B). Specifically, it is recommended that the City: <ul style="list-style-type: none"> • Conduct Level II audits on those buildings consuming more than 2,000 GJ per year (18 facilities) over 3 years. • Conduct Level I audits on all facilities consuming between 500 and 2,000 GJ annually (25 buildings) over 3 years. • Apply to BC Hydro's Continuous Optimization Program to access funds for recommissioning of the 14 larger buildings. 	Level 2 energy audits were completed for 56 civic buildings by AMERESCO in 2012. The review found that energy performance is high and had few recommendations for improvement.	
	Implement all activities identified that have a simple payback of 7 years or less.	Retrofit activities were undertaken as prioritized by City staff based on available resources and payback (see below).	Continue to evaluate replacements, renovations and maintenance with consideration for energy and

Corporate Emissions Action Plan Actions	CEAP Sub-Actions	General Description of 2013 Activities	2014 Priority Activities
			emissions savings.
3. Include alternative energy evaluation in replacement, renovation, and maintenance activities (Facilities Division, Planning & Buildings Dept)	Work to secure partner funding for all major retrofit activities.	Ongoing.	Ongoing.
3. Include alternative energy evaluation in replacement, renovation, and maintenance activities (Facilities Division, Planning & Buildings Dept)	Continue its practice of purchasing the most energy efficient equipment available with a simple payback of seven years or less within available budgets	Facilities that required upgrades, including Fire Hall #11, were retrofitted with more efficient boilers.	Continue to evaluate replacements, renovations and maintenance with consideration for energy and emissions savings.
4. Develop ongoing energy management activities (Facilities Division, Planning & Buildings Dept)	Evaluate opportunities for alternative energy or innovative technologies at the time of major equipment replacements		
4. Develop ongoing energy management activities (Facilities Division, Planning & Buildings Dept)	Increase the awareness of energy considerations in facility operations activities	Energy Monitoring Software: The vendor of existing Direct Digital Control systems developed software that displays energy use as a visual dashboard. In 2013, Fortis BC's EnerTracker software was installed at key City facilities including Newton Wave Pool to better monitor energy usage and trends.	
4. Develop ongoing energy management activities (Facilities Division, Planning & Buildings Dept)	Partner with the Sustainability Office to identify opportunities related to energy management and conservation.	New statistical reporting fields were integrated within the new Financial Management System (FMS) to better capture and analyze energy use.	Continue to develop and test functionality of new FMS to report on energy use and trends.
4. Develop ongoing energy management activities (Facilities Division, Planning & Buildings Dept)	Consider establishing a formal Energy Management Committee to provide input and resources to these issues	Quarterly corporate energy check-in meetings were coordinated by the Sustainability Office and included Facilities and Finance staff, to review status and energy performance of buildings.	Continue to hold quarterly corporate energy meetings.
4. Develop ongoing energy management activities (Facilities Division, Planning & Buildings Dept)	Partner with BC Hydro, Terasen and others to pursue funding opportunities	Continued to work with BC Hydro and others to pursue funding opportunities.	Continue to work with BC Hydro and others to pursue funding opportunities.
5. Continue	Obtain E3 fleet certification by the	E3 Fleet Gold certification was completed.	

Corporate Emissions Action Plan Actions	CEAP Sub-Actions	General Description of 2013 Activities	2014 Priority Activities
<p>implementation of green fleet management activities (Operations Division, Engineering Dept.)</p>	<p>end of 2010</p> <p>Continue efforts to reduce fuel use and emissions from fleet vehicles</p>	<p>Staff Transportation Demand Management (TDM) initiatives were developed to encourage staff to choose alternative transportation to new City Hall including: lunch and learns, one-on-one training, development of end-of-trip cycling facilities, switch to paid parking at the new City Hall, and expansion of City fleet by partnering with Modo car sharing service. The Modo program and new electric vehicle fleet (see below) also aims to make more efficient use of pool vehicles by enabling access for all City departments.</p> <p>The City continues to work with the SFU School of Mechatronics on their Life Cycle Assessment tool to compare economic and environmental performance of conventional and alternative fuel vehicles.</p>	<p>Roll out full car-sharing program with Modo at the new City Hall/City Centre.</p> <p>Finalize TDM measures for staff at new City Hall.</p>
<p>6. Establish an alternative vehicle pilot program (Operations Division, Engineering Dept.)</p>	<p>Commit to pilot testing a small number of commercially available alternative vehicles as they are available.</p> <p>Consider branding the initiative as the <i>“Surrey Alternative Vehicle Pilot Program”</i> in an effort to showcase the City’s efforts, and innovative approaches and demonstrate</p>	<p>The City continued its alternative fuel vehicle pilot, including using electric vehicles and compressed natural gas (CNG) trucks.</p> <p>With provincial funding, six Level 2 EV charging stations were installed at seven City facilities and made available to the public in March 2013.</p> <p>A DC Fast Charge (Level 3) charging station was opened at Surrey Museum, in partnership with the Province and BC Hydro. The station opened in November 2013.</p>	<p>Use Green Municipal Funds to obtain four additional electric vehicles for fleet deployment at the new City Hall.</p> <p>Install eight Level 2 EV charging stations for fleet and public at New City Hall, including signage.</p>

Corporate Emissions Action Plan Actions	CEAP Sub-Actions	General Description of 2013 Activities	2014 Priority Activities
	<p>leadership in the community. This could include a range of features – labeling of the vehicle, a GPS tracker connected to a website, etc</p> <p>Document results – both favourable and unfavourable to ensure that lessons learned can be shared with others</p>		<p>Collate and analyze EV charging station usage data.</p>
<p>7. Investigate potential for alternative energy demonstration (Various depts.)</p>	<p>Identify and implement alternative energy demonstration projects over the next 2 years.</p>	<p>The City and the federal government announced a public-private partnership to build the organics biofuel facility.</p> <p>Construction of a geo-exchange field for the City Centre District Energy system continued as part of the new City Hall project.</p> <p>Surrey City Energy continued to build in a biomass Combined Heat/Power system into its utility planning.</p>	<p>Finalize procurement process for the organics biofuel facility.</p> <p>Continue operation of City Centre District Energy system.</p>
<p>8. Evaluate and implement street-lighting alternatives (Various depts.)</p>	<p>Continue to study the feasibility of alternative street-lighting and, depending on the business case, look to implement solutions on a larger scale within the next 3 years</p>	<p>Testing of LED brands was completed.</p> <p>The City participated in a consortium of municipalities around BC and BC Hydro to create design criteria and specifications around LED street lights, share experiences with pilot projects, and pursue group purchasing discounts.</p> <p>Once decision is made on whether to switch to LED lights, Traffic Operations can consider implementing adaptive street lighting, since the adaptive system needs to be specifically compatible with the lighting system.</p>	
<p>9. Implement user control lighting and artificial turf for</p>	<p>Continue to implement user control lighting and artificial turf at major sports fields as appropriate</p>	<p>A new field was installed at Newton Athletic Park. New user-control lighting was installed at Newton and South Surrey Athletic Park.</p>	

Corporate Emissions Action Plan Actions	CEAP Sub-Actions	General Description of 2013 Activities	2014 Priority Activities
major sports fields (Various depts.)		<p>A new artificial turf field was installed at South Surrey Athletic Park.</p> <p>User control lighting systems were upgraded at five all-weather sports fields.</p>	
<p>10. Establish a procurement policy that considers energy and GHG emissions (Sustainability Office, City Manager's Dept.)</p>	<p>Develop a sustainable procurement policy that considers energy and GHG emissions</p>	<p>Staff liaised with City's office supplies vendor to improve sustainability-related program uptake, specifically to reduce waste and the number of delivery trips to City Hall (thus reducing energy use and emissions).</p>	<p>Staff will continue to explore options for Sustainable Purchasing including a staff scoping workshop to be held June 2014. Staff will continue to participate in the municipal sustainable purchasing collaborative.</p>
<p>11. Encourage energy conservation behaviours in the workplace (Sustainability Office, City Manager's Dept.)</p>	<p>Develop a strategy to engage staff in energy conservation behaviours in the workplace</p>	<p>The BC Hydro supported Workplace Conservation Awareness Program expanded from four aquatic centres and nine libraries to include all RCMP detachments and five arenas. Monthly events and campaigns were held to engage staff in behaviours around energy conservation.</p>	<p>Continue to support the Workplace Energy Conservation Program.</p>
<p>12. Consider expanding energy and emissions monitoring and reporting (Sustainability Office, City Manager's Dept.)</p>	<p>Explore its current capacity to track additional corporate GHG emissions (e.g., paper use, employee commuting).</p> <p>Put systems in place (where necessary) to allow for ongoing monitoring and reporting of these GHG emissions. This may include continuing use of the Cool Tool for inventory purposes, or adopting a new tool such as the provincial SMARTTool</p>	<p>New statistical reporting fields were integrated within the new Financial Management System (FMS) to better capture and analyze energy use.</p>	
	<p>Compile an annual report on the</p>	<p>Corporate report was completed on 2012 actions</p>	<p>Complete annual corporate report</p>

Corporate Emissions Action Plan Actions	CEAP Sub-Actions	General Description of 2013 Activities	2014 Priority Activities
	<p>carbon footprint from the previous calendar year, including a brief discussion on energy management and GHG reduction activities.</p> <p>Make a decision on which additional GHG emissions will be tracked (and possibly reported) in the future.</p>	<p>and priorities for 2013.</p> <p>As per the Province's requirements, the City collected fuel consumption data from its vendors. Staff continued to support vendors with a fuel tracking form and responding to queries. Beginning January 2013, the City added a clause to solicitation documents and contracts that requires vendors to provide fuel consumption data.</p> <p>New vehicle mileage reporting in the FMS allowed staff to select vehicle type, which will enhance fuel consumption reporting.</p>	<p>on progress of CEAP implementation.</p>
<p>13. Continue to dedicate CARIP rebate to sustainability related activities (Sustainability Office, City Manager's Dept.)</p>	<p>Continue to direct the CARIP rebate to an operating budget (or reserve fund) specifically dedicated to promoting sustainability activities within its corporate operations, and throughout the community.</p>	<p>The CARIP rebate has been used for two projects over 2011-13: the City's portion of costs to install a network of 14 Level 2 EV charging stations at seven civic facilities, and City portion of costs to develop the Community Climate Action Strategy.</p>	<p>Continue to explore allocation of the CARIP rebate as needed towards carbon reduction activities both corporately and community-wide.</p>

Climate Action Revenue Incentive Program (CARIP) Public Report

Climate Action Revenue Incentive (CARIP) Public Report for YEAR 2013

City of Surrey

Metro Vancouver



Report Submitted by
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July 17, 2014

General Information

Name of Local Government	City of Surrey
Member of Regional District (RD)	Metro Vancouver
Regional Growth Strategy (RGS) in region	Yes
Population	501,100

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Community Wide Actions for 2013

1.1 Measure

Community Wide Measurement Actions

Question	Have you been using the Community Energy and Emissions Inventory (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?
Answer	Yes
Additional Information	CEEMap Tool

1.2 Plan

Community Wide Targets

Question	Does your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act (LGA)</i> ? If yes, please identify the targets set. If no or in progress, please comment.
Answer	Yes
Additional Information	33% per capita reduction below 2007 levels by 2020; 80% per capita reduction by 2050

1.3 Reduce

Supportive Community Wide Actions

Action Type	Broad Planning
Actions Taken this Year	<ul style="list-style-type: none"> * Community Energy Emissions Plan (CEEP) was adopted by Council * Climate Adaptation Strategy was adopted by Council alongside the CEEP as part of Surrey's overall Community Climate Action Strategy * Surrey's new OCP, ""PlanSurrey2013"" passed the first reading by Council in December and includes energy and emissions policy
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Implementation of the Community Climate Action Strategy * Adoption and implementation of the new OCP

Action Type	Building and Lighting
Actions Taken this Year	<ul style="list-style-type: none"> * Land Use and Building are two key sectors advanced through the adoption of the CEEP and PlanSurrey2013. Diverse strategies are proposed to focus density and growth and support retrofits and energy-efficient new construction. * Partnered with LiveSmart BC's Business Energy Advisors to promote energy assessments and retrofits * Project Green Suites launched, engaging residents of 15 pilot multi-family buildings to conserve energy, waste and water
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Continue implementation of the CEEP and OCP strategies * Continue to support SME business energy outreach in Surrey through new BC Hydro/Fortis BC program * Continue supporting third-party energy retrofit programs, including BC Hydro and FortisBC pilot program to incentivize common-area and in-suite upgrades in market rental buildings and new HERO (home energy rebate offer) for single family homes * Complete and evaluate Project Green Suites pilot program

Action Type	Energy Generation
Actions Taken this Year	<ul style="list-style-type: none"> * Process initiated for new biofuel facility that will process Surrey's organic waste into compressed natural gas; the City has secured up to \$16.9 million in Federal funding to support the construction of this facility through a Public Private Partnership * Council approved the District Energy (DE) System Utility's Policy on Utility Rate Setting and Regulation * King George DE Feasibility Study completed
Proposed Actions for Next Year	<ul style="list-style-type: none"> * In 2014, following a market competition, the City will select its partner to design, build, finance, operate and maintain the biofuel facility for a 25 year period. The facility is expected to be operational by early 2017 *Continue to move forward with district energy studies and plans, focusing on City Centre

Action Type	Green Space
Actions Taken this Year	<ul style="list-style-type: none"> * Surrey's Biodiversity Conservation Strategy (BCS) is nearing completion and will guide the protection of valuable habitat hubs and corridors * Continued and expanded volunteer-based stewardship programs, including Surrey Natural Areas Partnership (SNAP), Salmon Habitat Restoration Program (SHaRP), Surrey Youth Stewardship Squad, Friends of the Forest, and Releaf programs.
Proposed Actions for Next Year	<ul style="list-style-type: none"> *BCS to be brought to Council for approval *Final OCP (PlanSurrey2013), including new DPA for sensitive ecosystems to be approved by Council * New Green Surrey program launch * Continue partnership with UBC to use remote sensing technology to measure the spread of invasive species, and stress levels in Cedar trees

Action Type	Transportation
Actions Taken this Year	<ul style="list-style-type: none"> * Continuation of the Transportation Lecture Program in partnership with the SFU City Program * PlanSurrey2013 identified FTDA's and includes policies to encourage complete and compact development along designated rapid transit corridors * The Surrey Rapid Transit Study, led by TransLink and the Government of BC in partnership with the City of Surrey, the City of Langley, and Metro Vancouver, was completed in March. <p>The City continues to support sustainable transportation for schools through the Safe and Active Schools Program, the School Travel Planning program, and new "bike to school" training</p>
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Continued implementation of the City's Transportation Strategic Plan, Cycling Plan, Walking Plan, and Greenways Plan * Implementation of transportation strategies outlined in the CEEP and PlanSurrey2013 * Continue and expand sustainable transportation programs in schools

Action Type	Waste
Actions Taken this Year	<ul style="list-style-type: none"> * Project Green Suites launched, engaging residents of multi-family buildings to conserve energy, waste and water
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Continue exploring ways to support waste diversion in multi-family residences

Action Type	Water/Sewer
Actions Taken this Year	<ul style="list-style-type: none"> * Continuation of the "Operation Save H2O" program to educate and raise awareness of high water usage and impacts * Continued development of Integrated Stormwater Management Plans (ISMPs) * Project Green Suites launched, engaging residents of multi-family buildings to conserve energy, waste and water
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Target completion of an ISMP for all watersheds identified in the regional Integrated Liquid Waste Resource Management Plan * Continue outreach programs, including Operation Save H2O and Project Green Suites

Action Type	Other Actions
Actions Taken this Year	<ul style="list-style-type: none"> * Continued funding Climate Change Showdown workshops in Surrey elementary schools, delivered by the BC Sustainable Energy Association * Participation in the Coastal Cities at Risk research initiative with SFU, as well as other regional initiatives to plan and prepare for sea level rise and other climate impacts

Proposed Actions for Next Year	* Continue participation in various school, community and research programs
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Direct Community Wide Actions

Action Type	Buildings
Actions Taken this Year	<ul style="list-style-type: none"> * Council approved in principle a draft energy efficiency density bonusing policy for the West Clayton Stage 1 NCP. Implementation is in progress. * City-wide design guidelines in PlanSurrey2013 include guidelines for low carbon and energy efficient design
Proposed Actions for Next Year	* Finalize and prepare to roll-out energy efficiency density bonusing policy in West Clayton NCP area

Action Type	Energy Generation
Actions Taken this Year	<ul style="list-style-type: none"> * Construction was nearly completed on Surrey's first district energy (DE) system, the civic centre's geoexchange system that will power Surrey's new City Hall and City Centre Library. * Implementation underway on 2012 by-law requiring all developments within the service area (within City Centre) and over a certain size be compatible with and/or connect to the DE system.
Proposed Actions for Next Year	* Continued development of the City Centre District Energy system

Action Type	Transportation
Actions Taken this Year	<ul style="list-style-type: none"> * Six level-2 electric vehicle charging stations and one DC Fast Charge station were installed at public facilities across Surrey * Modo car share vehicles were made available to the public at City Centre (City Hall) and Gateway Skytrain Station * Continued to require new fuel service stations and major renovations to existing stations to offer alternative fuels * Continued expansion of bicycle routes, including 13 new km of greenways
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Eight level-2 electric vehicle charging stations to be installed at Surrey's new City Hall * Continue expansion of active transportation infrastructure, including bike routes and greenways * Transit priority measures such as queue jumpers to enhance transit service along King George Boulevard is being considered

Action Type	Waste
Actions Taken this Year	* Continued implementation of the organics waste collection program, which increased residential curbside waste diversion to 68% in 2013
Proposed Actions for Next Year	* Continue implementation of the organics waste collection program and other measures to increase waste diversion

Action Type	Water/Sewer
Actions Taken this Year	* Continued implementation of the mandatory water metering program for new developments and voluntary metering program for existing residences * Continued water conservation efforts, such as the water sprinkling restrictions and educational initiatives
Proposed Actions for Next Year	* Continue implementation of existing efforts

Action Type	Green Space
Actions Taken this Year	* As part of PlanSurrey2013 and the BCS the City is: strategically acquiring land for ecosystem conservation purposes; identifying natural areas for protection in the preparation of Secondary Plans; encouraging and implementing greener development and building practices to improve water, air, soil and habitat quality; and, implementing Development Permit Areas and Guidelines for the protection of the natural environment and Biodiversity. * 41.1 hectares (99.1 acres) of parkland was added in 2013
Proposed Actions for Next Year	* Continue implementation of measures to acquire and protect green space in Surrey, including through Green Surrey and the Biodiversity Conservation Strategy

Action Type	Other Actions
Actions Taken this Year	
Proposed Actions for Next Year	

Question	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? Please describe and add links to additional information where possible.
Answer	* Completion of the Community Energy and Emissions Plan

Corporate Actions for 2013

2.1 Measure

Corporate Measurement Actions

Question	What steps has your local government taken toward completing its corporate emissions inventory?
Answer	The City of Surrey established a corporate energy and emissions inventory in 2009, and used data from 2005 through 2009 to create a baseline. The corporate energy and emissions inventory is updated annually. In 2013, vendors delivering "traditional services" as defined by the province were required to report on fuel use as part of the inventory.

Question	What tool are you using to measure, track and report on your corporate emissions?
Answer	The City uses the Pembina Institute's excel-based CoolTool to calculate emissions, and is working on integrating energy use accounting into the City's new financial management system that is currently being rolled out.

2.2 Reduce

Supportive Corporate Actions

Action Type	Broad Planning
Actions Taken this Year	* Continued implementation of our Corporate Emissions Action Plan, which sets a 20% GHG reduction target by 2020
Proposed Actions for Next Year	* Continue implementation of our Corporate Emissions Action Plan and tracking progress on emission reductions over time

Action Type	Building and Lighting
Actions Taken this Year	<ul style="list-style-type: none"> * Continued participation in BC Hydro's Workplace Conservation Awareness program to reduce electricity consumption in Surrey's indoor pools and libraries * Participated in Fortis BC's EnerTracker program at key facilities
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Expand participation in BC Hydro's Workplace Conservation Awareness Program to include arenas and RCMP divisions, as well as indoor pools and libraries * Continue to design new facilities to optimize energy efficiency where possible

Action Type	Energy Generation
Actions Taken this Year	<ul style="list-style-type: none"> * Continued to undertake studies on viable energy alternatives, when opportunities arise
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Continue to undertake studies on viable energy alternatives, when opportunities arise

Action Type	Transportation
Actions Taken this Year	<ul style="list-style-type: none"> * Supported planning for sustainable transportation modes to get to work with the move to new City Hall. Incentives include personalized commute planning, preferred carpool parking, end-of-trip facilities for cyclists, carsharing program with Modo Car Co-op, transit rebates on monthly passes, and introduction of pay parking at New City Hall. * The City continued to partner with SFU's School of Mechatronics to refine a lifecycle assessment tool that compares the economic and environmental costs and benefits of conventional and alternative fuel vehicles.
Proposed Actions for Next Year	<ul style="list-style-type: none"> "* Roll out of TDM measures for New City Hall * Continue lifecycle tool partnership with SFU, and utilize for purchasing decisions, where appropriate"

Action Type	Water/Sewer
Actions Taken this Year	<ul style="list-style-type: none"> * Effort to design new City Hall meeting rooms and kitchens so as to minimize use of bottled water and disposable dishware (i.e. close proximity of kitchens allows reusable dishware to be used in meetings)
Proposed Actions for Next Year	<ul style="list-style-type: none"> * Continue staff education on opportunities to reduce water use at work (e.g. discouraging bottled water at meetings)

Action Type	Other Actions
Actions Taken this Year	* Opportunities to build on Surrey's Sustainable Purchasing agenda were pursued, including the electric vehicle pilot program and reduced number of office supply deliveries from Mills Basics
Proposed Actions for Next Year	* Further sustainable purchasing actions will be pursued, including an update to the City's purchasing manual and an interdepartmental workshop to identify and prioritize opportunities over the coming years

Direct Corporate Actions

Action Type	Building and Lighting
Actions Taken this Year	* Continued energy retrofits in civic facilities, including boiler and lighting upgrades * Construction of the LEED-certified new City Hall, which includes a district energy system, green roof, electric vehicle charging stations, and more.
Proposed Actions for Next Year	* Continue pursuing energy retrofit opportunities in civic facilities * Grand opening of the new City Hall

Action Type	Energy Generation
Actions Taken this Year	* In 2013, the City Centre District Energy Utility prepared to open the geo-exchange field for the New City Hall, which will also serve the City Centre Library. * District Energy system expansion plans are also underway for the King George node – including partnership opportunities with Surrey Memorial Hospital – as well as in the Gateway and Surrey Central nodes
Proposed Actions for Next Year	* Continue to develop the City Centre District Energy Utility and expansion plans for other nodes

Action Type	Fleet
Actions Taken this Year	* Funding was confirmed from FCM to pilot four electric vehicles for three years within the City fleet * The Buildings' Division mobile inspector program was launched, helping building inspectors do more work from the road, plan efficient trips, and reduce the number and length of trips made.
Proposed Actions for Next Year	* Electric vehicle pilot to roll out with opening of New City Hall * Continue roll out and monitoring of the mobile building inspector program

Action Type	Waste
Actions Taken this Year	* Organics bins were distributed to key City facilities in 2013. The City has seen a 40% drop in garbage tonnage generated at City Hall in 2013.
Proposed Actions for Next Year	* Organics bins and education campaign will be expanded to more City facilities in 2014

Action Type	Water/Sewer
Actions Taken this Year	* The City continued to invest in artificial turf fields and has a program to allocate surplus field rental revenues into replacement reserves for the future replacement of field surfaces. * Continued implementation of the Water Loss Reduction Program to minimize leaks from water infrastructure
Proposed Actions for Next Year	* Continue investment in artificial turf fields * Continue implementation of the Water Loss Reduction Program

Action Type	Green Space
Actions Taken this Year	* The Parks Division is working on enhancing asset management for Park infrastructure and biological assets. The software supports preventative maintenance and are designed to optimize asset condition and prevent asset failure and premature replacement.
Proposed Actions for Next Year	* Roll out Asset Management Decision Support software

Action Type	Other Actions
Actions Taken this Year	
Proposed Actions for Next Year	

2.3 Corporate Innovation

Question	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? Please describe and add links to additional information where possible.
Answer	<p>"* Construction of the geo-exchange district energy system for City Hall and the City Centre Library.</p> <p>* TDM measures to support sustainable transportation modes for staff commutes"</p>

Carbon Neutral Progress Reporting

3.1 Carbon Neutral Progress Reporting

Emissions/Offsets	Tonnes CO ₂ e
Annual corporate emissions using SMARTTool or equivalent inventory tool	15635
<i>Emissions from services delivered directly by the local government</i>	11612.5
<i>Emissions from contracted services</i>	4022.4
Less:	1040.7
GHG reductions being claimed for this reporting year from Option 1 - GHG reduction project	
<i>Energy Efficient Building Retrofits and Fuel Switching</i>	
<i>Solar Thermal</i>	
<i>Household Organic Waste Composting (see Metro Vancouver Option 1 Report)</i>	1040.7
<i>Low Emissions Vehicles</i>	
Less:	12173.4
GHG reductions being claimed for this reporting year from Option 2 - GHG reduction projects	
<i>Option 2 Project A – Vancouver Landfill Gas Capture Project</i>	12173.4
<i>Option 2 Project B</i>	
<i>Sum of Other Option 2 Projects (if you have added projects below)</i>	0
Less:	
<i>Offsets purchased for this reporting year (Option 3). Please identify your offset provider in the offset provider information section below.</i>	
Balance of corporate emissions for this reporting year. <i>(If the corporate emissions balance is zero, your local government is carbon neutral for this reporting year)</i>	2420.9
Additional "Option 2" Projects	
<i>Option 2 Project C</i>	
<i>Option 2 Project D</i>	
<i>Option 2 Project E</i>	
<i>Option 2 Project F</i>	
<i>Option 2 Project G</i>	
<i>Option 2 Project H</i>	

3.2 Making Progress on Your Carbon Neutral Commitment

Question	If your community has not achieved carbon neutrality for this reporting year please describe the actions that you intend to take next year to move you toward your carbon neutral goal.
Answer	The previous work sheets have outlined in great detail the actions the City of Surrey intends to take in 2014 to reduce both corporate and community-wide GHG emissions. Chief among these are: continued implementation of the Corporate Emissions Action Plan (including ongoing building retrofit projects and greening the fleet), and implementation of the new Community Energy and Emissions Plan (CEEP) that outlines how the City will move towards its ambitious GHG reduction targets. CEEP implementation projects include the Green Suites Project in multi-family buildings, the MURB retrofit pilot with BC Hydro and Fortis BC, and supporting the business energy advising outreach to local businesses. The City will also continue with its rollout of the Rethink Waste program including curbside organics collection using CNG trucks.

3.3 Offset Provider Information

Question	Please Identify the name(s) of your offset provider(s) (Please answer below):
Answer	

Question	The offsets being claimed in this CARIP Report were purchased from the offset provider(s) indicated above prior to making this CARIP report public (please indicate yes or no):
Answer	

Question	If your community has not achieved carbon neutrality for this reporting year please describe the actions that you intend to take next year to move you toward your carbon neutral goal.
Answer	