



MEMORANDUM

TO: Mayor Bonnette and Members of Council

FROM: Michael Dean, Senior Climate Change & Energy Planner

DATE: November 11, 2020

MEMORANDUM NO.: ADMIN-2020-0011

RE: Low Carbon Transition Strategy Update

PURPOSE OF THE MEMORANDUM:

To inform Council on the progress towards the completion the Low Carbon Transition Strategy

BACKGROUND:

In May 2019, Council declared a climate change emergency and instructed staff to develop a plan to achieve net-zero greenhouse gas (GHG) emissions by 2030. In response, Town Staff initiated the development of a Low Carbon Transition Strategy (LCTS) which would update and expand on the actions and strategies developed in the 2014 Mayor's Community Energy Plan. The LCTS establishes a pathway to achieving the Town's net-zero goals, and put in place a framework for implementing the strategy in order to make clear progress in reducing GHGs. This memorandum is intended to update council on progress to date towards the development of the LCTS

COMMENTS:

Reference Scenario Report

In early 2020, the Town of Halton Hills hired Sustainable Solutions Group and whatif? Technologies to assist with the development of the LCTS. The first phase of the strategy development process has been focused on gathering data on energy and emissions in Halton Hills and developing the Reference Scenario Report (appendix 1). The consultants, with the assistance of Town staff, have been collecting information on energy use and processes that generate emissions within Halton Hills in order to develop an energy and emissions baseline, and developing a reference scenario base on ongoing trends and planned initiatives that projects what emissions will look like in Halton Hills if little additional action is taken. This provides important context for the development of the low-carbon scenario which will illustrate the emissions reduction pathway necessary to achieve the Town's climate change goals.

The Reference scenario report shows that in the baseline year of 2016, the Town of Halton Hills used 8.7 PJ of energy. This energy use was primarily provided by fossil fuels (81%) and transportation and residential buildings were the primary energy consumers in Halton Hills. Energy consumption and non-energy emissions (waste, agriculture, and fugitive emissions), generated 541 kt CO₂e of GHGs in 2016, or about 8.6 tCO₂e per person. The per capita emissions in Halton Hills are slightly higher than the average for the GTHA (6.9 tCO₂e/person) with the City of Toronto at 5.5 tCO₂e/person, and 7.9 tCO₂e per person in the Region of Peel. The breakdown of energy use and emissions by sector is shown in figures 1 and 2 below.

Figure 1 Baseline Energy by Sector

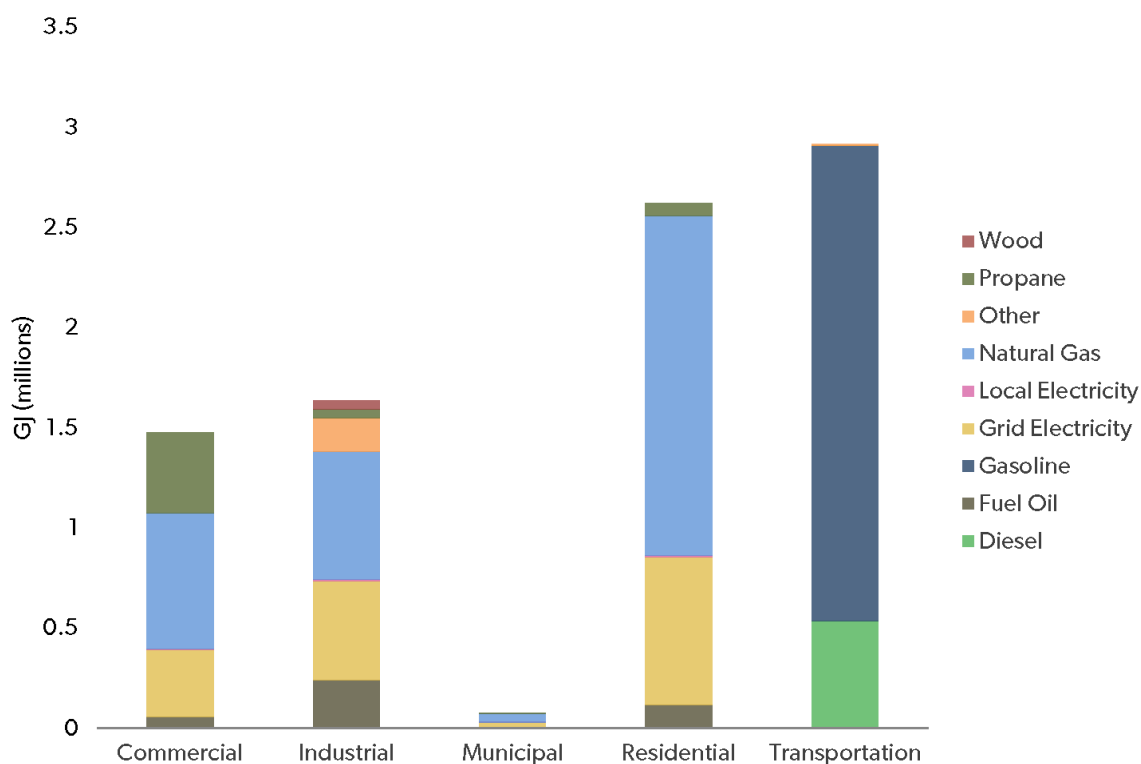
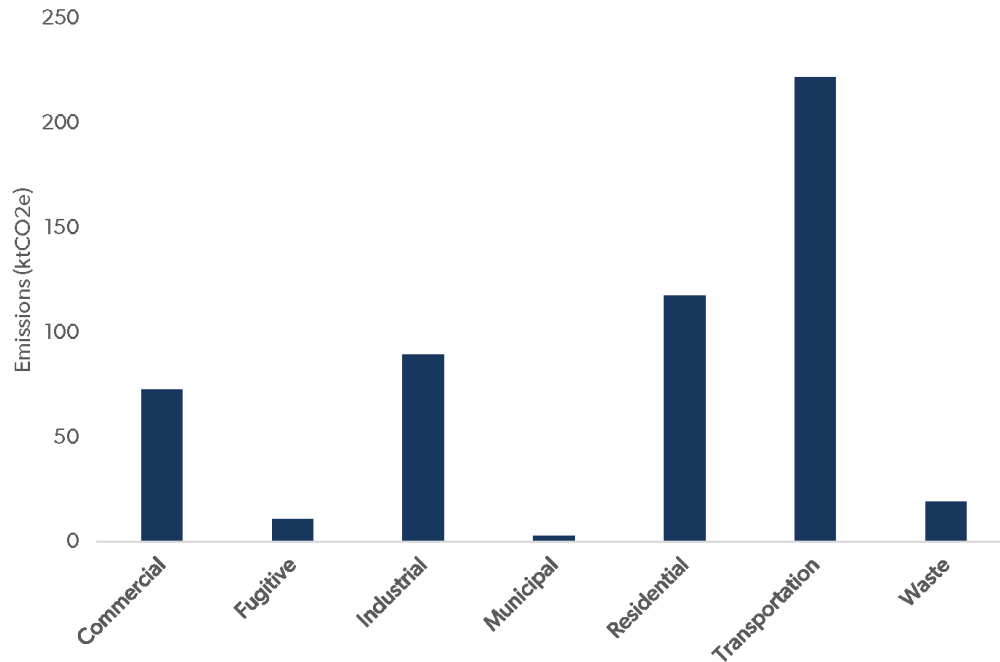
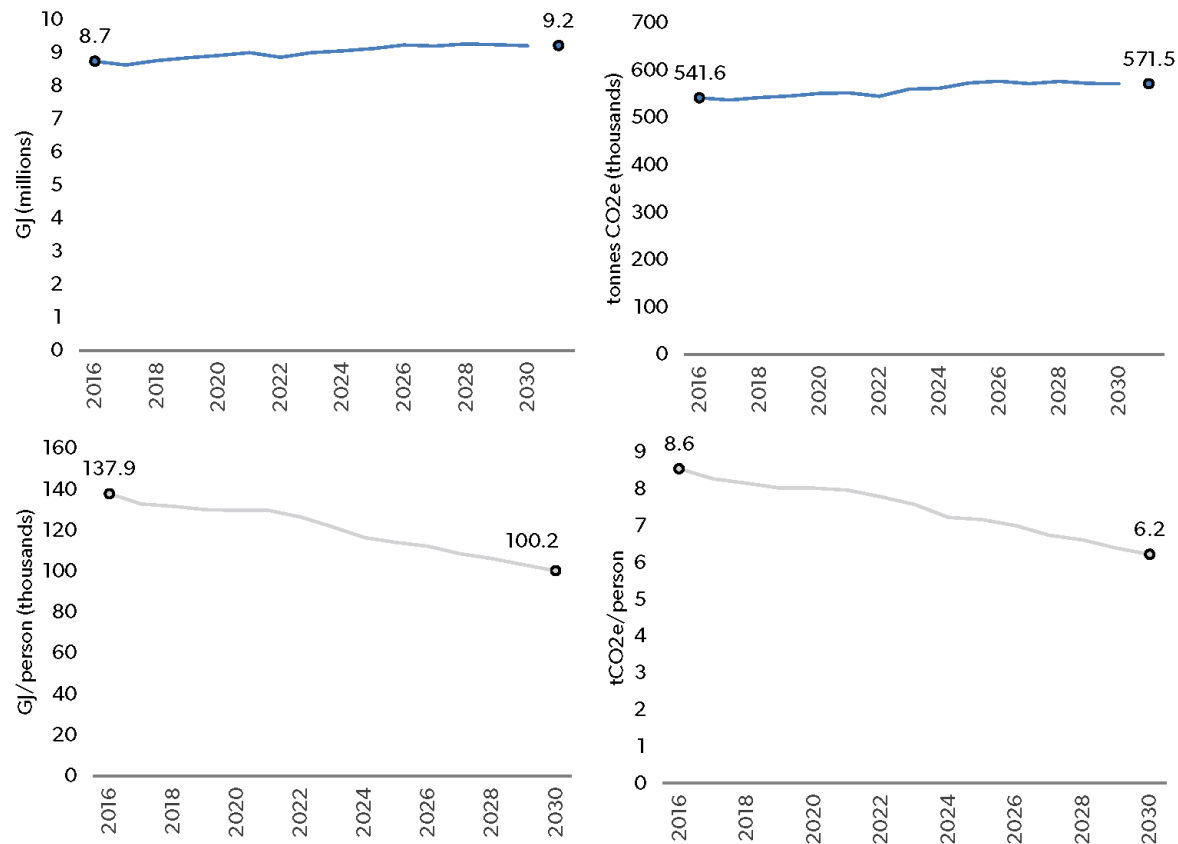


Figure 2 Baseline Emissions by Sector



In the reference scenario, energy consumption increases 5% between 2016 and 2030, while the share of fuel consumption by sector and fuel type remains fairly constant. Although total energy consumption increases during this period, per capita energy consumption declines by 27% due largely to improved vehicle efficiency, reduced vehicle use due to greater density and active transportation improvements, and improved building energy performance. Similarly, while emissions increase about 6% to 2030, per capita emissions fall from 8.6 tCO₂e per person, to 6.2 tCO₂e. The Reference Scenario report provides a detailed discussion of these trends and the data and assumptions used in developing this analysis.

Figure 3 Business-as-Planned Per Capita Emissions and Energy



Comparison to 2011 Baseline

The baseline for 2016 shows a nearly 20% reduction in emissions from the 2011 baseline used in the 2014 Mayor's Community Energy Plan. This reduction is largely driven by the phase out of coal fired electricity generation in this period. Caution should be taken, however, in drawing direct comparisons between the 2011 baseline and the updated 2016 baseline, as improved data sources and methodologies used in the 2016 inventory may also affect the totals. Nevertheless, this reduction in emissions is consistent with the impact of the coal phase out across Ontario.

Developing the Low Carbon Scenario and Implementation Plan

With the baseline and reference scenario completed, the Low Carbon Transition Strategy process is moving into the development of the Low Carbon Scenario and Implementation planning phase. This phase will involve developing a set of actions that will allow the Town of Halton Hills to meet the net-zero target established in the climate emergency declaration and establishing a framework for implementing the Low Carbon Scenario.

Because the actions necessary to achieve the Town's climate goals will require broad based action from stakeholder across the community, this phase of the plan development will involve an in-depth stakeholder engagement process. The objective of

this process will be to work directly with interested and affected parties in order to ensure a feasible, ambitious, and effective strategy is created. The engagement strategy seeks to:

1. Build understanding about the process necessary to achieve net-zero GHG emissions
2. Facilitate inclusive conversations among stakeholders in order to document community concerns and aspirations, and
3. Use community input as part of a collaborative problem-solving process with all stakeholders in order to address the challenges of getting to net-zero.

The engagement process will involve two parallel streams of engagement:

1. The Multi-Stakeholder Governance Body (MSGB): consisting of Town Staff and external stakeholders representing different sectors chosen through an open call for applications, the MSGB will provide in-depth advice and guidance throughout the LCTS development process through regular meetings.
2. A broad-based community engagement process: This process will engage the community of Halton Hills more broadly in a collaborative plan development process through a number of engagement activities, including online surveys, webinars, workshops and others.

The MSGB has now been established and will hold its first meeting on November 30th 2020. The broader public engagement process will be formally launched with a kick-off event, with additional engagement opportunities to be announced subsequently. A project page on Let's Talk Halton Hills has also been created to allow residents and other stakeholders to follow progress with plan development and provide input throughout the process.

Plan-While-Doing

In addition to their role in shaping the development of the strategy, both streams will align with the 'plan-while-doing' framework. Because of the short timeframe in which real change must be achieved, waiting to take concrete action to address climate change until after the plan is complete would create too much delay. As a result, through the LCTS process, the Town will be working with stakeholders engaged through the MSGB and community engagement process to launch pilot programs that will begin to take concrete actions to reduce GHG emissions. One example is the Home Retrofit Acceleration Program pilot which is currently under development. By engaging stakeholders in these pilots, it will be possible to develop important insights into GHG reduction strategies, build momentum for the Low Carbon Transition, and have a real impact on the Town's GHG emissions.

Net-Zero Target

The original May 2019 Climate Emergency Declaration directed staff to set a target to become a net-zero municipality by 2030. The term net-zero is commonly used in one of two ways:

1. Net-zero energy: The amount of energy drawn from the grid is equal to the amount of energy generated on-site, typically used in reference to buildings.
2. Net-zero carbon: Annual energy needs are met by non-fossil fuel sources, carbon offsets and/or carbon sequestration.

Through discussions with the consultant team, it has been recommended that the LCTS will aim to achieve net-zero carbon emissions by 2030, rather than achieving net-zero energy. This definition is different from absolute zero carbon, as some GHG emissions can remain as long as they are offset, resulting in an overall zero carbon balance.

CONCLUSION:

With the completion of the Reference Scenario Report, the establishment of the MSGB, and the initiation of the public engagement process, progress on the LCTS is proceeding as anticipated.

Reviewed and approved by,

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Dharmen Dhaliah, Senior Manager of Climate Change and Asset Management

A handwritten signature in dark ink, appearing to read 'R. Cockfield' with a stylized flourish at the end.

Richard Cockfield, Director of Strategic Planning

A handwritten signature in dark ink, appearing to read 'C. Mills' with a stylized flourish at the end.

Chris Mills, Acting Chief Administrative Officer