

Environmental Sustainability Coordinator 2011/2012 Year End Report

March 28, 2012, Penny Page-Brittin

The Environmental Sustainability Coordinator’s one year contract position with the City of Revelstoke is completed on June 15, 2012. The contract outlined seven specific tasks for this position. The table below lists the tasks as were presented in the contract as well as additional tasks identified during the term as areas of value to the City. Following the table, each item is further detailed to better understand the work that was completed, additional work required, benefits to the city and community, and anticipated work to be completed in the remaining two and half months in the contract. Reports that were completed for City Staff in the 2011/2012 contract are indicated in bold.

Specific Tasks 2011-2012	Completed	Additional work required
1. Implement the recommendations identified in the Corporate Energy and Emissions Reduction Plan, including a work plan and time frame, giving priority to municipal buildings and the vehicle fleet.	✓	✓
<ul style="list-style-type: none"> In conjunction with relevant city staff, aid in facilitating municipal building energy audits, including prioritization of opportunities identified. 	✓	
<ul style="list-style-type: none"> Establish a Green Building policy, including a third party rating requirement for new buildings and building retrofits. 		✓
<ul style="list-style-type: none"> Implement a Corporate Idle Reduction Policy including driver education and awareness. 	✓	
<ul style="list-style-type: none"> Establish a vehicle data collection program to allow for benchmarking of fuel efficiency of the vehicle fleet. 	✓	
<ul style="list-style-type: none"> Coordinate the delivery of programs and courses for staff that satisfy “GHG” understanding. 	✓	
2. Manage and provide guidance to city staff for input of corporate inventory data relating to provincial reporting requirements in 2012, to meet obligations under the Climate Action Charter.	✓	
<ul style="list-style-type: none"> Ensure the City’s inventory tool meets developing provincial reporting requirements. 	✓	
<ul style="list-style-type: none"> Collaborate with Carbon Neutral Kootenays to develop data input methodologies to meet the needs of Revelstoke, including energy costing and district energy. 	✓	
3. Research provincial requirements and regulations related to watershed and drinking water protection.	✓	
<ul style="list-style-type: none"> Develop a strategy to meet the provincial requirements. 	✓	
4. Provide information and update an environmental page on the City’s website that details and communicates information related to environmental issues in the community including:	✓	
<ul style="list-style-type: none"> Vehicle Idling facts 	✓	
<ul style="list-style-type: none"> Pesticide use bylaw 	✓	

Specific Tasks 2011-2012	Completed	Additional work required
• Water conservation	✓	
• Actions taken to reduce energy consumption and resulting successes	✓	
• Residential and commercial incentives available for retrofits to improve energy efficiency.	✓	
5. Implement and review possible funding opportunities where applicable for the below recommendations identified in the Community Energy and Emissions Plan (CEEP).	✓	
• Develop a scoring matrix for the Sustainability Check list, and research and evaluate possible incentive based changes to the Sustainability Checklist. (delayed at City's request)		✓
• Implement a public education program to encourage individual actions by increasing awareness of RCEC, energy efficiency and GHG emissions related to climate change.	✓	
• Develop a package of low cost, practical, energy efficiency products for homeowners to be sold at cost (or subsidized), along with information and support.	✓	✓
• Implement a focused awareness program for the hotel and hospitality sector about energy efficiency options for their operations.		✓
• Extend anti-idling education developed in task 1 to the community as a whole.	✓	
6. Provide support and raise awareness of the UBC Social Mobilization/Pacific Institute for Climate Solutions project.	✓	
7. Evaluate and report on the effectiveness of GHG reduction programs at the corporate and community level.	✓	
• Explore options to utilize the Community Energy and Emissions Inventory (CEEI) to aid in evaluating changes and success at the Community level. (release of CEEI's by the Province delayed)		✓
• Research the Ecological footprint developed by UBC and the LEED ND program as a means of evaluating the effectiveness of energy and emissions reduction actions at the community level.		✓
• Report on successes at the corporate and community level and report publicly as required to receive funding from the Carbon Action Reduction Incentive Program (CARIP).	✓	

Other Tasks 2011-2012	Completed	Additional work required
8. Cosmetic Pesticides Initiatives	✓	
9. Communities Adapting to Climate Change Initiative (CACCI)	✓	
10. Water Conservation	✓	
11. Live Smart Small Business Program	✓	
12. Integrated Community Sustainability Plan (ICSP)	✓	✓

1. Implement the recommendations identified in the Corporate Energy and Emissions Reduction Plan

- Building energy audit standards were researched and a Request for Proposals (RFP) was completed which evaluates energy use for lighting, building envelope and HVAC for three municipal buildings identified as being high energy consumers. Completion of energy audits will identify possible retrofits and the resulting reduction in operating costs, energy consumption and greenhouse gas emissions.
- A light fixture inventory of all municipal builds, a requirement for funding through BC Hydro Building Energy Audits Program, was completed in conjunction with the City electrician. The City has been working with BC Hydro Power Smart over the past few years and has received financial incentives to change to more energy efficiency light bulbs. The City has been proactive in switching to more energy efficient lighting and did not qualify for Building Energy Audit funding through BC Hydro Energy Study Program, which focuses predominately on electricity consumption.
- A Municipal Corporate Idle Reduction Policy was completed and adopted by City Council on March 13, 2012. An educational brochure was developed for municipal staff and was presented during a “Shop Talk” to Public Works staff. (**Municipal Vehicle/Equipment Idle Reduction Strategy, January 25, 2012**).
- Natural Resources Canada Fuel Management 101 course, a fully funded course, was coordinated for municipal staff. The course was also attended by Operations Managers from Sicamous and Golden which added to the discussion and sharing of information.
- A Smart Driver in the City course, also a Natural Resources Canada fully funded course is scheduled for April 18th and 19th for all Public Works staff. (Two 4 hour courses, approx. 25 people per course).
- The bulk fueling station at Public Works is now tracking fuel consumption and kilometers traveled for all municipal vehicles, allowing for benchmarking of the vehicle fleet.
- Feasibility, economics, and best practices for implementing a Municipal Green Building Policy were researched. Additional work is required to draft a Municipal Green Building Policy.
- The “Carbon Report” was completed which identifies GHG emissions by city department, including the cost for each department to be carbon neutral. The report helps give ownership to each department regarding energy consumption and will aid in identifying actions that can be taken to reduce energy consumption and operation cost. The report was presented at the Manager’s meeting, February 22, 2012.
- **Revelstoke Case Study, Inventory Maintenance, Practices and Findings, June 20, 2011**, was presented as part of the Carbon Neutral Kootenay Webinar series.
- The Corporate Energy and Emissions Inventory received recognition from the FCM Partners for Protection Program for completion of Milestones 1-3 for corporate operation in July of 2011. This may be important when making applications to the FCM Green Municipal Fund to fund and implement actions in the plan.

2. Manage and provide guidance to City staff regarding corporate inventory data relating to provincial reporting requirements in 2012 to meet obligations under the Climate Action Charter.

Background

A greenhouse gas emissions inventory for the City of Revelstoke Corporate Operations was initially developed by Carbon Neutral Kootenay Project (CNK) in 2009. The inventory was developed to aid participating municipalities to prepare to be carbon neutral in 2012 under the Climate Action Charter. The spreadsheet formed a good start

for the City of Revelstoke, however it did not meet the needs of Revelstoke to capture district energy or the data required to meet the requirements of the FCM Partners for Climate Protection plan, which Revelstoke is also a signatory. A task identified in this contract was to work with CNK to build on the spreadsheet to meet the needs of Revelstoke. In 2010 the joint UBC-Provincial Green Communities Committee (CGC) developed the Smart Tool for local governments for accounting of GHG emissions in preparation for reporting of 2012 emissions in 2013. Carbon Neutral Kootenay has recommended that participating municipalities purchase the Smart Tool.

- A new spread sheet was created that meets the needs of Revelstoke including district energy. As it was not expected that a new spreadsheet would be needed, considerably more time was spent for this task than initially anticipated.
- The spreadsheet includes “notes” for municipal staff which indicate where to easily access the data, or who to contact in the case of contracted out services. An emission factor was created for RCEC using a three year intensity, allowing for smoothing of changes in propane consumption and allowing for easy calculation of GHG relating to district energy (CNK required recording total annual propane consumption at RCEC and partitioning to each municipal building annually).
- The spreadsheet also includes energy costing data, allowing the financial impact of energy reduction initiatives to be easily quantified.
- The cost savings to the City of not purchasing the Smart Tool is approximately \$1300 annually.
- Research was completed to understand the options for Climate Action Charter reporting in 2013 including financial, carbon neutrality, and CARIP granting implications. **(Options for Climate Action Charter Reporting in 2013, March 18, 2012).**

3. Research provincial requirements and regulations related to watershed and drinking water protection.

- The requirements to meet the Provincial “Source to Tap” guide were researched to ensure they meet Interior Health’s Drinking Water Provider Permit to Operate.
- A funding proposal to create a Greeley Creek Watershed Management Plan was submitted to CBT Communities Adapting to Climate Change Initiative (CACCI) for \$10,000 in funding and \$3000 of in-kind technical support. The proposal was accepted March 15, 2012 and meets the requirements of Interior Health as well as addressing climate change adaptation in the watershed.

4. Provide information and update an environmental page on the City’s website that details and communicates information related to environmental issues in the community.

- An outline has been completed for an Environmental page on the City’s website.
- Information for each of the topics listed in the work plan has been gathered and is anticipated to be completed and posted on the website by the end of the contract.

5. Implement and review possible funding opportunities where applicable for the below recommendations identified in the Community Energy and Emissions Plan (CEEP).

Background

The CEEP was completed at the beginning of 2011 by the consulting company Think Bright Climate Solutions. The final report has not been adopted by council at this time and is anticipated to be presented to Council in May 2012.

- The development of a scoring matrix for the Sustainability Checklist has not been completed at this time.
- Three educational brochures were developed for “The Homeowner”, “Businesses” and “New Construction”. The brochures indicate ways to reduce energy consumption, save money, and additional resources and financial incentives available for each group.
- A presentation was made at the April 12, 2012 City of Revelstoke Building and Construction Public Meeting. The presentation focused on energy consumption and greenhouse gas emissions in Revelstoke, reduction targets and information and financial incentives to improve building energy efficiency.
- A project proposal was completed “The Promotion of Energy Conservation through Energy Efficiency Products, and Education and Awareness in the Community of Revelstoke”. The project would provide energy efficient products to the residents of Revelstoke including education and awareness and was modeled after the very successful project in Canmore “Sustainable Action Canmore”. The proposal has been submitted for funding to Fortis BC and is awaiting reply.
- A focused awareness program for the hotel and hospitality sector regarding energy efficiency options for their operations has not been completed at this time and requires additional work.
- A community Idle Reduction Strategy was completed including an educational brochure which details the City’s Anti-Idling Bylaw, including further information pertaining to idling, as well as highlighting Downie Timber’s anti-idling success story. A funding application was submitted to TD Friends of the Environment for \$5000 to fund the cost of implementation of the Strategy. **(City of Revelstoke Idle Reduction Strategy, February 1, 2012).**

6. Provide support and raise awareness of the UBC/Pacific Institute for Climate Solutions project.

- Involvement in “My Revelstoke 2030” scheduled for June 5, 6, and 7.

7. Evaluate and report on the effectiveness of GHG reductions programs at the corporate and community level.

Background

In 2010 the province created Community Energy and Emissions Inventories (CEEI) for baseline 2007 greenhouse gas emissions, for each municipality in British Columbia. Updates to the 2007 baseline inventory and a 2010 inventory were anticipated to be released in the summer of 2011. The date was revised to the first quarter of 2012, but has not been released at this time.

- The Climate Action Revenue Incentive (CARIP) Public Report was completed for 2011. The report details the City’s progress for measuring, and reducing energy and emissions at the Corporate and Community level. The report details supportive and direct actions to reduce energy and emissions that have occurred in 2011 and are planned for 2012 at both the community and corporate level. **(Climate Action Revenue Incentive (CARIP) Public Report for 2011, Dec 2011).**
- Research has been started to understand how the Ecological Footprint and the LEED ND program may be used to evaluate the effectiveness of energy and emissions reduction actions at the community level, but additional work is required.
- A report quantifying energy and greenhouse gas reductions in corporate operations from baseline 2007 levels to 2012 is anticipated prior to the end of the contract period.

8. Cosmetic Pesticides Initiatives

- A review of pesticide used at Revelstoke Golf Course was completed. (**The Revelstoke Golf Course and Pesticide Use, June 24, 2011**).

9. CBT Communities Adapting to Climate Change Initiative (CACCI)

- The CACCI initiative was supported through a municipal staff scanning and planning workshop and a public open house.
- The initiative addressed potential climate change impacts on the City of Revelstoke and created the City of Revelstoke Climate Adaption Scanning and Planning Workshop, Ideas for Action.
- As a result of this initiative, the City was eligible to apply for the funding mentioned above to support the development of a Greely Creek Watershed Management Plan and to view the plan through a climate change adaptation lens and create a more sustainable and resilient watershed.

10. Water Conservation

- The City of Revelstoke Water Conservation Strategy was reviewed including potential funding opportunities to implement different components of the plan.
- A funding application to FCM Green Municipal Fund for a Water Metering Feasibility Study was completed (pending City Staff finalizing timeframe and budget). The project is indicated in the Water Conservation Strategy and in the 2012 Capital Works Project Plan for Engineering and Public Works.
- The CBT Water Smart initiative was reviewed including possible financial and educational benefits to the City. (**Columbia Basin Trust Water Smart Initiative, March 9, 2012**).

11. Live Smart Small Business program

Background

The Live Smart Small Business program offers fully funded, level one energy audits to small businesses. The audits focus primarily on lighting and behavioural changes including a report with recommendations that could result in reduced energy consumption and access to financial incentive.

- Working with the LiveSmart BC consultant in Kelowna, and a local energy audit company, the program was advertised to ensure businesses in Revelstoke were aware of the benefits and opportunities available through level 1, 2 and 3 energy audits. The higher level audits addresses energy reduction opportunities relating to building envelope, hot water and space heating, ventilating and air condition systems.
- To date, 20 businesses have taken advantage of a level one audit with a few businesses proceeding to level 2 and level 3 audits. The estimated value of the level one audit is of \$400 per business. The annual savings anticipated as a result of recommendation as well as financial incentives available were outlined in a report for each business who receive the level one audit.

12. Integrated Community Sustainability Plan (ICSP)

- Reviewed Integrated Community Sustainability Plans completed in other BC communities.