

REPORT TO COUNCIL



Date: February 15, 2012
File: 1325-20
To: City Manager
From: Manager, Capital Assets and Investment
Subject: Corporate Energy and GHG Emissions Reduction Plan (SR #184054)

Recommendation:

THAT Council receives, for information, the report from the Capital Assets and Investment Manager dated February 15, 2012, with respect to the corporate energy and GHG emissions reduction plan;

AND THAT Council directs staff to report back with updates regarding "making progress towards" GHG neutrality in conjunction with its annual infrastructure performance scorecard.

Purpose:

COUNCIL RESOLUTION FROM THE DECEMBER 6, 2010 P.M. REGULAR MEETING: (Service Request #184054) THAT Council receives, for information, the Executive Summary of the 2010 Corporate Energy and GHG Emissions Plan prepared by Hyla Environmental Services Ltd. as attached to the Report of the Manager, Strategic Projects dated December 1, 2010; AND THAT Council directs staff to provide a plan, including resource implications, for the management of energy consumption and GHG emission data to meet annual provincial GHG emission reporting requirements under the Climate Action Charter; AND THAT Council directs staff to provide a prioritized project implementation plan to achieve Corporate carbon neutrality by 2012 and a 22% absolute reduction in Corporate GHG emissions by 2017 based on a benefit/cost analysis for Council consideration prior to the submission of the 2012 Financial Plan; AND THAT Council directs staff to implement operational changes to reduce GHG emissions that can be achieved within approved budgets; AND FURTHER THAT Council directs staff to contact UBCM regarding the Pacific Carbon Trust and, in particular, any opportunities available to municipalities so that they can to establish their own trust.

Background:

On September 21, 2007 the City of Kelowna signed the BC Climate Action Charter (CAC). By doing so, the City committed to voluntarily undertake actions to reduce both community and corporate GHG emissions. The Community actions were highlighted in a separate Council report on Dec 12, 2011 (Climate Action Revenue Incentive Program Reporting Requirement). The Corporate Energy and GHG Emissions Reduction Plan was presented in a previous Council Report (Dec. 1, 2010) which focused on 2007-2009 GHG emissions by sector within the corporation and provided a generalized GHG emissions reduction plan for each of five sectors: buildings, outdoor lighting, water & wastewater, vehicle fleet and corporate solid waste. This report addresses implementation of that plan and the associated resource and financial implications.

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The CAC is a provincial initiative signed by the Province, the Union of BC Municipalities (UBCM) and local governments. Signatory Local Governments agreed to voluntarily develop strategies and take actions to achieve the following goals:

1. being carbon neutral in respect of their operations by 2012;
2. measuring and reporting on their community's GHG emission profile; and
3. creating complete, compact and more energy efficient communities.

As an incentive to achieving CAC goals, the province reimburses signatory city corporations 100% of the carbon taxes paid on energy each year under the Climate Action Revenue Incentive Program (CARIP). In 2010 this payment was approximately \$133,000. The continuation of this payment is loosely connected to the City's compliance with the CAC.

The City of Kelowna recognizes that mitigating climate change is a consequence of efficient energy consumption systems and operating practices that yield on-going net savings. Since Kelowna spends in excess of \$6M annually on energy, the potential financial benefits are significant when they are based on sound business decisions.

Carbon Neutral. Becoming carbon neutral refers to the combined strategy of reducing GHG emissions and purchasing carbon offsets. Under CAC the City could voluntarily purchase carbon offsets annually for the corporation's current year's absolute GHG emissions. This is similar to Provincial Public Sector regulated requirements.

The Pacific Carbon Trust (PCT) is the provincial crown corporation mandated to provide quality BC-based GHG offsets for the public sector. The province has estimated the price for carbon offsets at \$25/tonne. Using CAC accounting methods and current Corporate GHG emissions this equates to approximately \$150,000/year that the City could pay for carbon offsets to achieve carbon neutrality.

The province recognizes that local governments vary in their capacity and resources to become carbon neutral by 2012. With this in mind, the province approved 'making progress towards' as part of the common approach to carbon neutrality under the CAC, with the intention of providing some additional time for those signatories who may need to build capacity and resources to achieve their commitment. The 'making progress towards' approach provides that if local governments are only able to take some of the steps to carbon neutrality (e.g. they measure, reduce and report on corporate emissions), this will demonstrate "making progress towards" carbon neutrality. In addition, through the reporting process, communities will also be asked to report on corporate and community-wide actions they have undertaken that may be more difficult to quantify in terms of reduced GHG's, but have long-term implications for meeting their broader Charter goals. Local governments who are "making progress towards" will not be able to claim carbon neutrality for the purposes of the CAC.

The province also recognizes that local governments want to keep offset dollars in their own communities. Signatory local governments that are not carbon neutral by 2012 and are instead 'making progress towards' will still be eligible to receive their CARIP grant, provided they report publicly on progress toward meeting the Charter goals.

Some local governments have chosen to set aside the dollars that they would use to purchase offsets and put them into a climate action reserve fund to support local climate actions. While

a climate action reserve fund will not in itself get a local government to carbon neutrality, it is one way to budget for GHG emission reduction projects. Publicly reporting on those projects is a way to demonstrate progress.

At this time, the province has not set a new deadline for achieving carbon neutrality. Instead, over the coming year the province will continue to work with local governments to support them in moving forward on their Charter goals and will revisit the issue of timing once it has had an opportunity to review the progress that local governments have made, in combination with any other relevant circumstances at the end of the 2012 reporting year.

The City of Kelowna has taken the “making progress towards” approach to meeting the requirements of the CAC and has established a reserve (Carbon Energy Reserve) that will be used exclusively for projects that will reduce corporate energy and GHG emissions. The reserve will be funded by the CARIP grant and does not affect the 2012 budget.

Measuring and Reporting. The City has undertaken a comprehensive data collection and reporting system. Reporting annually on all the corporate GHG emissions requires significant data management to capture energy use from all operations. The main corporate energy using sectors include Buildings, Street Lighting, Water & Wastewater, Vehicle Fleet and Solid Waste. The energy for these sectors is provided by electricity, natural gas, biodiesel, gasoline and/or propane. Buildings and Fleet sectors are the biggest energy users making up approximately 43% and 40% of the corporation’s total energy consumption, respectively.

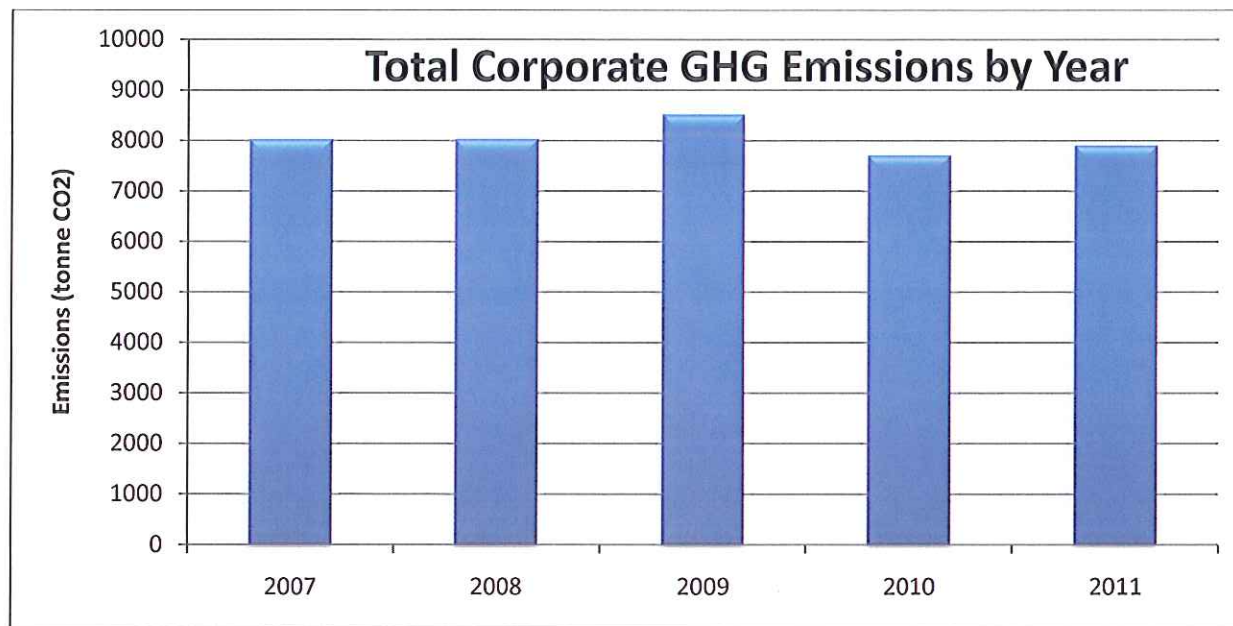
Real Estate and Building Services will be responsible for energy data input for the corporation and have purchased software for this purpose. The primary function of the software is a user friendly interface for data input and to provide regular energy consumption information to support operating decisions.

The GHG emissions data for the period from 2007 to 2011 is shown graphically below (Fig. 1). The data from 2007-2009 is from the Corporate Energy & GHG Emissions Plan, prepared by Hyla Environmental Services. The data from 2010-2011 is reported from the new software (Fame) system. In 2007, the Corporation’s total GHG emissions were estimated at 8,017 tonnes of CO₂ and by 2011 total emissions decreased 1.5% to 7,895 tonnes. Part of this reduction is attributable to an increase in the use of biodiesel in fleet vehicles and more efficient building heating systems. Weather may have played a role in the difference between yearly GHG emission data.

This historic comparison indicates that the corporation is heading in the right direction with respect to reducing GHG emissions and this reduction occurred despite the addition of Fleet and Building inventory.

The methodology for data collection has evolved since the project began in 2007. Moving forward the Fame system will be used to track energy and GHG data in a more robust and consistent fashion.

Fig. 1. Total Corporate GHG Emissions by year.



Infrastructure Planning will be responsible for annual reporting of corporate GHG emission data to the province. Integrating the corporation's data with the province's database requires software developed by the province. A copy of this software (SmartTool) has been purchased so that emissions data can be reported to the province. The data will also be used to prioritize cost-effective capital projects in future capital budgets that decrease life-cycle energy costs and GHG emissions.

Energy and GHG Reducing Projects. Corporate Energy & GHG Emissions Plan, 2011, prepared by Hyla Environmental Services identified several projects that could reduce the corporation's GHG emissions. This plan was produced through a \$95,000 grant from the Green Municipal Fund of the Federation of Canadian Municipalities. The City will review and amend the list as more information is gained through reporting and analysis of existing facilities.

Some of these projects have already been completed or are in progress. Energy saving projects included in the 2012 budget included the Park Pavilion replacement and vehicle replacements. At the same time the portfolio of new capital assets will also increase with projects such as the Laurel Air Conditioning, the new Mission Recreation Park Softball lights and additional mobile equipment. On December 13, 2011, Kelowna was awarded \$1,258,438 from the application-based Federal Gas Tax General Strategic Priorities Fund (Capital) to contribute toward several additional projects in this plan including energy enhancements for the Airport expansion, the Rutland Arena, and the Waste Water Treatment Plant.

Additional projects could be funded through further grants, future Council approved capital budgets and additional operational efficiencies. The replacement of existing inefficient and obsolete facilities with higher performance facilities will also contribute to energy savings and GHG reductions. Planned projects in this category include the replacement of the Water Street Seniors' Centre with the Parkinson Activity Centre, the replacement of the existing RCMP

detachment with a new integrated community protective services building on Clement at Richter.

Internal Circulation:

Director, Financial Services
Director, Infrastructure Planning
Director, Real Estate and Building Services
Sustainability Coordinator
Manager, Building Services

Existing Policy:

The GHG emission reduction target for the community as a whole has been established in the 2020 Official Community Plan at 33%. The CAC suggests voluntary local government neutrality by 2012 and a provincial goal of 33% by 2020 which it invites local governments to emulate. The Multiple Bottom Line framework pursuant to Council Policy 352: Sustainable Municipal Infrastructure targets climate change initiatives (mitigation and adaptation) including the reduction of GHG emissions. The corporate reduction target established by business case and amended on December 1, 2010, is 22%. This remains an ambitious target.

Financial/Budgetary Considerations:

The annual CARIP grant will be placed in the Carbon Energy reserve and will be used for projects that will reduce corporate energy and GHG emissions. This reserve will also fund operational expenses, like software licenses, for data collection and reporting.

Personnel Implications:

The data collection, reporting and management of the Corporate GHG Management plan will be completed by existing staff resources.

Considerations not applicable to this report:

Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
External Agency/Public Comments:
Communications Comments:
Alternate Recommendation:

Submitted by:



J. Shaw, P.Eng., Manager, Capital Assets and Investments

Approved for inclusion:



R. Cleveland MAIBC. Director, Infrastructure Planning

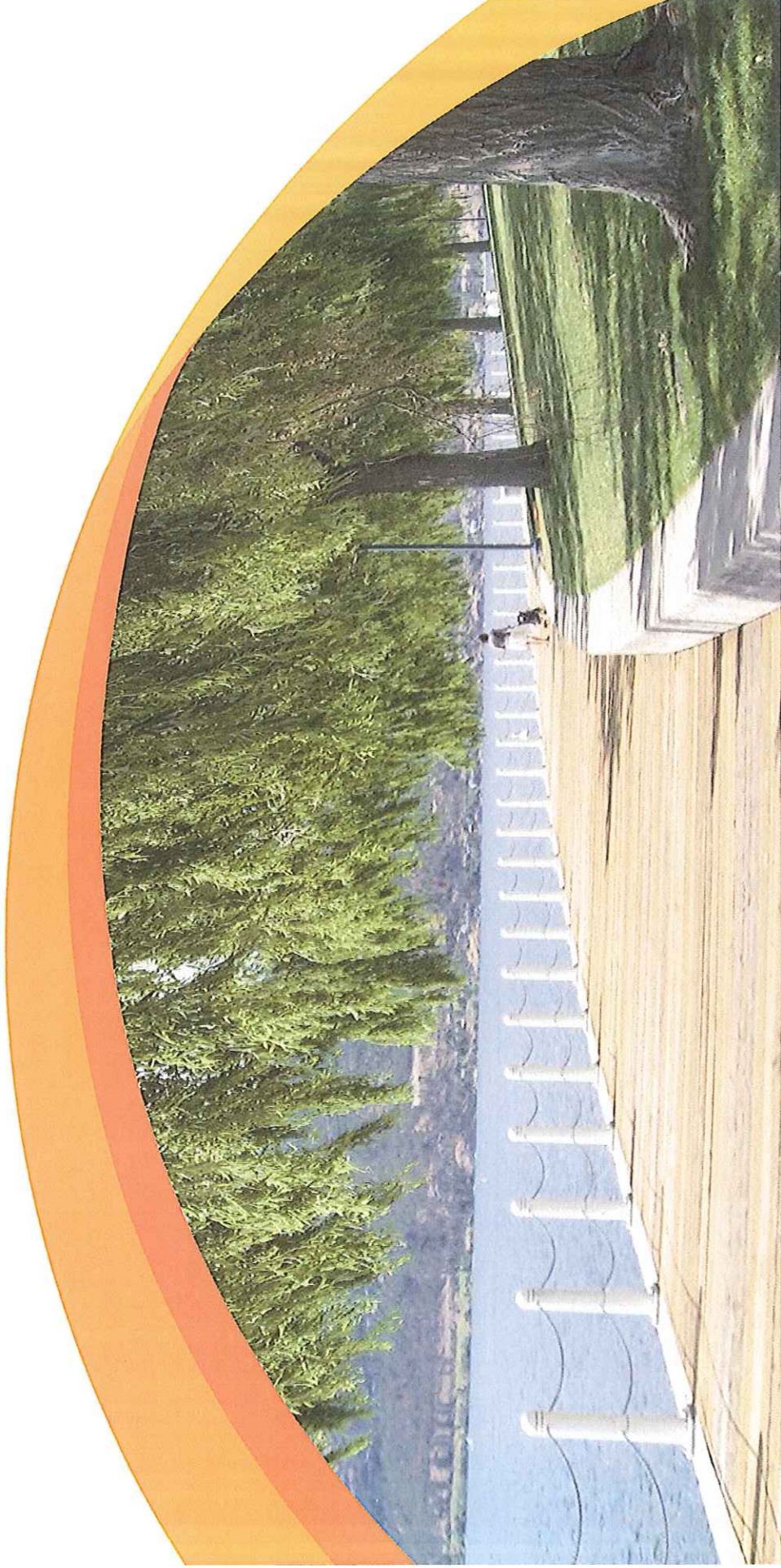
cc: General Manager, Community Sustainability
Director, Civic Operations
Director, Financial Services
Director, Real Estate & Building Services
Director, Policy & Planning



CORPORATE ENERGY AND GHG EMISSIONS REDUCTION PLAN



City of
Kelowna



AGENDA

- ▶ Background
- ▶ Making Progress Towards Carbon Neutrality
- ▶ Management Program for Energy and GHG emission data
- ▶ GHG reducing projects

TOTAL CORPORATE GHG EMISSIONS BY YEAR.

