

Region of Waterloo
Planning, Development, and Legislative Services
Community Planning

To: Planning and Works Committee
Meeting Date: April 4, 2023
Report Title: Community Greenhouse Gas Emissions Inventory 2020

1. Recommendation

For information

2. Purpose / Issue:

To provide Council the 2020 community greenhouse gas (GHG) emissions inventory results.

3. Strategic Plan:

Transformational climate action addresses all of the Strategic Focus Areas of the Strategic Plan, including Sustainable Transportation, Thriving Economy, and Healthy, and Safe and Inclusive Communities. Reducing GHG emissions is a key component of the Region's Strategic Imperative of Climate Action, and is directly addressed by Strategic Objective 3.1: Reduce greenhouse gas emissions.

4. Report Highlights:

- ClimateActionWR conducts a community greenhouse gas (GHG) emissions inventory for Waterloo Region every five years, with 2010 established as the baseline year.
- The target selected for this first decade of measurement and reporting was a 6% reduction in emissions by 2020 below 2010 levels. The 2015 community inventory reported a 5.2% emissions reduction below 2010 levels, which was largely attributed to the phasing out of coal-fired electricity generation in Ontario.
- Community emissions in 2020 decreased by 14% below the 2010 baseline levels (Figure 1). However, 2019 community emissions only decreased by approximately 4% below 2010, which represents an upward trend from the 2015 emissions inventory results. This suggests that the 2020 inventory results were directly influenced by changes in community travel and consumption patterns associated with the COVID-19 pandemic. The extent to which these changes are

temporary or permanent is still unknown; subsequent inventories conducted over the next three years will shed light on this uncertainty.

- Although incremental changes since 2010 have led to a small but important decrease in *per-capita* carbon emissions, transformational changes will be required to meet the newly established community target of a 50% reduction in GHG emissions by 2030 below 2010 levels. The TransformWR strategy outlines the actions that municipalities, businesses, and individuals can take to meet this ambitious target.
- The Region can take a strong leadership role and catalyze action across the community by connecting the bold direction established in TransformWR to our day-to-day decisions. To this end, staff will establish a dedicated 'climate implications' section in future Council reports that will be informed by new and existing decision-support tools, including the Climate Implications Tool and the Corporate Carbon Budget described in Report PDL-CPL-23-006.

5. Background:

ClimateActionWR is a collaborative led by Reep Green Solutions and Sustainable Waterloo Region and includes the eight municipalities in Waterloo Region. This collaborative coordinates the implementation of the TransformWR strategy, measures and monitors progress on GHG emissions reductions, and engages the community in climate action initiatives. As a member of this ClimateActionWR, the Region is committed to taking action to achieve the long-term community target of 80% GHG emissions reduction below 2010 levels established in TransformWR, as well as the interim target of 50% reduction by 2030 that was endorsed by Regional Council in 2021.

In 2012, ClimateActionWR conducted a baseline GHG emissions inventory for the year 2010, which identified the total GHG emissions emitted by the community in Waterloo Region, inclusive of all sectors. At this time, the collaborative also established an emissions reduction target of 6% by 2020 below 2010 levels. The subsequent 2015 re-inventory reported a 5.2% emissions reduction below the 2010 baseline; this change was largely attributed to the phasing out of coal-fired electricity generation in the Ontario. Our Progress, Our Path 2020 (Appendix A), the second and final re-inventory in this reporting cycle, indicates that community-scale GHG emissions decreased by 14% in 2020 below 2010 baseline levels. However, this significant reduction is likely due to the impacts of the COVID-19 pandemic, which has led to changes in consumption and travel patterns across the community and the world. The degree to which these changes are temporary or permanent is not yet known. For this reason, an inventory was also conducted for 2019, as this year provides a snapshot of typical activities and behaviours observed before the pandemic. Accordingly, an increase of 110,006 tonnes CO₂e was observed between 2015 and 2019.

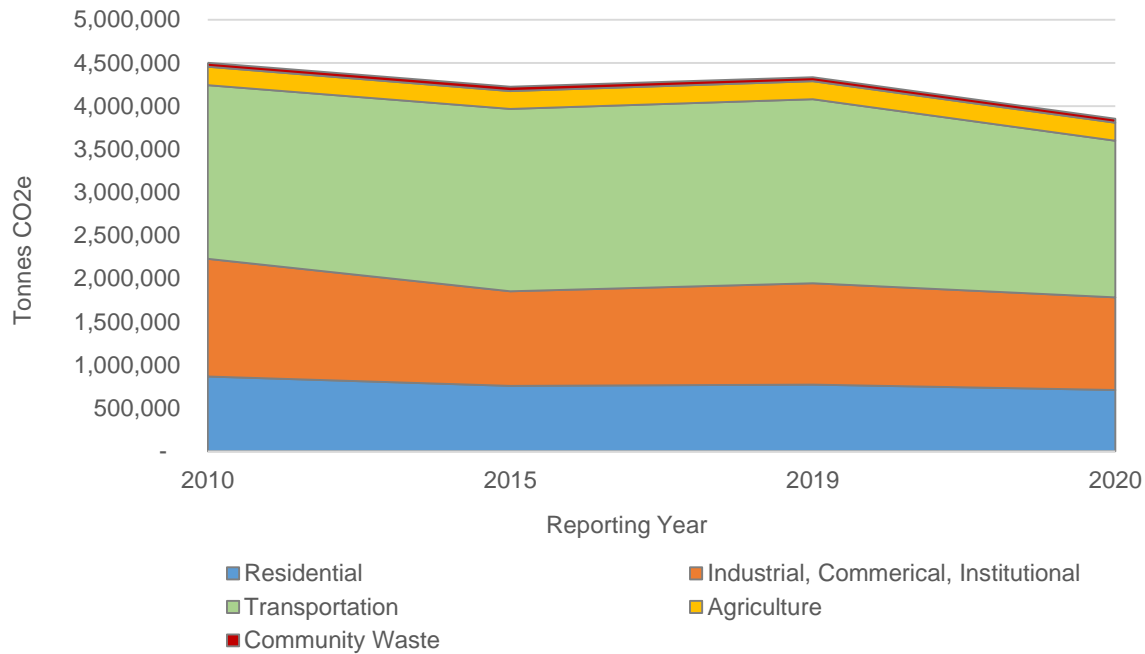


Figure 1: Community GHG emissions from 2010 to 2020

The transportation sector continues to generate the largest portion of community emissions (approximately 48%); this sector experienced a 6% increase in emissions in 2019 compared to the 2010 baseline, despite increased fuel efficiency measures. During this period, the rate of passenger vehicle growth more than doubled that of population growth, and a 62% increase in the number of passenger light trucks was observed.

6. Area Municipality Communication and Public/Stakeholder Engagement:

Area Municipality Communication:

The Region actively collaborates with Area Municipalities, local utilities, and the public on transformational climate action and energy transition initiatives through the ClimateActionWR partnership and WR Community Energy, which the Region funds jointly with Area Municipal and utility capacity-holders.

7. Financial Implications:

Nil

8. Conclusion / Next Steps:

Our Progress, Our Path 2020 represents the final chapter of the first community climate action plan. The focus of ClimateActionWR will now shift to implementing the actions outlined in the TransformWR strategy, which are intended to support the achievement of the following outcomes by 2050:

1. Most trips are taken using active transportation, with the support of a robust public transit system
2. Remaining personal and commercial vehicles are zero emissions vehicles
3. Waterloo Region uses less, wastes less, and no longer disposes of organic matter in landfills
4. Waterloo Region has a thriving local food system built on local farming and food production and processing that feeds much of our community
5. Waterloo Region has leveraged reducing GHG emissions to increase equity, prosperity, and resiliency for all

In the next GHG re-inventory, progress will be measured toward these outcomes as well as the 2030 target of a 50% emissions reduction below 2010 levels. Results of the 2020 inventory suggest that incremental changes will not be sufficient to achieve this target. Rather, significant and transformational efforts will be needed across all sectors. It follows that the Region now has the opportunity to lead by example and take bold action to address the climate emergency. The Region's corporate emissions inventory results for 2021 and a summary of key initiatives underway can be found in Report PDL-CPL-23-006.

9. Attachments:

Appendix A: Our Progress, Our Path 2020: Community GHG Re-Inventory Report

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