

APPENDIX B to Report EICS-07-21

Stakeholder Updates for the Burlington Climate Action Plan

The community Stakeholder Advisory Committee was formed in 2012 to support the development of the original Community Energy Plan, which has now been replaced with the implementation of the Burlington Climate Action Plan. The membership of the advisory committee consists of representation from the following groups:

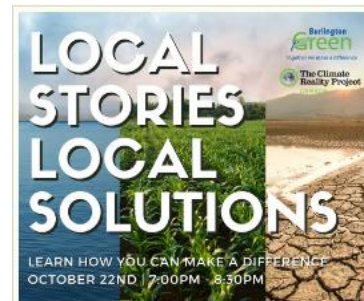
- Andrew Pride Consulting
- BOMA (Building Owners & Management Association)
- BurlingtonGreen
- Burlington Economic Development
- Burlington Hydro
- Centre for Climate Change Management @ Mohawk College
- Enbridge Gas Inc.
- Halton Catholic District School Board
- Halton District School Board
- Halton Environmental Network
- Halton Region
- IESO (Independent Electricity System Operator)
- McMaster Institute for Energy
- Royal Botanical Gardens
- Burlington Sustainable Development Committee
- Sustainable Hamilton Burlington
- Mayor Marianne Meed-Ward (ex-officio member)

The following updates were provided by members of the Stakeholder Advisory Committee on the work that their organizations are involved to take action on climate change.

BurlingtonGreen

Some of the climate action initiatives accomplished and underway at BurlingtonGreen are as follows:

- BurlingtonGreen staff became trained [Climate Reality Leaders](#)
- Hosted [Local Stories. Local Solutions](#) webinar event highlighting the pressing environmental challenges at the global, federal and local level, in addition to shining a light on local residents' action on climate. We also hosted virtual film screenings such as "I Am Greta", and provided presentations to groups to empower individual action on climate change through local, practical solutions/tips.
- BurlingtonGreen's Executive Director serves as a founding member of the BACCC (Bay Area Climate Change Council) and the Operations Manager serves on the BACCCI Transportation Implementation Team, providing subject matter expertise including effective community engagement strategy and practices.
- BurlingtonGreen establishes Community Climate Hub ([Community Eco Network](#)) (as part of National Climate League), joins the [Future Ground Network](#) and continues to serve on the City of Burlington's Climate Action Plan Stakeholders group and most recently joined the city's Climate Adaptation Plan stakeholder group.
- [Make the Switch](#) programming continues including:
 - Raising awareness about the benefits of active transportation
 - Highlighting the importance of electrifying transit fleets
 - Breaking down barriers to higher ZEV adoption rates
 - Promoting alternative options for home energy such as heat pumps
 - Providing fun and engaging videos on active transportation and heat pumps
- [Community Spotlight](#) feature stories provide relatable, empowering examples of local individuals, groups and businesses that are leading by example through their efforts to protect and improve the health of the environment.



- Natural Solutions to Climate Change: established a new [Nature Friendly Burlington](#) program connecting more of the community to local green space, stewardship opportunities and to a multitude of benefits nature provides including the provision of resources and tips to combat climate change. BurlingtonGreen also recently joined the new UnFlood Ontario initiative which aims to reduce flooding through natural infrastructure.
- Community Clean Up Green Up flagship city-wide opportunity continues to provide a collective effort cleaning up Burlington' natural areas and neighbourhoods of litter, with the Green Up component improving local biodiversity and contributing to carbon sequestration through the planting of more trees by the community.
- Our Speak Up offering informs and enables the community to share their valued voices on a variety of issues to protect the environment and take action on climate locally, such as:
 - Phase-out of gas powered plants
 - Tree protection
 - Transportation - permanent federal funding for transit
 - ON Forest Management
 - COB HERO Program
 - Conservation Authorities
 - Amendments to the Growth Plan
 - Blue Box Program
 - GTA West Highway
 - Nelson Quarry
 - COB OP - Downtown Policies
 - Halton Region OP
 - COB V2F Strategic Plan
- [BurlingtonGreen Youth Network](#) organizes and hosts Fridays for Future Shoe Strike in Burlington with 16 participants represented.
- Another impactful year providing the Grow to Give Program: connecting residents in need with locally grown food. The program addressed food insecurity and reduced "food miles", with a total of 829 lbs of food donated, adding to the overall program total of 8,688 lbs of healthy, organic produce donated to local families in need. [Video](#) produced highlighting the link between local food and climate change.
- Local Food - a wide range of videos and social media campaign promoting local opportunities, tips and benefits to action on climate change



- Zero waste - food waste
 - Hosted a virtual event to address food waste and mindful consumption
 - Created [mindful consumption resources](#) and comprehensive [Event Greening Guides](#) that contribute to climate action efforts through reduced energy usage and minimal waste generation.
- Provided digital guides and virtual workshops to engage the community on reducing their carbon footprint and providing skill building opportunities such as: upcycling cartons into bird feeders, building bee hotels, mending and sewing, native container gardening and a DIY edible spa day.
- Produced a new website highlighting local action on [climate opportunities](#) , [live green](#) and [smart community](#) resources.

Burlington Hydro - Suite Metering and EV Charging Stations

Considerable opportunity for suite metering installations continued in the City's condo and apartment space in 2020¹. Burlington Hydro focused on growing the electricity suite metering business, while targeting expansion of the water suite metering businesses under Burlington Electricity Services (BESI). Attention was also given to the conversion of apartment building metering – from a bulk metering service to unit smart meters – which gained momentum in 2020 as apartment building owners were approached for conversion.

In the Electric Vehicle (EV) charging station space, it was another year where attention focused on condominium owners and developers. Whether it is existing building infrastructure or installing EV charging stations as part and parcel of new builds, growth is anticipated in the condominium sector over the next number of years. BESI's EVFutureGrid brand features EV charging stations in each of four market segments: residential, multi-residential (condominium), workplace and public spaces.

The following projects have been completed or are ongoing:

- The installation of Water and Gas metering for the Jazz Condominium at 457 Plains Road.
- The installation of Water and Electricity Meters & EV Chargers at Bridgewater, 1 Elizabeth Street and at 2060 Lakeshore Road.
- The installation of Electricity Meters at Saxony Condo, Elgin St.
- Continuing installations of EV Chargers at Bunton's Wharf, Lakeshore.
- EV Chargers installed in Visitor Parking at Paradigm Condo, Fairview.

¹ With Electricity Suite Metering, a single Burlington Hydro account is created for individual condominium suite owners. For the first time, they can take practical ownership of their usage which is likely to create a building-wide conservation culture.

Not unlike other projects, COVID-19 resulted in the delayed construction of buildings that had suite metering and EV Charging Station contracts for 2020. These projects are expected to be completed by the fall of 2021.

Enbridge Gas Inc.

Enbridge Gas provided the following data related to their energy efficiency (Demand Side Management) initiatives for Burlington including their Home Efficiency Rebate, energy saving kits, smart thermostats, industrial and commercial initiatives, and low income programs:

Initiatives	2015	2016	2017	2018	2019	2020
Home Efficiency Rebate (formerly Home Reno Rebate) # of homes	151	354	754	998	722	382
Total gross annual natural gas (NG) savings (m ³)	197,878	240,547	432,679	460,883	326,116	180,888
Average gross annual NG savings (m ³) per home	1,310	680	574	462	452	474
Other Residential Programs						
# of Energy Saving Kits provided to homeowners	1,568					
# of Smart Thermostats Installed					229	474
Total gross annual NG savings (m ³)	102,334				35,149	71,871
Commercial Sector						
# of Custom Projects	14	6	7	2	2	16
# of Prescriptive Measures	154	77	136	127	219	36
Total gross annual NG savings (m ³)	992,032	427,786	1,419,678	915,444	1,077,949	388,160

Initiatives	2015	2016	2017	2018	2019	2020
Industrial Sector						
# of Custom Projects	2	2	3	2	3	2
Total gross annual NG savings (m ³)	4,582,458	102,302	279,995	249,088	742,393	81,652
Low Income Single Family (includes Home Weatherization Program, Indigenous offering, and Furnace End-of-Life Upgrade offering)						
# of Homes		2	6	11	27	24
# of Basic Measures				8	76	46
Total gross annual NG savings (m ³)		1,363	4,180	4,613	20,269	17,890
Low Income Multi-Family						
# of measures				10	2	
Total gross annual NG savings (m ³)				93,885	11,024	

*2020 results are draft and subject to change through audit.

Notes:

(1) The participation counts above are not unique participants, it is based on Demand Side Management participation counts. For example, a home energy retrofit home may also get an adaptive thermostat and would be counted twice in the numbers above - once under the whole home and once under # of adaptive thermostats. Conversely, a participant may get an adaptive thermostat (or basic measures) but not conduct whole home weatherization so would not be under the "# of homes" total. The basic measures includes faucet aerators, pipe insulation, showerheads, and programmable thermostats.

(2) Gross Annual Natural Gas Savings above include both prescriptive and whole home measures. These savings are deemed or modelled and do not represent actual consumption reduction.

(3) Above participation counts only include participants with m³ savings and not all participants in Enbridge's portfolio. Some programs have objectives that are quantified in ways other than m³ savings, such as market transformation or performance-based programs.

Enbridge Gas - 2020-21 Initiatives in Low Carbon

a) Renewable Natural Gas (RNG) programs

Renewable Natural Gas (RNG) is a carbon-neutral fuel that reduces harmful emissions and provides a renewable source of energy.

Waste (organic, wastewater, garbage) can be put to work by converting it to RNG and injecting it into the natural gas network to fuel transportation and heat homes and businesses. Known for its carbon-offsetting advantage, RNG can manage waste, generate revenue and reduce harmful emissions to fight climate change.

RNG can be used to fuel transportation, provide energy needs for homes and businesses and create new revenue streams and jobs for local economies. RNG byproduct can also be turned into fertilizers that return valuable nutrients back into the soil.

Enbridge Gas is offering a new voluntary renewable natural gas (RNG) program for its customers that will reduce overall emissions from Ontario's gas supply. The **OptUp Program** provides the option for residential and small business customers, who buy their gas from the utility, to contribute \$2 a month as a cost-effective initiative to help offset the increased costs to acquire carbon-neutral RNG.

The volume of RNG purchased will depend on the number of program participants, the availability of RNG, as well as the cost difference between RNG and traditional natural gas at any given time. The OptUp program will not offer participating customers a specified volume of RNG, alternatively it will support the development of RNG sources to supply carbon-neutral fuel into the current Enbridge Gas pipelines and infrastructure. The total RNG purchased and the emissions impact will be posted annually on the Enbridge Gas website.

<https://www.enbridgegas.com/Natural-Gas-and-the-Environment/Enbridge-A-Green-Future/OptUp>

RNG is fully compatible with existing natural gas infrastructure, making it easily accessible to residential and commercial customers. Other Enbridge Gas announcements:

- The City of Hamilton recently launched Ontario's first carbon-negative bus:
<https://www.newswire.ca/news-releases/enbridge-gas-partners-with-city-of-hamilton-to-fuel-ontario-s-first-carbon-negative-bus-890245563.html>
- The City of Toronto is powering waste vehicles with RNG:
<https://www.enbridgegas.com/Natural-Gas-and-the-Environment/Enbridge-A-Green-Future/Renewable-Natural-Gas>
- Ground was recently broken on Ontario's largest RNG plant:
<https://www.enbridge.com/stories/2020/october/enbridge-and-partners-break-ground-ontarios-largest-rng-plant>

b) Hydrogen:

Sometimes Ontario generates more electricity than is used. Surplus electricity can be used to produce hydrogen gas through Hydrogenics electrolysis technology, which is stored and converted back into electricity when needed, or blended with natural gas as a less carbon intensive energy source.

Power to Gas energy storage is an efficient use of excess power. The technology is scalable to provide a significant storage capacity for the grid.

In Markham, Enbridge Gas recently commissioned North America's first and the world's largest power to gas plant, producing emission free hydrogen from surplus electricity. Enbridge Gas and Cummins announced the \$5.2-million project which will blend renewable hydrogen gas into the existing Enbridge Gas natural gas network, reducing greenhouse gas emissions.

This hydrogen-blending pilot project, supported by Sustainable Development Technology Canada, is the first of its kind in North America—and represents an important step in greening the gas supply that millions of Ontario homeowners and businesses depend on to heat their homes and energize industry.

In February 2021, Enbridge subsidiary Gazifère announced one of Canada's largest green hydrogen projects for injection into a natural gas distribution network in Quebec. Gazifère and Evolugen, the Canadian operations arm of Brookfield Renewable, plans to build and operate one of Canada's largest green hydrogen injection projects in Quebec. The approximately \$90-million project will see a 20-megawatt (MW) electrolyzer plant built in the city of Gatineau, adjacent to Evolugen's hydroelectric facilities. Green hydrogen produced via electrolysis will be injected into Gazifère's natural gas distribution network via a new 15-kilometre pipeline.

In the long term, Gazifère aims to be North America's first natural gas utility to be 100% green by 2050. In the short term, hydrogen could very well be a vital rung on that ladder.

c) Geothermal:

Enbridge Gas offers a geothermal program for homeowners and builders. The Enbridge Gas Geothermal Program provides affordable and quality access to a geothermal system. Geothermal loops can be costly and account for a large portion of the upfront installation cost. Enbridge provides the following services in the program:

- Covers all associated materials and installation costs for the geothermal loop (installed outside the home underground)
- Provides expertise and oversight of the installation including ongoing maintenance and repairs to the Geothermal loop.
- Charges a monthly rental service fee for the Geothermal loops.

Halton Environmental Network (HEN)

HEN is an incorporated non-profit organization that serves the community of Halton. It offers a range of programs and initiatives, striving to make the community of Halton a region with educated citizens, engaged stakeholders and best practice policies for climate change mitigation, adaptation and environmental sustainability.

- **Halton Climate Collective – HEN** is the architect and backbone agency of the HCC. The HCC is comprised of environmental leaders and engagers from: Conservation Halton, Halton Region, Town of Oakville, Town of Halton Hills, Town of Milton, City of Burlington, Halton District School Board,



Halton Catholic District School Board, University of Waterloo, Sheridan College and the Halton Environmental Network. The leaders of the HCC work together to respond to the challenges of climate change to create a climate-resilient, low-carbon Halton community. HCC's new Collective Action page on its website allows the community to find information about climate actions being done by each of HCC's partners. You can see it here:

<https://climatecollective.ca/collective-climate-action/> Check out this video from Conservation Halton where they talk about the HCC from 4:45-5:35 - <https://www.youtube.com/watch?v=Bu3ia6dJtqY>

- HEN, with the HCC, organized a community engagement activity through **HCCReads**, highlighting Sheila Watt-Cloutier's book, *The Right to be Cold*. This program was also offered as an opportunity for students to earn community involvement hours. We had at least 850 participants view the screened presentation of Sheila speaking to our community via Zoom and it was also broadcast on Cogeco. More than 2400 questions were submitted for consideration to be shared with the author following her presentation. Youth were asked to create a blog or infographic demonstrating how Ms. Watt-Cloutier's book inspired them. Some of their work can be viewed here: <https://climatecollective.ca/hccreads/>
- **Generation Green** – By youth, for youth, this program educates and supports student to reduce their GHG emissions, measuring and tracking their impact, both at home and in the community, inspiring action across Halton. HEN and the HCC launched the Generation Green initiative with 55 youth stakeholders in the Fall of 2020 from across Halton, and these stakeholders started to organize the event that would take place in March 2021. The Generation Green conference welcomed 526 students virtually on Pheedloop, to view speakers from around the world, speaking to the theme of Climate Justice (as chosen by the youth stakeholders). Students are working on projects to reduce their greenhouse gas emissions and will complete their projects by April 28th. There will be a virtual wrap-up event in May where prizes will be awarded. More details on the program can be found here: <https://climatecollective.ca/generation-green-2021/>

- **Halton Food** – Educating residents about sustainable food production and promoting access to local, healthy culturally-relevant food through environmentally sustainable community gardening, urban farming and school gardens. This program supported ten community gardens in Burlington, as well as gardens at 4 schools. The food gardens promote local sustainable food production, thereby reducing greenhouse gas emissions through reduced transportation and inputs (chemical fertilizers). The pollinator gardens also include species that act as carbon sinks (deep rooted grasses, wildflowers). They will continue this work in 2021.
- **Oakville Ready** – Preparing our community for extreme weather, building resiliency to address our changing climate.
- **Greening Sacred Spaces (Halton Peel)** – Working with faith based organizations to reduce their environmental impact through energy benchmarking, educational workshops and gardening initiatives.
- **Halton Green Screens** – Inspiring environmental stewardship through film, reaching over 18,000 community members. HEN and its affiliated programs provided several virtual engagements in 2020, with the goal of increasing knowledge and inspiring climate action. These include a Netflix party of The Biggest Little Farm, and film screenings of The Story of Plastic, 2040 and I am Greta. The film screenings brought in more than 650 viewers. All special events that HEN organizes are posted here: <https://haltonenvironet.ca/special-events/>
- **Halton Waste Mitigation** – Waste diversion at large community events and #Haltonwastechallenge in schools. First community based GHG & household waste study in Canada.
- HEN hosted two educational Lunch & Learns, one with CORE Burlington on the proposed Nelson Aggregate Quarry expansion, and another with Environmental Defence on the proposed GTA West Highway, which brought about 100 viewers combined. These can be seen here: <https://haltonenvironet.ca/special-events/webinars/>
- HEN created and launched a new synchronous learning tool, funded by the Oakville Community Foundation, but available across Halton. Initially designed as an in-school program, it was redesigned as a synchronous learning tool for virtual or in-person instruction. The ‘How to Drive Climate Action’ program aligns with the Ontario curriculum and is targeted for primary-aged children. It is available at no cost to the Halton District School Board and the Halton Catholic District School Board, and other educators in the community. More information is available here: <https://haltonenvironet.ca/synchronous-learning-tools/>

- HEN organized a virtual summer camp for children aged 6-10 in July 2020 and had over 100 attendees. HEN plans to run this program again in 2021.
- Pop what? Pop-up! HEN's Pop-up Clean-up program was launched in the summer of 2020 when health guidelines around COVID-19 permitted. In total, there were 97 clean-ups conducted throughout Halton Region in 2020, with 293 volunteers filling 227 garbage bags. By the end of the summer, 28,455 pieces of litter had been collected. Over 520 community involvement hours were verified for High School students across Halton through this program. HEN will be launching it again soon for 2021 with a new app, Litterati, that will better facilitate the tracking of waste collected – stay tuned!
- HEN was awarded funding from the Investment Readiness Program and initiated a feasibility study on the potential role of a Social Purpose Enterprise in driving deep home energy retrofits. The results of this study will be available and shared in the Spring of 2021.
- HEN's Executive Director, Lisa Kohler, volunteers her time to sit on the Burlington CAP - Stakeholder Advisory Committee.
- **Coming up** – HEN is a new member with Green Communities Canada (GCC). Depave Paradise is the first GCC program HEN will be making available across Halton. Depave Paradise addresses the proliferation of hard surfaces in urban environments through the primal act of ripping up unused pavement and replacing it with soil and vegetation. More details can be found here: <https://haltonenvironet.ca/our-programs/>

Royal Botanical Gardens

- Purchased the first fully electric vehicle for the RBG fleet in 2020.
- Purchased an e-assist bicycle to allow for low emissions travel between sites by RBG staff members.
- A 2 kW off-grid solar powered system was installed at the Boathouse located in the Arboretum enabling the removal of power lines.
- Boilers were replaced at RBG Centre. Both boilers were replaced (first in late 2019/early 2020, the second in late 2020) resulting in a change in efficiency from 80% to 96.9%. This is in addition to automated building controls which the installation/calibration is still underway.
- Boilers were replaced in the propagation greenhouse in 2020. The new boilers are rated 85% efficient and an improvement from the 82% of the previous equipment.

- Participating in Sustainable Hamilton Burlington's 'Sustainability Leadership' program to report on emissions using 2017 as a baseline.
- A staff member is currently creating a project plan for a climate change demonstration garden at the RBG. The goal is to have a set of recommendations by Fall 2021 to enable the RBG to seek funding opportunities for implementation.
- Through education and outreach programs, the RBG continues to encourage and educate people how to reduce their environmental impact.

Burlington Sustainable Development Committee



- The SDC is represented on and contributes to the following committees, supporting local action on climate change:
 - The Stakeholders Advisory Committee for the Climate Action Plan (CAP).
 - The Integrated Transportation Advisory Committee (ITAC).
 - The Bay Area Climate Change Committee (BACCC), a multi-stakeholder group focused on regional climate action.
- Occasionally the SDC invites guest speakers to their meeting to learn about various sustainability issues and projects. In December, 2020, Drew Hauser of McCallum Sather provided a presentation on net zero and sustainable buildings and their work to design the net zero Endress & Hauser Centre in Burlington.
- Prior to the Covid-19 pandemic, several SDC members visited West 5 which is a new greenfield net-zero community being developed by Sifton Properties in London, Ontario. There is no fossil fuel supply to the community. Electricity is generated on site with solar panels.
- The SDC reviews and comments on policies, plans and projects. Low carbon building and transportation measures are encouraged in the SDC's comments on all development applications, based on the Sustainable Building and Development Guidelines. Some notable reviews included the Climate Emergency Declaration, the Climate Action Plan and the Downtown Concepts, as well as the Burlington Official Plan and the Regional Official Plan.
- SDC members attended numerous events and consultations related to climate change and the Climate Action Plan:
 - The 'Cities in Action Climate Summit' at the RBG in March (organized by the Centre for Climate Change Management at Mohawk College).
 - The April COB COW Workshop on climate change planning.

- The Clean Air Partnership's 'Getting to Zero Case Studies' meeting at Mohawk College in May.
- The BACCC strategy session in June at the Joyce Centre at Mohawk College.
- The COB CAP Community Workshop in September.
- The 'Building Climate Ambition in a Globalized World' presentation at the McMaster Innovation Park in October.
- For 2021, the SDC will partner with Burlington Public Library to host an online information session for local residents featuring Brian Millar from Plug'n Drive to raise awareness about the benefits of owning and driving an electric vehicle. The in-person version of this event with test drives of EVs had to be cancelled in 2020 due to the pandemic.