

APPENDIX A – EICS-11-22

LIST OF COMMUNITY STAKEHOLDERS AND UPDATES

The community Stakeholder Advisory Committee was formed in 2012 to support the development and implementation of the original Community Energy Plan, which has now transitioned to 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 University - Institute for Energy
- Royal Botanical Gardens
- Burlington Sustainable Development Committee
- Sustainable Hamilton Burlington
- West End Homebuilders Association
- Councillor Paul Sharman (ex-officio member – attending in place of Mayor Meed-Ward)
- 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.

Climate Actions and Initiatives 2021 - 2022

Some of the climate action initiatives accomplished and underway at BurlingtonGreen over the past year include:

- BurlingtonGreen is collaborating with the City of Burlington to develop the first community based Electric Mobility Strategy for Burlington. Building on BurlingtonGreen's popular [Make The Switch](#) program, the strategy will support Burlington's Climate Action Plan's goal of community carbon neutrality by 2050 and drive emissions reductions from the transportation sector.



- BurlingtonGreen partnered with the City of Burlington, Burlington Hydro and Plug N Drive to host the Earth Day Action on Climate event on April 23, 2022. The event kicked off the month long Mobil EV Education Trailer (MEET) activation in addition to hosting a tree giveaway and a Clean Up supply giveaway.



- BurlingtonGreen's Executive Director serves as a founding member of the BACCC (Bay Area Climate Change Council) and the Program Manager serves on the BACCC Transportation Implementation Team, providing subject matter expertise including effective community engagement strategy and practices. BurlingtonGreen is also part of the Burlington Climate Adaptation Plan stakeholder team, attending 10 workshops and providing input to the plan's themes.

- In 2021 and 2022, 10,947 Clean Up participants and 399 Green Up participants contributed to cleaner and greener communities and increased the amount of waste diverted from the landfill.

Additionally, BurlingtonGreen distributed 585 packets of native plant species seeds to improve local biodiversity. On April 30th, together with the Forestry Department, BurlingtonGreen hosted the annual Green Up Tree Planting event and planted 500 trees with the community at Millcroft Park.

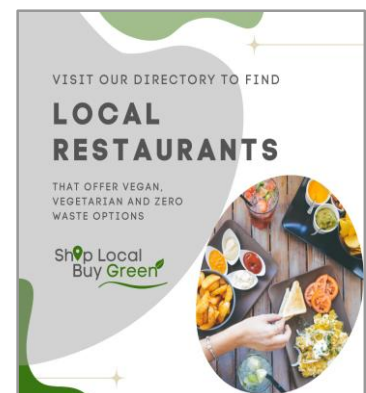


- The [Burlington Community Climate Action Hub](#) launched in 2021. The Hub operates through BurlingtonGreen with an aim to introduce and grow a resident-driven, non-partisan community movement focused on local action on climate change. Together, BurlingtonGreen and the Hub hosted "[Climate Change: Listen, Learn, Take Action](#)" in November, 2021, co-hosted a peaceful action on climate rally and hosted a series of candidate questions ahead of the federal election in 2021 and the provincial election in 2022.



- [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. Additionally, our social media platforms and popular monthly [newsletter](#) provide various climate action related information and tips, contributing to community awareness about opportunities to tackle climate change locally.

- The [Shop Local Buy Green](#) resource launched in November 2021 and has already reached/engaged with more than 44,871 people through social media! The one-stop handy resource provides low-waste living and green buying tips, a searchable [directory](#) of local eco-friendly products, services, businesses, and much more. There are currently 180 businesses listed in the growing directory, which includes a map feature, categories, contact information and an online form for suggesting new listings. We have reached out to local multicultural groups and networks for assistance in promoting the directory and attracting additional listings.



- Proactively supporting continued community interest in local nature and parks, we strengthened our [Nature-Friendly Burlington](#) program, with increased focus and emphasis on online engagement through surveys, social media posts featuring the popular and educational [Dave's Feathered Friends](#) and active participation in [Bird Friendly City Hamilton-Burlington](#) of which we are a founding member organization. We also hosted a number of Nature-Friendly Burlington virtual events.



- Our Speak Up page 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. In 2021, BurlingtonGreen provided input to various levels of government on [6 environmental issues](#) with a far-reaching [letter to the Prime Minister](#) while at COP26 that was published in the Hamilton Spectator. We served as co-moderator for the 100 Debates for the Environment and we also provided input and submissions on 10 environmental issues.

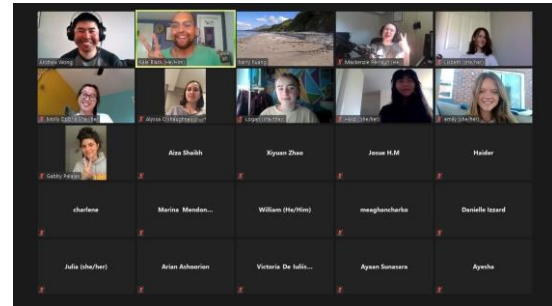
- Our first in-person outreach opportunity since the COVID pandemic hit took place in December 2021 at the Burlington Holiday Market. Market visitors engaged with the BurlingtonGreen team at our tent, learning more about our programs and opportunities to take action on climate change. Our participation at the Burlington Holiday Market also included event greening services, where volunteers diverted 295 lbs of waste.



- BurlingtonGreen also collected 8,000 lbs of electronics waste at two zero waste drives at the Burlington Centre.



- In 2021 and 2022, BurlingtonGreen has provided 15 educational and hands-on workshops, engaging with 286 children and youth in Burlington.
- In 2021 and 2022, the BurlingtonGreen Youth Network has hosted 35 online meetings featuring over a dozen various Guest Speakers from organizations like Bay Area Restoration Council, Creeks and Trees, Field and Stream Rescue Team, Green Linings, Climate Activists and many BGYN Alumnus.
- In 2021 we had 167 different students attend our bi-weekly meetings, contributing a total of 1491.75 volunteer hours.
- In just the first 5 months of 2022, we have had 102 students contribute 475 hours. In total, throughout 2021 and 2022 we have had over 200 unique BGYN members contributing just under 2000 volunteer hours!



“BGYN has been a really enjoyable experience for me that has also taught me a lot. I have learned so much about the environment and about climate change since I first joined BGYN, and the guest speakers always bring an expert perspective. Whenever I leave a BGYN meeting I always feel like I’ve learned something.” - Joshua G, April 2022

Burlington Hydro / Burlington Electricity Services Update

Not unlike other projects, COVID-19 resulted in the delayed construction of buildings that had suite metering and EV Charging Station contracts for 2020 and 2021. These projects are expected to be completed in 2022.

Suite Metering

There are over 13,300 multi-residential units in Burlington - primarily apartment units – which are bulk metered. Considerable opportunity for suite metering installations continues in the City's condo and apartment space. Burlington Hydro (BHI) has focused on growing the electricity suite metering business, while targeting expansion of the water suite metering businesses under Burlington Electricity Services (BESI).

Electricity Suite Metering is a simple, cost-effective program offered to condominium and rental buildings, where each unit gets its own meter. Customers pay only for the electricity used in their unit and can benefit from their individual conservation efforts.

Burlington Hydro is giving increased attention to the conversion of apartment building metering – from a bulk metering service to unit smart meters. Apartment units are suite metered on turnover of the unit, or by agreement of the tenant. The building owner cannot force a tenant to switch to a suite (individual) meter. At the 5-year point of the suite meter system going live, all remaining units that have not turned over will become individual accounts in the building owner's name. The industry averages an annual turnover rate of 15% annually. The program has been well received.

In 2021, good progress continued with the completion of meter installations at Maranantha Gardens and Bridgewater Condominiums.

2022 Electricity Suite Meter Contracts:

- Condominiums: 2071 Fairview Street; 2097 Fairview Street
- Apartment Buildings: 2095 Prospect; 367 and 384 St. Paul Street; 390 Guelph Line; 2132 Harris Crescent

Expanding the Suite Metering Portfolio to include Water and Gas

BESI has installed Water and Gas metering in the condominium at 457 Plains Rd. This represents the first 85 suite customers to have a full offering of electric, water and gas metering. In 2022, 5 Commercial Water Accounts will be added. This can be used as the model to expand the full package of metering services to future condo developments.

Electric Vehicle (EV) Charging Stations

The Government of Canada plans to eliminate combustible engine-run cars and light trucks by 2035 as part of its net-zero emissions goal to limit further global warming. Despite a lack of provincial incentives, interest in Electric Vehicles (EVs) and EV Chargers in multi-unit residential buildings remains high in Burlington. Burlington Electricity Services (BESI) expects the demand for EV Chargers in multi-unit residential buildings to grow exponentially beginning in 2024.

Community interest in Burlington Electricity Services' (BESI) Managed Electric Vehicle Charging Program was high in 2021 with EV Charger installations continuing at Bridgewater, Paradigm and Bunton's Wharf condominiums.

Not all apartment or condominium buildings have enough electrical capacity to install a large number of EV Charging Stations (EVSE). Energy management at the EV Charger level is a tool to expand the number of EV Chargers that can charge in the building and to limit the total amount of energy used for charging.

Energy management can be very important for protecting the buildings critical electrical infrastructure and controlling building electrical costs through load sharing and controlling the peak load. Load sharing systems for EVSE's are specifically designed for multi-unit residential buildings, whereby, the EVSE can allocate limited electrical capacity between several stations, making sure everyone gets the opportunity to charge before they need their car in the morning.

Signed EVSE Contracts (2022): Paradigm Condo, Bldgs A, B, C and visitor (public) parking; Buntons Wharf Condo; Bridgewater Condos (1 Elizabeth Street; 2060 Lakeshore Road); and New Horizon Head Office. Ten further contracts are currently in progress.

A significant hurdle is the public perception which has led many to believe that the cost to install a charger and run an electric vehicle is negligible.



Supporting Home Energy Retrofits

In the Climate Action Plan, home energy retrofits are identified as a key opportunity to help Burlington residents reduce their greenhouse gas emissions and improve home comfort.

- Collaborated with City of Burlington staff on a home energy retrofit program feasibility study. Approved by Council in March 2022.
- With support from the City of Burlington and The Atmospheric Fund (TAF), developed a business case for a Home Energy Retrofit Delivery Centre, to support Hamilton-Burlington residents.
- Supported the City of Hamilton's FCM grant application to design a home energy retrofit program for Hamilton. If successful, there will be opportunities to support greater uptake of retrofits regionally.

Accelerating Industry Decarbonization

Industry contributes >60% of the Hamilton-Burlington region's greenhouse gas emissions. The CCCM is dedicated to supporting industry decarbonization, and realize important co-benefits for our communities.

- Partnering with ArcelorMittal Dofasco to build a waste wood value chain for biocarbon to replace coal in the steelmaking process. This will significantly reduce greenhouse gas emissions from steelmaking.

Supporting Canadian Clean Tech

Canada is well positioned to be a leader in clean tech solutions on the global stage. The CCCM is engaged in helping clean tech SMEs scale and commercialize their solutions.

- Through a partnership with the National Research Council's Industry Research Program, the CCCM and its sister centre EPIC, is piloting a program to provide clean companies with strategic advisement on their energy reduction and emissions strategies.

Supporting Campus Sustainability

As part of Mohawk's larger sustainability commitment, the CCCM continues to house and provide strategic support to the campus sustainability office. Mohawk College continues to be a sectoral leader in sustainability.

- Medical mask recycling program successfully recycled more than 260,000 masks as of April 2022.
- Community garden donated over 600 pounds of produce to community food programs in 2020-2021.
- College community garden will be welcoming back over 200 members in May 2022 for the first time since the pandemic began.

Incubating Coalitions in Climate Action

Addressing climate change requires an unprecedented level of collaboration. The CCCM incubates multisector coalitions to address systems-level climate challenges.

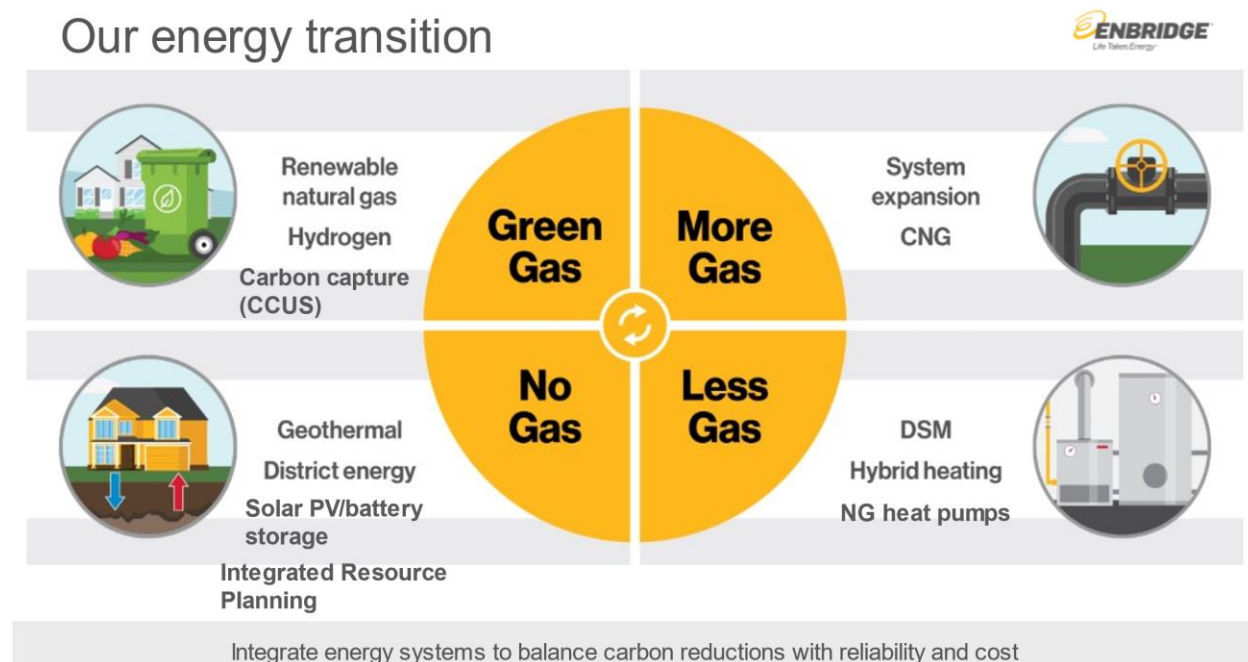
- Continue to serve as the administrative home of the Bay Area Climate Change Council (BACCC).
- Continue to act as lead convener of Canadian Colleges for a Resilient Recovery – a coalition of 14 colleges from across Canada supporting workforce transformation to the low carbon economy.

Enbridge Gas Inc. Updates

Our Energy Transition

Given our scale and experience, Enbridge Gas (Enbridge) is uniquely positioned to partner with the City of Burlington in this energy transition.

Our energy transition today looks like this:



We will enable a diversified pathway for municipalities like Burlington, to achieve their climate action targets in support of a cleaner, greener future for Ontario.

We will deliver less gas through conservation and energy efficient technologies exceeding 100% efficiency, like heat pumps and hybrid heating. We will deliver green gas including RNG, hydrogen and carbon capture technologies. We will deliver non-gas solutions like geothermal, solar PV with battery storage and district energy systems. We will work with Local Distribution Companies (LDCs) to integrate natural gas solutions with low-emitting electricity to balance carbon reductions with cost and reliability.

POWER.HOUSE Pilot

Enbridge has been working with the City of Markham and its electric utility Alectra on the POWER.HOUSE hybrid energy project for the past 3 years. With deployment in 10

Markham residential homes, the POWER.HOUSE project, funded by Natural Resources Canada, aims to explore the benefits of integrated and decentralized hybrid energy generation.

Homes are retrofitted with a set of controllable electrical and thermal technologies feeding into a Virtual Power Plant (VPP) platform. These technologies include:

- Hybrid heating (natural gas and electric)
- Solar panels
- Battery storage
- Micro combined heat and power (CHP) systems
- Electric vehicle chargers

This equipment is controlled with an integrated smart controller that will enable customers to reduce greenhouse gas (GHG) emissions, have greater control over their energy costs, and enjoy increased comfort through automated controls.

<https://www.markham.ca/wps/portal/home/about/sustainability/Power-House-Hybrid/01-Power-House-Hybrid-Pilot-Study>

Hybrid Heating

A hybrid heating system with smart controls switches between electricity and natural gas to heat and cool more efficiently. By doing so, homeowners can reduce their natural gas use, reduce GHG emissions and save money.

Enbridge is currently running a pilot program in London, Ontario, that involves the installation of hybrid heating systems in more than 100 homes. The program is gathering data to measure how much energy and GHG emissions hybrid heating systems can save, with the intent to accelerate adoption.

Enbridge, with the support of the Ontario Government, will be expanding this Hybrid Heating pilot in London, and to homeowners in Sault Ste. Marie, St. Catharines and Peterborough. Electric heat pumps with smart controls will be made available to up to 1,000 more households, providing homeowners with \$3,000 to \$4,500 in incentives to help offset the incremental cost to replace an air conditioner with an air source heat pump.

Enbridge in its next Multi-year Demand Side management Plan proposal, has asked the Ontario Energy Board (OEB) to approve the delivery of an annual hybrid heating incentive program – a first for Enbridge. If approved, Enbridge hopes to be able to deliver a program until at least 2027 – a program informed by the results of the pilot.

A hybrid heating incentive paired with additional financial incentives for other energy efficient solutions for homeowners, can help maximize comfort, reduced energy consumption and GHG, and savings on energy costs for Burlington homeowners.

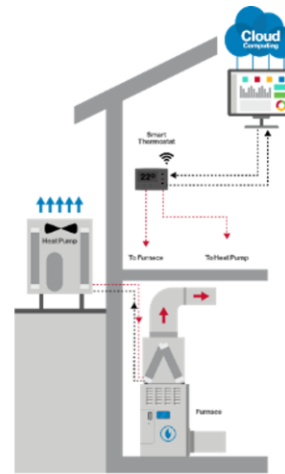
Hybrid Heating Pilot Program - Overview



Description

Hybrid Heating with Smart Controls: A system that adjusts to the most efficient energy saving method available to heat a home using technologies with varying fuel sources

- Can combine gas furnace or combo -system with an electric heat pump (vs. air conditioner).
- Offers better energy efficiency than traditional gas appliance, choosing technology that is most efficient at any given time.
- Can help reduce carbon footprint if switching from a purely fossil-fuel-burning system.



- ✓ Furnace provides assurance of thermal comfort on cold winter days
- ✓ Heat pumps provide shoulder season heating using spare capacity on the electric grid
- ✓ Smart controls respond to price signals to achieve GHG reductions without increasing energy costs
- ✓ A dual-fuel system is a hedge to uncertain energy costs

Efficiency – greater than 100%

Municipal Support

We are committed partners with a vested interest in Burlington's livability, quality of life and low carbon future. That is why our ask of the [Ontario Energy Board](#) also includes an annual budget to support municipal climate action through partnerships; like pilot projects – again, a first for Enbridge.

Two years ago, Enbridge dedicated a small team to support municipalities on their climate change action journey.

Royal Botanical Gardens

- 2021 was the first year where RBG's greenhouse gas emissions fell below their 2017 baseline levels. Work in 2020 to replace old natural gas boilers with newer efficient models played an important role in this reduction.
- RBG purchased over 20 commercial grade electric landscaping tools to be used by our horticulture and natural lands departments.
- Work was completed in Hendrie Park to expand the garden's electrical capacity meaning that generators were not required to provide power for events in this space in 2021, and aren't expected to be required in the future.

- Irrigation rain sensors were installed in Hendrie Park, RBG Centre, and the Rock Garden. These sensors automatically shut-off scheduled irrigation in the event of rain and prevent systems from re-starting until conditions have begun to dry out.
 - A member of RBG's education department completed a feasibility study and initial project plan for a climate change demonstration garden which would help visitors and the public better understand the impact of climate change on nature. RBG is exploring funding opportunities to implement this project but currently there is no set timeline to proceed.
 - Through education and outreach programs, the RBG continues to encourage and educate people how to reduce their environmental impact.
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Sustainability Leadership

(formerly Sustainable Hamilton Burlington)

- We hosted our inaugural Innovation Hackathon in October of 2021. We saw students grouped into two teams to find solutions geared towards zero waste and circular economy. One team found an opportunity to create a water soluble pill bottle to reduce plastic waste. The other team designed an app that identifies the GHGs associated with your groceries, just by taking a picture of your receipt. Check out the [event recording here](#).
 - We brought back the Sustainable Business Expo in November of 2021 in a virtual format. As an official World Circular Economy Forum Side Event, we took a deep dive into the concepts of Zero Waste and Circular Economy, delivered by 20 unique speakers over two days. The [event recordings](#) are available for purchase as a bundle.
 - We have worked with our members to reduce ~17,300 tCO₂e in 2021. We have several members who are on track to achieve emissions reductions that exceed Sustainability Leadership's targets of 30% reduction by 2025, 60% reduction and 100% reduction by 2045. See our progress in our [Annual Impact Report](#). (2021 report will be released on June 2, 2022)
 - After more than two years of research and development, Sustainability Leadership has launched its first course in the Sustainability Leadership Learning Series for anyone in the community to take. The course identifies the environmental, social and economic impacts created by our actions, and aims to address specific issues such as the climate crisis, systemic discrimination, linear economy and supply chain limitations. Take a look at our [first Course](#).
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West End Home Builders' Association



Below are some of the WE HBA initiatives that are applicable to climate action in Burlington:

Local Energy Efficiency Partnerships (LEEP) – Cost Benefits Analysis Workshop

WE HBA in partnership with LEEP held a workshop designed to help builders and renovators better understand the technologies and costs of constructing to higher levels of energy performance. The workshop helped:

- identify and select performance targets
- define a case study home to work on
- illustrate the range of technology combinations and associated costs
- explain how to choose the optimum solution while exploring options from a cost and technology perspective.

The workshop was designed for participants to trial NRCan's costing tool, in real-time, to have a working understanding of the tool as well as the output results.

EnerQuality Steps to High Performance Building

WE HBA co-hosted a half-day session with EnerQuality to help our local building industry find a direct path between building code changes, high performance buildings, and municipal sustainability requirements. Monica Curtis, EnerQuality and Gord Cooke, Building Knowledge hosted a workshop where leading subject matter experts offered timely updates related to building codes, building certification and municipal sustainability requirements. The interactive event also featured panel discussions and case studies including local builders and energy advisors as well as a working session providing practical applications of sustainable and high-performance technologies and practices; with an opportunity to share experiences in an in-person format.

Partnerships and Collaboration

City staff participate in a number of other organizations and collaboratives to help accelerate and report on climate action at a local, regional, and national level:

1. Bay Area Climate Change Council

[The Bay Area Climate Change Council](#) (BACCC) is a social impact initiative made up of 14 community leaders from Hamilton and Burlington. BACCC's vision is for the Bay Area to be a thriving and resilient net zero community by 2050. The mandate of BACCC is to develop and advocate for local climate solutions that will reduce greenhouse gas emissions. In doing so, BACCC provides strategic leadership and function as an ongoing forum for advice, feedback and guidance to the cities of Burlington and Hamilton.

2. Halton Climate Collective

The [Halton Climate Collective](#) is a group of local organizations, including Halton Region, the local municipalities and the school boards, focused on collectively transforming Halton into a low carbon climate resilient community. Its purpose is to align actions and leverage expertise to reduce climate change, secure funding opportunities and promote a collective approach to addressing climate change.

3. Clean Air Partnership

The [Clean Air Partnership](#) (CAP) is a charitable environmental organization launched in June 2000. CAP's mission is to enable communities to improve air quality, advance active and sustainable transportation options, take bold climate action, increase community resilience to climate impacts and accelerate the transition to a low carbon economy. CAP facilitates the [Clean Air Council](#) (CAC) network made up of over 30 municipalities (Burlington has been a member since 2002) from across southern Ontario working collaboratively on the transfer and scale up of climate actions.

4. QUEST

[QUEST](#) 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.

The QUEST network provides Burlington with the opportunity to learn from others, share information and provides access to senior levels of government and utilities on energy issues.

5. Global Covenant of Mayors (Canada)

The [Global Covenant of Mayors](#) (GCoM) (Canada) is a collaboration between the Federation of Canadian Municipalities, [ICLEI Canada](#), C40 Cities, the Global Covenant

of Mayors Secretariat and the International Urban Cooperation Project. This initiative combines the two leading domestic climate programs, the [Partners for Climate Protection](#) (PCP) and Building Adaptive and Resilient Communities (BARC) with the leading global climate program. The purpose of this collaboration is to further advance Canadian local climate action by adding value, international opportunities/profile and streamlines support and reporting for members.

Burlington has been a participating member in the PCP program since 2002 and met all five milestones of the program in 2017. Burlington is also a member of ICLEI Canada. Burlington joined GCoM in 2019 and has received the mitigation badge related to the Climate Action Plan and set a greenhouse gas emissions reduction target.

6. Carbon Disclosure Project

The [Carbon Disclosure Project](#) (CDP) is an international non-profit charity that runs a global disclosure system for investors, companies, cities, states, and regions to manage environmental impacts. CDP North America is based in New York City and administers the program for the United States and Canada. The global head office is in London, England. This will be the first year that Burlington staff report on climate action through the CDP, which will be shared with and meet the city's reporting requirements for GCoM.