



**Report:** PDL-CPL-17-14

## **Region of Waterloo**

### **Planning, Development and Legislative Services**

#### **Community Planning**

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**To:** Chair Tom Galloway and Members of the Planning and Works Committee

**Date:** June 6, 2017                      **File Code:** D06-80

**Subject:** **Progress Report on Community Greenhouse Gas Action Plan**

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#### **Recommendation:**

That the report, entitled “Our Progress, Our Path: An Update on Waterloo Region’s Community Carbon Footprint” as **Attachment A**, and the “ClimateActionWR Implementation Overview” as **Attachment B** be submitted to the Federation of Canadian Municipalities for formal acknowledgement of the Region of Waterloo’s fulfillment of Community Milestone 4 and 5 within the Partners for Climate Protection program, and;

And That staff continue to work with the ClimateActionWR collaborative to establish a long-term community greenhouse gas reduction target for Council consideration as described in report PDL-CPL-17-14, dated June 6th, 2017.

#### **Summary:**

This report provides a progress update on the Community Greenhouse Gas Action Plan and Reduction Target approved by Regional and Area City Councils in 2013 (report CR-FM-13-022, dated December 3, 2013). Community GHG emissions at year-end 2015 decreased by approximately 5% below the base year of 2010. This decrease is largely due to the phase out of coal from the provincial electricity grid. However there are several noteworthy areas of local progress highlighted within the detailed the emissions report as **Attachment A** and implementation status update as **Attachment B** prepared for the FCM Partners for Climate Protection Secretariat. Staff continue to work with the ClimateActionWR collaborative and over the next year will be engaging the community to explore a long-term reduction target for Waterloo Region for further consideration by Council in 2018.

**Report:**

Regional Council previously approved a Community Greenhouse Gas (GHG) Action Plan and Reduction Target (report CR-FM-13-022, dated December 3, 2013). The action plan and target was also unanimously approved by the Cities of Cambridge, Kitchener and Waterloo Councils. The plan and target is part of the Region's commitment to the national Partners for Climate Protection (PCP) program administered by the Federation of Canadian Municipalities (FCM) and ICLEI Canada (CR-FM-10-007, dated April 6, 2010). This voluntary initiative, which involves over 300 municipalities in Canada, requires implementation of actions towards achieving a GHG reduction target along with progress reporting as actions are implemented and results are monitored.

As part of the Action Plan, a collaborative partnership was established with the three area Cities and two local organizations: REEP Green Solutions and Sustainable Waterloo Region (SWR). This collaboration is referred to as ClimateActionWR which is lead by REEP and SWR. ClimateActionWR has prepared a summary report which provides a progress update on community GHG emissions up to calendar year-end 2015 entitled "Our Progress, Our Path: An Update on Waterloo Region's Community Carbon Footprint" as **Attachment A**. A more detailed implementation status report is prepared as **Attachment B** for review by the FCM PCP Secretariat for their consideration in formally acknowledging the Region and area Cities for fulfillment of Community Milestone 4 and 5 of the Partners for Climate Protection program. Details of the program milestones and their status are included in **Table 1** below:

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

Community Milestones		Status	Notes
<b>Milestone 1</b>	Creating a greenhouse gas emissions inventory and forecast	Achieved in 2012	
<b>Milestone 2</b>	Setting an emissions reductions target	Achieved in 2013	<i>6% below 2010 by 2020</i>
<b>Milestone 3</b>	Developing a local action plan		<i>A Climate Action Plan for Waterloo Region: Living Smarter in 2020</i>
<b>Milestone 4</b>	Implementing the local action plan or a set of activities	<b>Ready for FCM review as recommended in this report</b>	<i>Activities ongoing through 2020</i>
<b>Milestone 5</b>	Monitoring progress and reporting results		<i>Next major progress report in 2021</i>

Community GHG emissions at calendar year-end 2015 decreased by approximately 5% below the base year of 2010 as shown in summary within Table 2 below.

**Table 2 – Waterloo Region Community GHG Emissions 2010 - 2015**

<b>Waterloo Region GHG Emissions</b>	<b>2010 (Tonnes)</b>	<b>2015 (Tonnes)</b>	<b>% change (2010 - 2015)</b>
Transportation	2,012,007	2,112,547	+ 5%
Workplaces	1,393,617	1,150,951	- 17%
Homes	889,091	797,172	- 10%
Agriculture	213,559	206,615	- 3%
Community Waste	45,774	50,828	+ 11%
<b>TOTAL</b>	<b>4,554,048</b>	<b>4,318,113</b>	<b>- 5.2%</b>

The decrease in community emissions is largely due to the phase-out of coal within the provincial electricity grid. If coal had not been phased-out, our community would have experienced a 4.4% increase in GHG emissions between 2010 and 2015. This means that unless action is accelerated at the local level, our community will not likely see further reduction over the 2016 to 2020 time period.

Electricity consumption however was fairly flat between 2010 and 2015 with increases of only 0.3% and 1.2% in workplaces and the residential sector respectively. This can be seen as an efficiency improvement when compared against broader demographic trends for Waterloo Region which show that population grew by 5.7%, the number of employees increased by 7.5% and the GDP grew by 14% over the same period of time. Natural gas consumption increased by 10% in homes but this is closely related to the difference in space heating requirements during the colder winter of 2015 compared to 2010. Local transportation emissions, which remains at about half of all Waterloo Region's GHGs, grew by over 100,000 tonnes as the number of registered vehicles within the community has increased significantly since in 2010. More details regarding the changes in local emissions and related influences can be found in **Attachment A**.

There are several noteworthy areas of local progress as listed below:

- Waterloo Region is more electric vehicle (EV) friendly – In 2010 there was only 1 EV registered within the region and 1 private charging station. By December 2016, the community had 279 EVs and 42 public charging ports. As electricity is much cleaner than gasoline and diesel fuel, annual emission reductions from this transition to cleaner transportation are estimated to be well over 800 Tonnes. Electrically powered vehicles also can save drivers from \$1,500 - \$2,000 annually on gas and maintenance.

- Waterloo Region continues to provide diversity in choice of how to get around the community - Community Carshare has 87 parking locations in Waterloo Region and 30 stationary cars. Their membership has expanded to over 900 members, including 20 corporate memberships. Members drive much less compared to owning their own car and as such, an estimated 360 tonnes of GHG emission are avoided per year. The local Bikeshare program also is growing.
- Energy utility companies continue to help residents and employers save money on their utility bills. Local electric utilities provided \$10.5 million in incentives between 2011-2014 which attracted another \$36 million in private investment from proponents implementing energy-efficiency or conservation projects with an average payback of two and a half years. These projects were estimated to have saved over 3,700 tonnes of GHG emissions. Natural gas programs also have helped community members in a similar way with almost 600 tonnes reduced from more efficient use of natural gas in Kitchener alone between 2011 – 2015.
- Organics Waste Diversion not only saves valuable landfill space and creates a re-useable soil amendment it also reduces GHG emissions. In 2015, the local Green Bin program is estimated to have avoided close to 2,500 tonnes of GHG emissions. Since inception, the Green Bin has reduced about 14,000 tonnes of GHG emissions compared to if the organic waste was sent to the landfill.
- Other community programs and organizations are helping Waterloo Region transition to a low-carbon economy while maintaining or improving quality of life. Examples include the Sustainable Waterloo Region Carbon Initiative for organizations which since inception has facilitated a GHG reduction of over 42,000 tonnes and REEP Green Solutions home energy audit program in partnership with Union Gas has helped residents reduce over 12,000 tonnes of GHG emissions since 2010.

### **Next steps**

As the community grows, more homes, businesses, vehicles and public infrastructure can potentially contribute to increased GHG emissions. However, an increasing number of communities around the world are demonstrating that community growth and development can occur while lowering these emissions in addition to achieving several other economic, environmental and social goals.

There is strong interest locally to explore the development of a long-term GHG reduction target for Waterloo Region. This was demonstrated recently at Kitchener City Hall when all local MPs attended a Climate Town Hall event in advance of the Paris accord. Over 300 participants met to discuss the need for accelerated action and ongoing commitment to the important goal of limiting emissions by the year 2050.

In the Region's Corporate Strategic Plan for 2015 – 2018, it is acknowledged that a long-term community GHG reduction target would be investigated in consultation with community stakeholders. ClimateActionWR is planning stakeholder engagement later in 2017 and early 2018 to explore for this purpose. Staff will bring the results of this community consultation forward for Council consideration in 2018. This timing will coincide with the completion of the Community Energy Investment Strategy, led by the Region in collaboration with the area municipalities and utilities, to help identify the types of major initiatives that would achieve this shift towards a low carbon economy.

### **Corporate Strategic Plan:**

This report directly addresses the Focus Area Environment and Sustainable Growth within the Region's Corporate Strategic Plan with respect to the Strategic Objective 3.3 Enhance efforts to improve air quality and Action 3.3.2 Work with local stakeholders to continue to reduce emissions of greenhouse gases (GHGs) at a Community Scale and consider establishing a long-term GHG reduction target.

### **Financial Implications**

The Region of Waterloo's approved 2017 Community Planning Capital Program includes a budget of \$522,000 in 2017 to 2021 for Community Sustainability (project 22036) to be funded from the Region of Waterloo 2017-2021 operating budgets (39.8%; \$208,000), and the three cities (60.2%; \$314,000). Of this budget, \$471,000 is committed to the ClimateActionWR initiative for overall plan management, which includes preparing and delivering all public communications and events, meeting facilitation and progress reporting. Collaborative agreements which address this cost-sharing arrangement, as well as governance, are in place until 2021 when reporting on the 2020 reduction target concludes.

### **Area Municipal Consultations/Coordination:**

Staff at the Cities of Cambridge, Kitchener and Waterloo were consulted in the preparation of the report and attachment. During May 29<sup>th</sup> and 30<sup>th</sup> 2017, the three City Councils approved similar recommendations to this report regarding the attachments and a commitment to long-term target setting to take place over the next year.

### **Attachments:**

Attachment A – Our Progress, Our Path: An Update on Waterloo Region's Community Carbon Footprint (Distributed separately)

Attachment B – ClimateActionWR Implementation Overview

**Prepared By:** David Roewade, Sustainability Specialist

**Approved By:** Rod, Regier, Commissioner, Planning, Development and Legislative Services

## **Attachment A**

Our Progress, Our Path: An Update on Waterloo Region's Community Carbon Footprint  
(Distributed separately)

Electronic copies are available upon request from the following email address:

[connect@climateactionwr.ca](mailto:connect@climateactionwr.ca)

**Attachment B**

ClimateActionWR Implementation Overview

Electronic copies are available upon request from the following email address:

[connect@climateactionwr.ca](mailto:connect@climateactionwr.ca)