

## REGION OF WATERLOO

### CORPORATE RESOURCES Facilities Management and Fleet Services

**TO:** Chair Tom Galloway and Members of the Administration and Finance Committee

**DATE:** December 3, 2013

**FILE CODE:** D06-80

**SUBJECT: COMMUNITY GREENHOUSE GAS ACTION PLAN AND REDUCTION TARGET**

#### RECOMMENDATION:

THAT the Regional Municipality of Waterloo, in consensus with the Cities of Cambridge, Kitchener, and Waterloo:

- a) Approve the absolute community-wide Greenhouse Gas (GHG) emission reduction target of 6% below 2010 emission levels by 2020,
- b) Approve in principle the Community Climate Action Plan as described in Appendix 'A' attached to report CR-FM-13-022, dated December 3, 2013, subject to budget and other required approvals;
- c) Direct staff to submit the Community–Wide GHG target and Community Action Plan for review by the Federation of Canadian Municipalities (FCM) as fulfillment of Community Milestone 2 and 3 of the Partners for Climate Protection (PCP) program, and;
- d) Direct staff to implement the Community Climate Action Plan (PCP Milestone 4) using the collaborative approach described within the attached Plan subject to the terms of reference and any partnership agreements be prepared to the satisfaction of the Regional Solicitor and Chief Purchasing Officer, and;
- e) Direct staff to work with local partners to monitor and report results in order to undertake the final Milestone 5 of the PCP program (monitoring progress and reporting results).

#### SUMMARY:

Nil

#### REPORT:

##### Background

In 2010, Regional Council passed a resolution to become a member of the Partners for Climate Protection (PCP) program which focusses on stimulating action to reduce GHG emissions from local municipal (*corporate*) operations as well as at the *community* scale (CR-FM-10-007 dated April 6, 2010). The PCP program is jointly administered by the Federation of Canadian Municipalities (FCM) and International Council for Local Environmental Initiatives (ICLEI) – Local Governments for Sustainability. To date, over 1000 local governments internationally and almost 250 municipalities across Canada have committed to this program including the Cities of Cambridge, Kitchener and Waterloo. Since 2010, the Region has worked diligently on the *corporate* scope of the PCP program and has already reduced emissions by 15% (see CR-FM-13-015.1, dated October 9, 2013).

As a means to address GHG reductions at the *community* scale, a required component of PCP, Regional Council approved entering into a collaborative agreement with Sustainable Waterloo Region and REEP Green Solutions to form the *Climate Collaborative* (CR-FM-11-012, dated May 3, 2011). This collaborative, now known as ClimateActionWR, also involves key stakeholders such as the three local cities, representatives from area post-secondary schools, local electric and gas utilities, non-profit groups and members of our business community. The following table provides a status update on the completion of the PCP milestone framework for the corporate and community scope.

**Table 1. PCP Milestone Program and Status for the Region of Waterloo**

Milestone Description		Corporate	Community
<b>Milestone 1</b>	Create a GHG emissions inventory and 10-year forecast	<i>Achieved May 2011</i>	<i>Achieved June 2012</i>
<b>Milestone 2</b>	Setting an emissions reductions target	<i>Achieved May 2011 (new target set Oct.2013)</i>	<i>December 2013 - Pending approval of recommendations within this report</i>
<b>Milestone 3</b>	Developing a local action plan	<i>Achieved May 2011</i>	<i>December 2013 - Pending approval of recommendations within this report</i>
<b>Milestone 4</b>	Implementing the local action plan or a set of activities	<i>Achieved October 2013</i>	<i>Requires action recommended within this report</i>
<b>Milestone 5</b>	Monitoring progress and reporting results	<i>Achieved October 2013</i>	<i>Requires action recommended within this report</i>

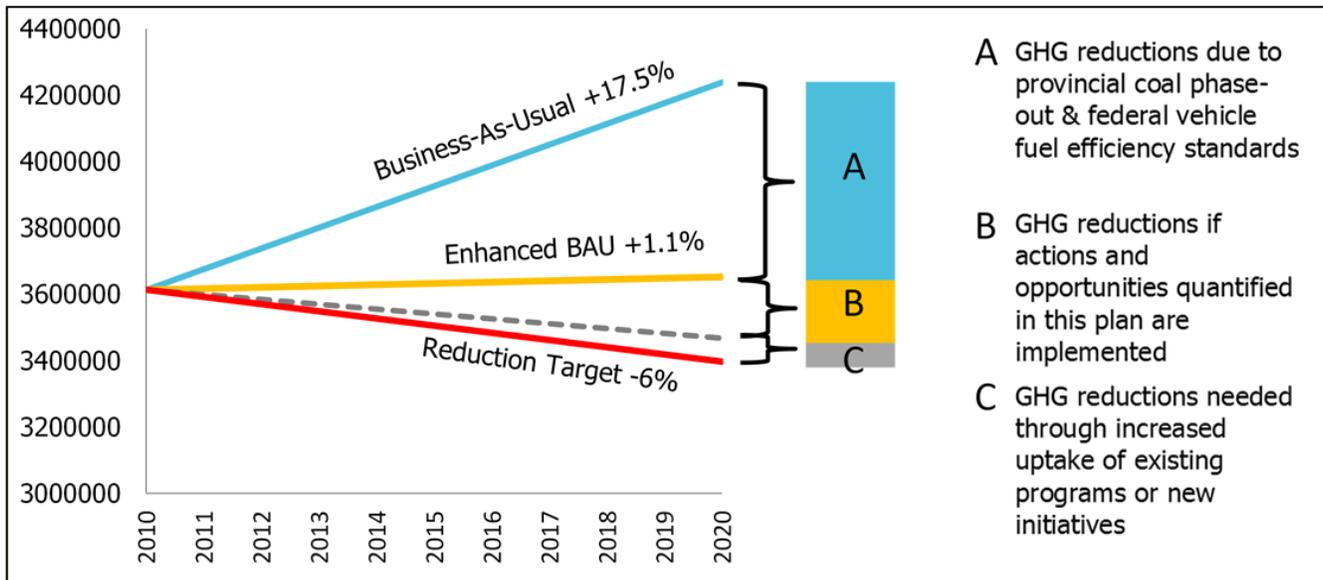
### Community GHG Reduction Target

Waterloo Region's community GHG emissions in 2010 were estimated at 3.6 million tonnes per year. These community emissions are forecasted to grow more than 17% by the year 2020 largely due to projected population growth and the associated increase in demand for energy and fuel. The anticipated population growth within Waterloo Region is estimated to result in approximately 100,000 more people living in 40,000 new households and almost 80,000 new vehicles owned locally by 2020. Any GHG reduction target has to first offset this anticipated growth in emissions before making any additional absolute reductions below the 2010 base year emission levels.

A goal was set early on to establish one common reduction target for the community to be endorsed by all local municipalities participating in the PCP program in order to solidify the collaborative nature of the ClimateActionWR work. Based on consultations with municipal partners and other stakeholders through the ClimateActionWR planning process, a community GHG reduction target of 6% below 2010 levels by 2020 is recommended for Waterloo Region. This target was recently approved by City Councils at Cambridge, Kitchener and Waterloo during the month of November 2013.

The recommended target strikes a balance between a level that is achievable and ambitious as it includes GHG reduction estimates for many initiatives currently in the plan yet still requires continued innovation and implementation of additional actions to be identified in the future as our community continues to grow. It is expected that much of the forecasted growth in emissions will be offset from the estimated impact of federal vehicle fuel-efficiency standards by 2020 and the current provincial phase out of coal-based electricity generation in Ontario. After this impact is considered, Waterloo Region will still need to work together to implement actions that collectively reduce at least 256,000 tons of GHGs in order to achieve the reduction target of 6% - the equivalent of taking 56,000 cars off the road. These different current and forecasted emission levels are illustrated in figure 1.

**Figure 1. Forecasted Community GHG Emissions (Tonnes) for Waterloo Region: 2010 – 2020**



**Community Action Plan**

Over the past few years a significant amount of community dialogue and consultation has led to the development of an integrative Community Climate Action Plan (summary included in attachment A). The action plan, although focussing on measuring progress in reducing GHG emissions from activities within Waterloo Region, will achieve a number of important benefits to the community when implemented. Some of these benefits include the following:

- Strengthening Our Local Economy – Mitigation projects, like those in the ClimateActionWR Plan, encourage the growth of the region’s innovative, diverse and resilient low-carbon economy by creating employment opportunities and boosting other related sectors across Waterloo Region.
- Reducing the Cost of Infrastructure Renewal and Adaptation – Investing in low carbon infrastructure and programs that optimize utilization of natural resources, reduce GHGs, adapt to climate change and produce cost savings all contribute to slowing the increase of local infrastructure costs.
- Increasing Energy Security – Improving energy security in Waterloo Region ensures that reliable and affordable sources of energy are available to maintain the daily functions of our homes, businesses and community services.
- Improving Public Health and Air Quality – Local projects that encourage more active transportation and decrease emissions that contribute to smog will result in improvements to air quality and the increased well-being of our residents.

The full action plan document (available online at: [www.climateactionwr.ca](http://www.climateactionwr.ca) ) provides more detail on these benefits including a summary of an economic impact study that was conducted based on implementation of a portion of the action plan. Highlights of these economic benefits for this community from implementation of this subset of actions include the following:

- \$350 million value added to local economy
- Generation of over 5,000 person years of employment
- Energy cost savings of over \$21 million for households/businesses within Waterloo Region.

The action plan includes numerous initiatives and for each identifies the corresponding organization(s) that would lead, collaborate on and/or facilitate implementation. The specific actions or potential opportunities that the Region of Waterloo is either identified as a lead partner or collaborator are listed in attachment B. Many of these initiatives are either already included in the Region's corporate GHG action plan or are a part of other strategic plans such as the Regional Transportation Master Plan which will help reduce some of the growth in vehicle fuel consumption by enabling more sustainable modes of travel as the community continues to grow (e.g. transit, cycling, walking, carpooling).

Any initiatives involving the Region which require new allocation of staff time or financial resources will be subject to the normal approval processes within the Regional decision-making frameworks (e.g. annual budgets). Similar to the Region's commitment to the corporate GHG action plan, where Regional initiatives are not feasible for implementation within the timeframe of the community plan (2013 – 2020), the commitment expected from the Region is to continually work with staff and external stakeholders to identify additional alternatives to achieving the GHG reduction target.

### **Collaborative Implementation**

To date, the ClimateActionWR initiative has been a collaborative endeavour led primarily by Sustainable Waterloo Region (SWR), REEP Green Solutions and the Region of Waterloo with direct support from the Cities of Cambridge, Kitchener and Waterloo. This collaboration has been extremely successful in terms of raising external grants, leveraging expertise and creating synergies and economies of scale amongst participants (see progress reports: CR-FM- 12-009, dated May 29, 2012 and, CR-FM-12-018 dated October 16, 2012). The action planning process also included involvement of various other organizational and individual stakeholders within Task Forces who met five times during a nine month period. Community engagement also included public forums and on-line social media mechanisms.

During the community consultation conducted within the action planning process, collaboration amongst different stakeholders has been identified as an ongoing critical success factor as no one organization has the existing resources or authority to administer the action plan in its entirety. The current collaborative agreement between the Region and SWR/REEP has been in place since June 2011 and expires December 31, 2013 and, consequently, a new structure for administering the plan needs to be considered in order to coordinate implementation and progress reporting activities amongst the different stakeholders.

Based on best-management practices in other communities (e.g. Durham Region, Peterborough, Hamilton and Calgary), the Implementation Strategy section of the action plan recommends that a similar collaborative structure be continued into the implementation phase by establishing a Leadership Team with cross-community representation and assigning a dedicated plan manager in order to successfully reach the community GHG reduction target. This Leadership Team would be utilized through to 2020 as the means that enable the Region and three local Cities to achieve PCP Milestone #4 (Implementation) and Milestone #5 (Monitoring and Reporting) for the community scope. The Implementation Strategy within the full action plan further outlines four strategic objectives of the recommended governance and administrative structures as follows:

- A. Collaborate among municipalities and other organizations to optimize collective impact.
- B. Move actions towards implementation, advance opportunities, and identify new initiatives for consideration.
- C. Engage the community by facilitating open dialogue and increasing stakeholder participation in local programs.
- D. Monitor action and report measurable results.

A terms of reference for the new leadership and implementation structure will be established via formal agreements to initially outline the new collaborative roles and responsibilities with SWR and REEP as administrators of the Action Plan as well as the three local Cities and the Region as core implementation partners. These core partnership agreements will be developed to the satisfaction of the Regional Solicitor and Chief Purchasing Officer. Other stakeholders may also be invited to join the Leadership Team, advisory committees or project oriented working groups on an as needed basis to further broaden the breadth and effectiveness of the implementation activities.

#### **CORPORATE STRATEGIC PLAN:**

Focus Area 1 - Protect and Enhance the Environment:

- Objective 1.2 – Reduce Greenhouse gas emissions and work to improve air quality

Focus Area 2 – Growth Management and Prosperity:

- Objective 2.3 Support a diverse, innovative and globally competitive economy.

Focus Area 5 - Service Excellence:

- Objective 5.6 Strengthen and enhance partnerships with area municipalities, academia, community stakeholders and other orders of government

#### **FINANCIAL IMPLICATIONS:**

There are no new impacts to the 2014 budget from the initiatives outlined in this report. Several Regional actions are already in progress from previous budget cycles (e.g. RTMP, Regional Energy Conservation Office). The financial resources required to support the coordinated and collaborative management and administration of the community plan, as described above, is initially expected to be shared by the Region and the three local Cities for the first year of overseeing implementation. The Region's contribution to the collaborative management of the plan in 2014 is already included in Corporate Resources capital budget and is estimated to be approximately \$25,000. Any agreements developed for this collaborative will be prepared in consultation with the Region's Finance and Legal departments then circulated to the aforementioned core administrative and implementation partners. Staff will need to report back to Council regarding the long-term management of the plan and make recommendations for ongoing support as part of the 2015 budget cycle after conducting an evaluation of the new leadership and implementation structure for the plan.

#### **OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:**

Development of this report included consultation with the Environmental Leadership Committee with representation from all seven Regional departments.

#### **ATTACHMENTS:**

Attachment A: A Climate Action Plan For Waterloo Region: Summary Version (*Attached separately*)

\* Summary version available online: [www.climateactionwr.ca/actionplan](http://www.climateactionwr.ca/actionplan)

Attachment B: Actions in Plan for which the Region is Identified as Lead Partner or Collaborator

**PREPARED BY:** *David Roewade*, Sustainability Planner, Corporate Resources

**APPROVED BY:** *Gary Sosnoski*, Commissioner, Corporate Resources

## ATTACHMENT B: Actions for which the Region is Identified as Lead Partner or Collaborator

ACTION	Lead(s)	Potential Collaborator(s)	Implementation Status
<b>Regional Transportation Master Plan:</b> Projected shifts in transportation towards more sustainable modes of travel resulting in less fuel consumed per passenger vehicle km travelled (e.g. transit, cycling, walking, carpooling).	<ul style="list-style-type: none"> <li>• Region of Waterloo</li> </ul>	<ul style="list-style-type: none"> <li>• Area municipalities</li> </ul>	Implementation in-progress
<b>Corporate (Regional) GHG Reduction Initiatives</b> - specifically those that reduce stationary energy consumption (electricity and natural gas) as part of the community emissions inventory.	<ul style="list-style-type: none"> <li>• Region of Waterloo</li> </ul>	<ul style="list-style-type: none"> <li>• Local energy utilities (rebates)</li> </ul>	In-progress or planned as part of current Corporate GHG Action Plan and Energy Office projects aimed at improving energy efficiency and conservation.
<b>Regional Electric Vehicle Charging Network</b> – collaborate to provide enough public charging stations to support consumer adoption of 1000 EVs by the year in 2020.	<ul style="list-style-type: none"> <li>• Region of Waterloo</li> </ul>	<ul style="list-style-type: none"> <li>• Area Municipalities</li> <li>• Sustainable Waterloo Region</li> <li>• Various public/ private sector stakeholders</li> </ul>	In progress: Region to install 3 additional public charging stations as well as encourage other partners to do the same in various locations around the community
<b>LED Streetlights</b> - upgrade to light-emitting diode (LED) technology as high wattage streetlights come due for replacement.	<ul style="list-style-type: none"> <li>• Region of Waterloo</li> <li>• Area municipalities</li> </ul>	Local electrical utilities (rebates)	In progress: Pilot projects being evaluated. Staff will further investigate the business case of the initiative before bringing forward a recommendation.
<b>Region-wide Anti-Idling Campaign/ Bylaw</b> – reduction of unnecessary vehicle idling and tail-pipe emissions.	<ul style="list-style-type: none"> <li>• Region of Waterloo</li> <li>• Area municipalities</li> </ul>		Staff to investigate feasibility of building on previous education campaigns as well as existing street signage and by-laws established by local cities.

ACTION	Lead(s)	Potential Collaborator(s)	Implementation Status
<b>Low Emission or Hybrid Taxis:</b> Develop an incentive program to accelerate shift of all taxis operating in the region to low emission or hybrid electric models.	<ul style="list-style-type: none"> <li>• Region of Waterloo</li> </ul>		Not implemented yet - Further investigations and budget approval required in the future
<b>Expansion of Local Car Share System</b> – expand fleet and membership, on average – each new member reduces personal vehicle kilometres travelled by approximately 1,740km/year.	<ul style="list-style-type: none"> <li>• Community Car Share</li> </ul>	<ul style="list-style-type: none"> <li>• Region of Waterloo and Area Municipalities</li> <li>• Various private sector stakeholders</li> </ul>	In-progress: current municipal/regional support through corporate membership and provision of numerous parking spaces around the community
<b>Bike Share Systems</b> – pilot a public bike share system similar to the local car share program.	<ul style="list-style-type: none"> <li>• Grand River Public Bike Share</li> <li>• The Working Centre</li> </ul>	Region of Waterloo and Area Municipalities	In progress: Two pilot projects in different stages of implementation
<b>Integrated Community Energy Solutions:</b> Work with local utilities to explore and develop renewable and alternative energy generation opportunities; explore integrative energy technologies and infrastructure to maximize performance, secure energy reliability and cut costs.	<ul style="list-style-type: none"> <li>• Utilities</li> <li>• Universities</li> </ul>	<ul style="list-style-type: none"> <li>• Region of Waterloo and Area Municipalities</li> <li>• Various private sector community stakeholders,</li> </ul>	Not implemented yet - Preliminary feasibility assessments still required. Interim steps could include a District Energy Feasibility Study and Strategy and a Heat and Power Survey.
<b>Zero-Impact Sustainability Incubator:</b> A zero-impact demonstration building that showcases sustainable building technologies and serves as a hub for sustainability-focused organizations and start-ups.	<ul style="list-style-type: none"> <li>• Sustainable Waterloo Region</li> </ul>	<ul style="list-style-type: none"> <li>• City Economic Development Departments</li> <li>• Region of Waterloo</li> </ul>	Preliminary investigations being led by Sustainable Waterloo Region