



REPORT

TO: Mayor Bonnette and Members of Council

FROM: Michael Dean, Senior Climate Change and Energy Planner

DATE: October 30, 2021

REPORT NO.: ADMIN-2021-0046

SUBJECT: Town of Halton Hills Low Carbon Transition Strategy

RECOMMENDATION:

THAT Report No. ADMIN-2021-0046 dated October 30, 2021 regarding the Town of Halton Hills Low Carbon Transition Strategy be received;

AND FURTHER THAT the Low Carbon Transition Strategy and priority projects be approved in principle;

AND FURTHER THAT Council direct staff to develop programs, business cases, and detailed workplans including staff resources and capital costs as necessary to support the implementation of the Low Carbon Transition Strategy;

AND FURTHER THAT Council direct staff to develop and report back regularly on progress towards implementing the Low Carbon Transition Strategy and GHG emission reduction results.

KEY POINTS:

The following are key points for consideration with respect to this report:

- In May 2019 Council unanimously declared a climate emergency and committed the Town of Halton Hills to achieving net zero carbon by 2030. The Low Carbon Transition Strategy (LCTS) directly supports that declaration by establishing a pathway to significantly lower community GHG emissions.
- Since at least 2008 the town has been acting on climate change and leading by example to implement climate change policies, plans and initiatives that reduce corporate and community greenhouse gas emissions and build awareness in the community of the solutions and opportunities available.

- The LCTS is comprised of the Low Carbon Transition Strategy Final Report and 5 technical appendices: Reference Scenario Modelling Results; Net-Zero Modelling Results; Financial Analysis Report; Table of Reference and Net-Zero Scenario Actions; and the LCTS Implementation Framework.
- The LCTS sets out a community energy vision and community goals for energy efficiency, emissions reduction, and energy relation economic savings for 2041.
- A 24-member Multi-Stakeholder Governance Committee was established by the Town from an open call for applicants, consisting of residents, youth, utility representatives, Town staff, the business community, local institutions, and environmental non-profits, whose mandate was to provide advice on the LCTS development process.
- The LCTS establishes four main action areas that put the community on the path for achieving its 2030 goals: low carbon mobility; energy efficiency and green development; and local renewable energy.
- Because of the scale and scope of the transformation required, the Town does not have the jurisdiction or resources necessary to carry out the entire program of actions outlined in the LCTS and will seek to establish external partnerships and a community governance framework to carry out aspects of the implementation.

BACKGROUND AND DISCUSSION:

In May 2019, Halton Hills Town Council declared a climate emergency and set a target of achieving net-zero carbon in the community by 2030. Since that declaration the Town has accelerated action on climate change mitigation and greenhouse gas (GHG) reductions in several areas. The Town has also created the Climate Change and Asset Management (CCAM) division to replace the former Office of Sustainability, a recognition of the more central focus on taking climate change actions. As part of the response to the climate emergency declaration CCAM staff developed the Low Carbon Resilience Framework (figure 1 below) as an overall strategy for reducing GHG emissions and building resilience to anticipated impacts of climate change.

Since 2020, CCAM staff have been undertaking a major update to the 2014 Mayor's Community Energy Plan, which would demonstrate an ambitious, evidence-based pathway to significant GHG reductions: the Low Carbon Transition Strategy. The LCTS provides a detailed analysis of current GHG emissions in the Town and presents a scenario for deep emissions reductions alongside an implementation framework which sets out key priority actions for the Town. This report summarizes the process for the development of the LCTS, conclusions of the analysis undertaken, and next steps for the implementation of the strategy.

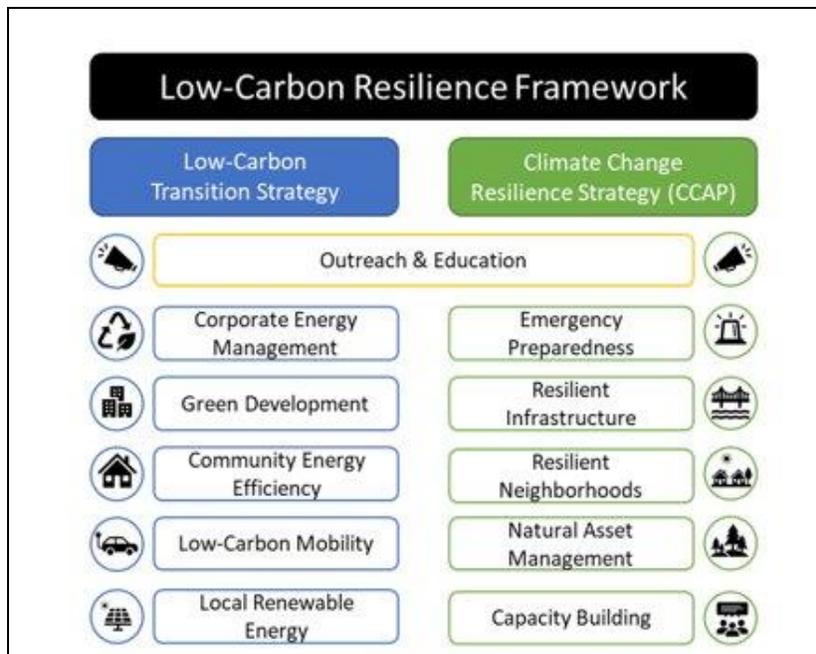


Figure 1. Town of Halton Hills Low-Carbon Resilience Framework

Low Carbon Transition Strategy

In 2020, Town Staff initiated the update to the 2014 MCEP, now called the Low Carbon Transition Strategy. Industry leading community energy planning firms Sustainability Solutions Group (SSG) and Whatif? Technologies were hired (through RFP P-016-20) to complete the strategy. The LCTS establishes the action pathways necessary to achieving the target set out in the Climate Change Emergency Declaration and addresses de-carbonizing every aspect of town wide GHG emissions from homes, transportation, industry, agriculture, and waste.

The LCTS was developed with public consultation through the following stages:

- GHG Inventory Energy Mapping
- Business as Planned Projections
- Scenario based modelling
- Future modelling
- Draft strategy including implementation actions

The results of these processes are described in the technical appendices included with the LCTS Final Report. These are:

- Reference Scenario Modelling Results
- Net-Zero Modelling Results
- Financial Analysis Report
- Table of Reference and Net-Zero Scenario Actions
- LCTS Implementation Framework

Throughout the development of this strategy, Town staff and team at SSG consulted regularly with representatives from the public and key community stakeholders through the Multi-Stakeholder Governance Committee (MSGC) – this group provided key insights throughout the process and shaped the outcomes presented here.

In addition, throughout the process of developing the LCTS, Town staff regularly provided updates to the Low Carbon Transition Steering Committee and the Halton Hills Climate Change Action Task Force.

Multi-Stakeholder Governance Committee

The 24-member MSGC was selected by the Town from an open call for applicants, based on the need for diverse stakeholder representation and relevant experience. Its membership consisted of Town residents, youth, utility representatives, Town staff, the business community, local institutions, and environmental non-profits. Their mandate was to provide advice on the LCTS development process and will end once the LCTS is completed.

The MSGC and its data and implementation/governance subcommittees were key sources of oversight and input into the LCTS. Members participated in nearly a dozen hours of meetings, in which they learned about the Town's energy and GHG emissions in a business-as-usual scenario, as well as the scale of action that would be needed to decarbonize. During these meetings, members had an opportunity to hear from experts, ask questions, share their experiences, and participate in brainstorming sessions. The MSGC helped shape the focus of the LCTS, the scale and depth of its actions, and the content of its Implementation Framework.

LCTS Development Process

In addition to meetings conducted to inform members about the ongoing work on the LCTS, the Town and consultant team created web-based surveys and forms for the MSGC to provide input on the modelling, actions, and implementation strategy for the plan. Town staff also presented updates on the LCTS process and preliminary results to the Town's Senior Management Team and to Council as part of a preliminary report in March 2021 and a Council workshop in August 2021.

Residents were also provided with opportunities to learn about the plan and provide input early on via a dedicated LCTS page on the Town's website, social media, a Let's Talk Halton Hills public engagement portal, a virtual Town Hall, and a survey.

The major public engagement and MSGC process events are summarized below.

- **June-July 2020 – Pre-engagement:** 10 interviews with cross-section of stakeholder groups to help design an engagement plan that meets the needs of the community.
- **Nov 2020 – Multistakeholder Governance Committee Kick-off Meeting:** Introduction to energy and emissions modelling, consultation of key-low carbon actions.
- **Dec 2020 – Public Virtual Open House:** Introduction to project goals and process, recorded and posted on Let's Talk Halton Hills.
- **Jan 2021 – MSGC Implementation and Governance and Data Subcommittees inaugural meetings:** review of climate projects already underway, consultation on additional low-carbon actions, feedback on data collection for reference and low-carbon scenario.
- **March 2021 – MSGC Net-Zero Modelling Results and Introduction to Implementation:** Review of initial net-zero energy and emissions modelling results and introduction to implementation planning. Consultation on implementation planning for key net-zero actions.
- **March-May 2021 – MSGC Implementation and Governance and Data Subcommittee Meetings #2 and #3:** Background education and consultation on implementation and governance options, consultation on key data challenges for low-carbon scenario.
- **May 2021 – MSGC Net-Zero Financial Results & Implementation Part 2:** Review of net-zero financial and economic modelling results and further consultation on implementation planning for key low-carbon actions.
- **May-June 2021 – Public Survey:** Seeking feedback from residents about their priorities for LCTS implementation
- **July 2021 – MSGC Draft Implementation Framework:** Review and Feedback on Draft Implementation Framework

The MSGC and the public provided critical input on potential local partners, potential expansion or development of policies and programs, and sources of investment. Answers from an implementation focused public survey are featured throughout this report. This helped inform the LCTS' near-term implementation strategy.

LCTS Outcomes:

The Town's pathway to net-zero is made up of four main action areas:

1. Low-carbon mobility: Enable travel by foot, bicycle, emissions-free transit, or electric vehicles.
2. Energy efficiency and green development: New and existing buildings are more energy efficient and are powered by renewable energy;
3. Local renewable energy: Replace fossil fuel energy with local renewable electricity and renewable natural gas; and
4. Natural assets: Protect and expand the town's natural carbon sinks, greenspaces and healthy soil, to offset some of the remaining emissions.

These four action areas are described in more detail in the LCTS Final Report. The cumulative GHG reduction impact of all projects modelled through the LCTS process are show in figure 3, below.

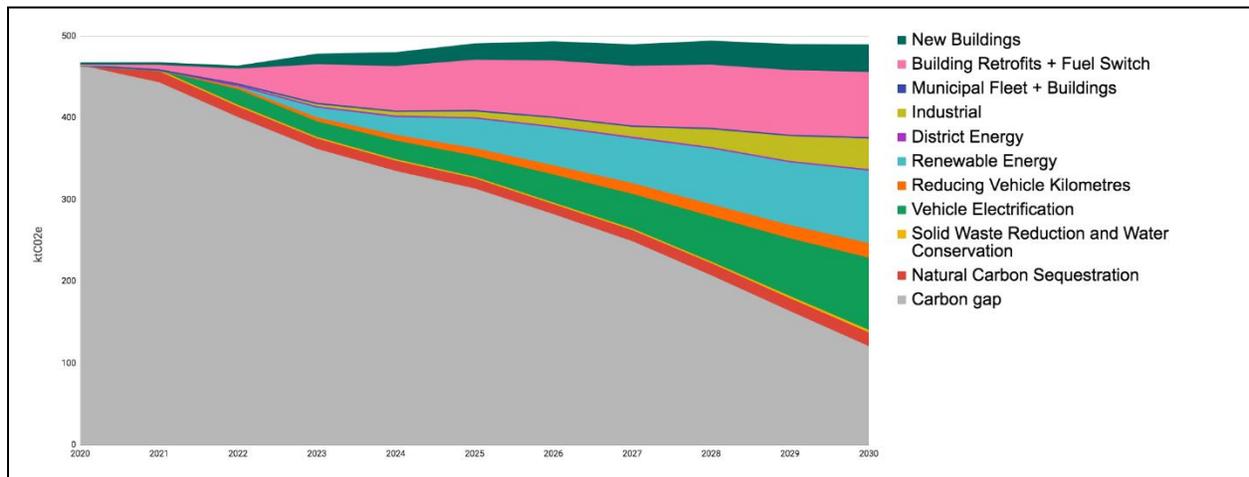


Figure 2. Net-zero scenario emissions by sector (tCO₂e), 2020-2030. Note: Each wedge is a cumulative reduction from the business-as-usual scenario modelled for the Town.

As for waste, the Town will collaborate with Halton Region, which currently manages the Town’s waste collection and disposal, to tackle emissions. The LCTS recommends maximizing diversion of organic waste away from the landfill and exploring the potential to divert it to an anaerobic digester to produce local renewable natural gas.

Together, these four main action areas have the potential to reduce Halton Hills’ emissions by 74% by 2030, even as the population and economy grow significantly. Remaining emissions (see Figure 4) in 2030 will be primarily due to:

- combustion engine vehicles purchased now and in the near future (63%);
- the local share of air and rail travel (20%); and
- organic waste from residents and businesses decaying in the Region’s landfill (13%).

While, in the current analysis, 26% of 2016 emissions remain in 2030, these emissions are expected to fall rapidly after that time, as existing internal combustion engine vehicles are retired. Furthermore, it is anticipated that future iterations of the LCTS will develop additional strategies to reduce remaining emissions beyond the levels modelled here.

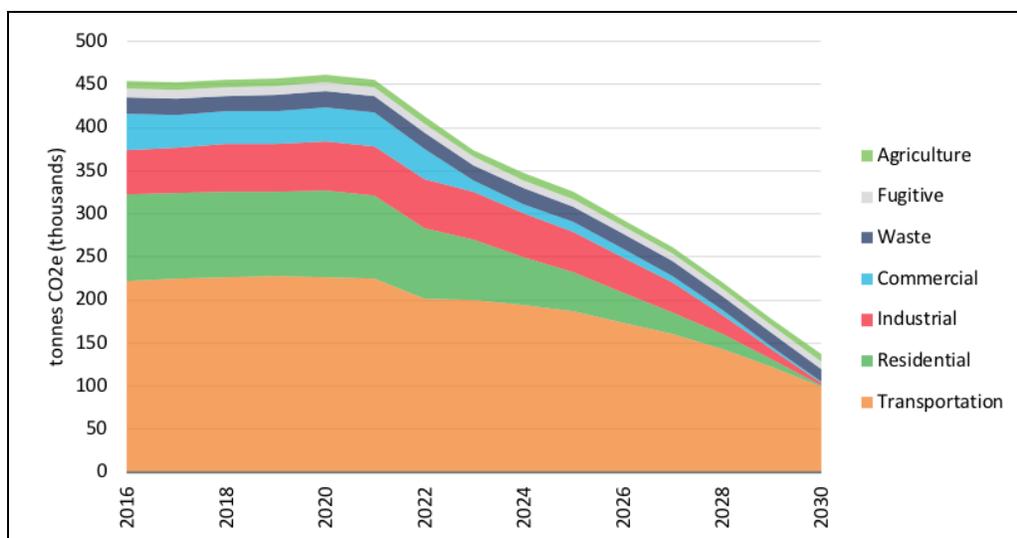


Figure 3. Town of Halton Hills LCTS emissions, by sector 2016-2030.

LCTS Implementation Overview

In keeping with the Climate Emergency Declaration and recognizing the need for urgent action, CCAM staff have already begun implementing projects that align with the actions outlined in the LCTS. These include:

- Retrofit Halton Hills Pilot Program
- Low Carbon Energy Supply Study for Vision Georgetown
- Town of Halton Hills Green Development Standards v3
- Tree Canopy Management Program
- Natural Assets Management Project

Along with ongoing initiatives such as:

- the installation of EV chargers throughout the community
- hosting the EV Extravaganza in August 2021
- ongoing implementation of the Corporate Energy Management Plan
- the development of a Corporate Climate Lens for Town Projects.

In addition to these ongoing projects, Staff have identified key projects for completion in 2022, for example, the Fleet Electrification Feasibility Study.

The LCTS provides conceptual strategies for achieving the roadmap to net zero. Staff will develop programs with costs and resources requirement and bring back to Council throughout the implementation process. For the 2022 budget cycle, staff will continue to refine projected budget needs associated with the implementation of the LCTS and will seek to develop external sources of investment and funding for the strategy.

Because of the scale and scope of the transformation required, the Town does not have the jurisdiction or resources necessary to carry out the entire program of actions

outlined in the LCTS. As a result, the LCTS envisions the development of mechanisms intended to bring external stakeholders into the transition process.

In the short term, the Town will continue to lead implementation, and report back to Council with a work plan for a new community-wide governance strategy which will provide oversight and engagement with key local stakeholders involved in the low carbon transition.

Over the medium-term, the Town will continue to lead implementation and develop partnerships with the private sector to deliver certain priority projects, for example: retrofits to existing buildings, community energy systems, and large-scale renewable energy projects. Exploration and development of these investment opportunities is already underway.

Over time the Town will assess whether a third-party organization would be better placed in the longer term to support the implementation priorities outlined above by providing the oversight and implementation of certain LCTS programs. This study will include consideration of regional collaboration opportunities.

Because the Town is only one stakeholder among many in the low carbon transition, successful implementation of the LCTS will require a shared effort and behavioral changes from many actors across the community, including residents, businesses, non-governmental organizations, and others. The Town can act as a catalyzer of these necessary changes. Doing so will require extensive promotion, communications, and incentives targeted at informing external actors about the goals and benefits of the LCTS and facilitating the transition across multiple sectors.

STRATEGIC PLAN ALIGNMENT:

This report aligns to the Town's Strategic plan recognizing the value to preserve, protect and enhance our natural environment for the health benefits and enjoyment it provides to present and future generations.

This report also identifies climate change and the environment as one of the Town's Strategic priorities.

RELATIONSHIP TO CLIMATE CHANGE:

This report impacts and/or helps address climate change and the Town's Net Zero target through climate mitigation.

PUBLIC ENGAGEMENT:

Public Engagement has been conducted as follows: Online Survey, Open House/PIC/Workshop, and Stakeholder Meetings.

Public engagement processes undertaken through this strategy are described in the report above and through the Low Carbon Transition Strategy Final Report (attached).

INTERNAL CONSULTATION:

Staff were engaged throughout the development of the LCTS as members of the MSGC, through the Low Carbon Transition Steering Committee, and presentations to the Senior Management Team and the Climate Change Implementation Team.

FINANCIAL IMPLICATIONS:

This report will be funded through an existing approved budget source.

For 2022, the Low Carbon Transition Strategy will be implemented through existing budget items. As part of the 2022 Capital Budget, an additional \$200,000 has been committed to the implementation of the Low Carbon Transition Strategy.

Future year budgets associated with the Low Carbon Transition Strategy will be developed on a project-by-project basis and submitted through the annual budget process.

In addition, because of the broad nature of the actions proposed under the LCTS, the successful implementation of the strategy will require contributions from staff across several Town departments. The resources of the Town's corporate communications, finance, economic development, and other related departments will be considered as part of the cost of implementing the LCTS.

Reviewed and approved by,

Dharmen Dhaliah, Senior Manager of Climate Change and Asset Management

Richard Cockfield, Director of Strategic Planning

Chris Mills, Acting Chief Administrative Officer