

Appendix B - Report CW-21-19

City of Burlington Climate Change Activities

The following is a list and description of climate action activities that the City of Burlington is involved in:

Climate Action Plan (formerly the Community Energy Plan)

In 2014, city council endorsed the first Community Energy Plan (CEP) for the City of Burlington. The focus at the time was on energy usage within the community with a vision to improve energy efficiency, security, and reduce the carbon footprint. The energy reduction target is conservative and based on available conservation programs at the time. The plan has five overall goals with 55 actions related to conservation and behaviour change; energy efficiency; energy security; land use and transportation.

In 2017 the Partners for Climate Protection (PCP) Program, administered by the Federation of Canadian Municipalities and ICLEI – Local Governments for Sustainability, recognized the City for achieving all five of the milestones for the PCP program. The PCP program credited Burlington for completing, implementing and monitoring its progress on both the Community Energy Plan and Corporate Energy Management Plan.

City staff coordinated the development of the CEP with technical support from Burlington Hydro. A number of community stakeholders were involved in the development of the plan and continue to be involved in the implementation, including:

- Burlington Economic Development Corporation
- Burlington Sustainable Development Committee
- BurlingtonGreen
- Burlington Hydro
- Centre for Climate Change Management @ Mohawk College
- Halton Catholic District School Board
- Halton District School Board
- McMaster Institute for Energy Studies
- Region of Halton
- Royal Botanical Gardens
- Sustainable Hamilton Burlington
- Union Gas Limited (now Enbridge Gas Inc.)
- Citizen Representatives

In 2015, council approved a new strategic plan with an aspirational target:

- The city recognizes that climate change is a significant issue and is working with the community and all levels of government towards the goal of the Burlington community being net carbon neutral.

In 2018 staff began the process to update the Community Energy Plan to align with the strategic plan direction. Stakeholders were interviewed, along with members of council and three representatives of the local development industry. A survey was posted on Get Involved Burlington to engage the community on issues related to climate change.

In response to council's recent Climate Emergency Declaration and directions, the Community Energy Plan will be replaced with the Climate Action Plan combining both mitigation and adaptation initiatives. The mitigation part of the plan will focus on reducing greenhouse gas emissions resulting from the community's use of energy. A second part will also be completed which will focus on adaptation. Once completed the two parts can be combined into one document.

Funding: Original funding to support the Community Energy Plan was provided by Burlington Hydro. Approximately \$120,000 in funding was obtained from the Green Municipal Fund under the Federation of Canadian Municipalities to support the feasibility study for a district energy system in Burlington with matching funding from city and Burlington Hydro. The transition to the Climate Action Plan will benefit from the GHG emissions inventory analysis already completed through the BACCC. Staff are recommending \$80,000 in funding to support additional community engagement, the development of actions and tangible goals to reduce greenhouse gas emissions and a process to monitor progress and report on metrics.

Corporate Energy Management Plan

The Corporate Energy Management Plan was first endorsed by City Council in 2013. All Ontario municipalities are required to develop and implement a corporate energy management plan with energy reduction targets under the provincial Electricity Act, Regulation 507/18. These plans must be updated every five years.

The City of Burlington has one of the most ambitious carbon reduction target related to city operations in the province as stated in the city's Strategic Plan: The city's operations will be net carbon neutral (by 2040). The CEMP is currently being updated with actions, targets and required investments to work towards the strategic plan goal and is planned to be presented to council in July.

Funding: The budget to update the Corporate Energy Management Plan is \$60,000.

Centre for Climate Change Management at Mohawk and The Bay Area Climate Change Office & Council

On June 23, 2016, City Council directed staff to work with the City of Hamilton to develop a governance model for the Community Climate Change Action Plan Implementation Team.

The Centre for Climate Change Management at Mohawk (CCCM) is a multi-sector partnership between the cities of Hamilton and Burlington, Sustainable Hamilton Burlington and Mohawk College. The governance model, particularly for the Bay Area Climate Change Office (BACCO) and Council was developed through extensive community engagement to create and implement a community driven plan to grow the economy while reducing emissions and building resilience to adapt to a changing climate.

Member organizations and individuals on Bay Area Climate Change Council include:

- Richard Korocil (resident & chair)
- Burlington Economic Development Corporation
- BurlingtonGreen
- Burlington Sustainable Development Committee
- Clean Air Hamilton
- Conservation Halton
- Environment Hamilton
- Hamilton Chamber of Commerce
- Hamilton Conservation Authority
- Hamilton Health Sciences
- Hamilton Industrial Environmental Association
- Sustainable Hamilton Burlington
- United Way Halton and Hamilton
- Anna Pautler (Burlington citizen)

A strength of the council is the diverse background and experience of the membership. The council will collectively promote the adoption of deep greenhouse gas emissions mitigation strategies and climate change adaptation initiatives, prioritizing the following actions in their workplan:

- Advocating for the adoption of progressive climate change policies;
- Supporting deep energy retrofits for homes and residential buildings;
- Advancing transportation strategies to reduce greenhouse gas emissions;
- Collaborating on low carbon supply chain solutions to support access to local food and reduce waste throughout the food supply chain.

Funding: A request has been made to both municipalities to provide funding support for the activities of the Bay Area Climate Change Office, including the

council and implementation teams. Burlington staff are recommending that a commitment be made to provide \$20,000 in funding for 2019. Staff will submit a business case for funding for \$32,000 per year from 2020 to 2021. In 2021 staff will assess the effectiveness of the partnership with a report to Council.

In the absence of 'backbone' funding from the province to support this initiative, the CCCM was successful in obtaining funding from the federal Ministry of Environment and Climate Change to support the recent Bay Area Climate Change Summit, a full week of activities to engage both communities on climate change, including a full day for youth at the McMaster Innovation Park. It was also successful in obtaining a small grant from The Atmospheric Fund to support the development of a three-year workplan for the BACCC with assistance from Lura Consulting. Additional funding for specific projects will be obtained through grants from the federal and provincial governments, as well as non-profit partners like The Atmospheric Fund.

Halton Climate Collective

The Halton Climate Collective was initiated by and is led by the Halton Environmental Network (HEN). Established in 2004, HEN is an incorporated non-profit organization operating in Halton Region (Oakville, Burlington, Milton, Halton Hills) and supports and enhances the capacity for local climate action and environmental sustainability across region.

The Halton Climate Collective is a group of local organizations focused on collectively transforming the community of Halton into a low carbon, climate resilient community. The purpose of the collective is to align actions and leverage expertise to reduce climate change, secure funding opportunities and promote a collective approach to addressing climate change. Organizations represented on the collective include:

- City of Burlington
- Conservation Halton
- Halton Environmental Network
- Town of Halton Hills
- Town of Milton
- Town of Oakville
- Halton Catholic District School Board
- Halton District School Board
- Region of Halton; and
- University of Waterloo

To date, the collective has engaged the community across the region by hosting four climate charrettes in each local municipality with a total of 130 participants and an on-line survey with almost 500 responses. The HCC has also formed a Youth

Halton Climate Collective to engage Halton youth and organize a youth summit in the fall of 2019 to be hosted at Sheridan College.

Staff have been participating in the HCC to support our local partners to engage the Halton community on climate change. Future activities include #HCC reads, working with the local libraries to champion climate change themed books. The HCC will also be bringing 'pop-up' activities to different events across the region to engage the community on climate change.

Funding: The Halton Environmental Network was successful in obtaining funding from the Ontario Trillium Foundation to support the development of the HCC. To date, no request has been made to the city for funding support for this initiative other than staff time.

Clean Air Partnership and Clean Air Council

The Clean Air Partnership (CAP) is a charitable environmental organization launched in June 2000. CAP's mission is to help municipalities become sustainable, resilient, vibrant communities where resources are used efficiently, the air is clean to breathe and greenhouse gas emissions are minimized. The Clean Air Council is a program administered by CAP and is a network of 28 municipalities and health units from across Ontario. Since 2000, Clean Air Council members have been working collaboratively on the development and implementation of clean air, climate change, sustainability and resilience actions. The City of Burlington has been an active member on the Clean Air Council for several years.

Climate Action Support Centre

Recently, CAP was successful at obtaining funding from the FCM Green Municipal Fund to support the development of the Climate Action Support Centre. City staff are participating on two of the implementation teams, aligning with corporate priorities.

The Home Energy Efficiency Retrofit Implementation Team will collaborate to develop a model Comprehensive Home Energy Efficiency Retrofit Program that addresses energy efficiency uptake barriers, develops joint marketing and outreach resources, identifies financing options, and increases local capacity to serve the sector. The team will facilitate pilot projects in communities to put the program into practice.

The Corporate Implementation Team will focus on corporate actions for municipal energy plans. The team will develop a benchmarking process for the plans and respective actions to help the energy managers understand where their municipality fits in the spectrum of energy goals and implementation practices. The team will also provide a forum for municipal energy managers to share best practices, experiences and lessons learned and financing opportunities.

Funding: There was no requirement for the city to provide funding to participate in the new Climate Action Support Centre other than in-kind staff time. The city does contribute \$2,800 annually to participate on the Clean Air Council. All local municipalities, regional and senior levels of government participating on the Clean Air Council contribute annually, where amounts are pro-rated based on population and/or size of the organization.

McMaster University

Burlington is supporting two projects with Dr. Jim Cotton, McMaster University. Dr. Cotton has represented McMaster University on the city's Community Energy Plan Stakeholder Advisory Committee since its development and his research has been inspired by his experience working with Burlington. One project is the Smart Solar Building and Communities (SSBC) Strategic Network. This project involves 27 top researchers from 13 Canadian universities and approximately 40 industry and government/non-profit sector partners. SSBC will develop the knowledge and technologies required to implement integrated clean energy solutions for new and existing smart buildings and communities for the Canadian context. Funding is pending for this project from NSERC (Natural Sciences and Engineering Research Council of Canada).

The second is the Integrated Community Energy and Harvesting System Research Project funded by NSERC and Ontario Centre of Excellence (OCE) to address GHG emissions with a goal to redesign how we interact with energy. This research program will address the sustainable energy challenge faced by Ontario by creating efficient, resilient low carbon community energy nodes in an integrated manner through energy harvesting, storage, generation and use of renewables. The City's participation in this research project is to share energy data for a node of city buildings (Central Park) as a case study.

Funding: There was no requirement for the city to provide funding for these initiatives other than in-kind staff time and occasional travel to SSBC team meetings.

Sustainable Hamilton Burlington

Sustainable Hamilton Burlington is a non-profit social enterprise serving the cities of Hamilton and Burlington. It works with local businesses like Walker Emulsions, Wolseley Distribution and Zip Signs (Burlington businesses) and non-profit organizations to take leadership and adopt a sustainable approach to their operations through collaborative learning, measurable action and recognition of success. This includes supporting organizations in setting and working towards carbon reduction targets. The cities of Hamilton and Burlington are members of SHB in part to show leadership to other local organizations and businesses to

improve sustainability and adopt a low carbon approach to their operations. This program supports the city's Strategic Plan goal to work with partners and all levels of government towards being a net carbon neutral community.

Funding: The annual membership fee for Burlington to participate in the SHB program is \$5,500.

QUEST – Community Energy Planning and Implementation Network

QUEST (Quality Urban Energy System for Tomorrow) is a national non-government organization that works to accelerate the adoption of efficient and integrated community-scale energy systems in Canada by informing, inspiring and connecting decision makers. This organization commissions research, communicates best practices, convenes government, utility, and private sector leaders, and works directly with local authorities to implement on the ground solutions.

Participating in QUEST's Community Energy Planning and Implementation Network (CEPIN) provides Burlington the opportunity to network with peer municipalities on community energy planning, sharing best practices, lessons learned and other information, with access to senior levels of government and utilities on energy issues. The network assists Burlington staff to stay informed about changing policies and programs related to community energy planning as well as best practices being implemented by other organizations. The city's Sr. Sustainability Coordinator is a past chair of the QUEST Ontario network.

Funding: The annual membership fee for Burlington to participate in QUEST is \$2,500.

International Urban Cooperation Program

In 2017, Burlington applied to participate in the European Union's International Urban Cooperation program, to be matched with an EU city to share solutions to common challenges such as sustainable development, community energy systems and climate change. Burlington was linked with Växjö, Sweden, to build on an existing relationship of sharing information. The program is part of a long-term strategy by the EU to foster sustainable urban development in cooperation with both the public and private sectors.

Each city is working on a local action plan for a specific issue. Burlington's focus is on an Urban Parks Strategy and Växjö is the redevelopment of an industrial area into a vibrant mixed use neighbourhood. Information is being shared through skype meetings and webinars on topics such as the fossil fuel free city; storm water management; tall wood buildings; and community engagement activities.

Funding: There is no fee to participate in the IUC program which is funded by the European Union.

Stormwater and Flood Management Initiatives

A changing climate means that the city can expect increased severe weather events where rainfall can be more intense and significant in a localized area causing flooding of homes, businesses and infrastructure. In 2014, Burlington experienced a significant flood event with over 3,000 homes reporting being flooded and over \$90 million in insured claims. Following this event, a comprehensive review of the city's stormwater system was undertaken resulting in measures and investments to improve the resiliency of the city from flood damage from more intense storm events. One example of support for homeowners is the University of Waterloo's Intact Centre on Climate Adaptation's Home Flood Protection Program which was launched in Burlington. Over the course of the program in 2017 and 2018, 120 home inspections were done where homeowners are provided a report on measures that they can implement to reduce the risk of flooding in their home. An update report on stormwater management and flood management measures will be provided to Council in July.

Funding: Following the 2014 flood, council dedicated \$20 million to be invested in stormwater/flood adaptation measures to be implemented over a 10 year period. Funding in the amount of \$40,000 was also provided to support the home flood protection program.

Urban Forestry Master Plan

The Urban Forestry Master Plan (UFMP) was endorsed by council in 2010 and will soon be updated. The forestry program is overseen by the manager of urban forestry in the Roads, Parks and Forestry Department. Trees are a valuable resource to climate change in that they absorb carbon from the air and store the carbon in the tree itself and soil. They also combat the urban heat island effect by providing shade and cooling trees and also help to reduce peak stormwater flows by absorbing water. The city is seeing the impact of the increasing intensified storms on the tree canopy. In 2018 the April 4, 14, 15 and May 4th storms resulted in \$340,000 in forestry related clean-up costs.

The city has implemented a two-year pilot private tree bylaw in the Roseland community which came into effect on March 1st, 2019. The city continues to enter into partnerships to plant trees across the community, working with a number of different organizations such as IKEA, Union Gas (now Enbridge), BurlingtonGreen, and Conservation Halton, among others. In addition, the city has implemented a management strategy to respond to the Emerald Ash Borer infestation.

Funding: An additional \$100,000 was provided to the forestry base budget to support planting initiatives in 2019. The total cost for the EAB program is \$11 million (report RPF-04-18). Council approved \$100,000 in 2019 to update the UFMP.

Green Fleet Transition Strategy

The city's first Green Fleet Transition Strategy was developed in 2008 in an effort to reduce energy and the city's carbon footprint. It included actions related to monitoring alternative technologies; selecting vehicles with low emissions; right sizing for function; use of bio-fuels, among other action. Given the rapid speed of fleet innovation and the Strategic Plan's goal for city operations to become net carbon neutral by 2040, the strategy requires an update. Resources to update the strategy and implement ongoing fleet related analysis will be requested through the 2020 budget cycle.

Integrated Mobility Plan, Cycling and Transit

The transportation sector represents over 40% of Burlington's community greenhouse gas emissions. Therefore, strategies to promote and support active transportation and transit ridership will help to reduce the carbon footprint and work towards the goal to become a net carbon neutral community. There will be another round of engagement for the draft Cycling Plan before it is presented to Council in early fall and work will commence at a later date on the Integrated Mobility Plan. Council recently approved funding to support transit improvements. Starting on June 3, 2019, adults 65+ ride for free on weekdays between 9 a.m. and 2:30 p.m. and on May 1, 2019, customers using the Subsidized Passes for Low Income Transit (Split) program will receive a free PRESTO monthly pass.

Burlington Ready

The city's Business Continuity & Emergency Planning Coordinator coordinates the city's participation in the Burlington Ready project. This program engages local faith-based communities to develop a network with resources to help make residents and neighbourhoods safe and weather ready. Faith communities engage in both community service and care for the environment and they have the facilities and networks that make them the ideal sites or catalysts for 'resiliency hubs'. Neighbourhoods can be more resilient when residents know and provide support for each other. The Burlington Ready project will develop outreach strategies, processes and goals.

Funding: No current funding allocation - future funding will be required.

Other Organizations

There are two key organizations that staff would like to acknowledge which are active in the community raising awareness about climate change and sharing information with residents and students on how they can take action to make a difference.

Burlington Sustainable Development Committee (SDC) is one of city council's volunteer citizen advisory committees. The SDC, which was established in 1990, reviews planning policies and development applications with a sustainable development lens. They have been instrumental in supporting green development and energy efficient measures over the years. The committee also engages the community on environmental sustainability issues, hosting many library sessions to raise awareness about climate change and actions that residents and businesses can take to reduce their carbon footprint.

BurlingtonGreen (BG) is a citizen led, non-partisan registered charity that works to protect the environment, mitigate climate change and create a healthier, more environmentally responsible community through awareness, advocacy and action. BG is known for their annual city-wide dual component Community Clean Up - Green Up (tree planting) event, the greening of community events, their popular BG Youth Network who plan Youth Eco-Summits and have also been working with Burlington Transit on the Burlington Transit Youth Ambassador (BTYA) program to promote sustainable forms of transportation in Burlington high schools, Eco Film events, and many other initiatives.

BG actively engages the community in action to reduce greenhouse gas emissions through its programs such as Kids Go Green Challenge, 'Eco Score' as well as 'Make the Switch' – which educates Burlington residents on the benefits of electric vehicles, taking public transit and installation of heat pumps.