



Clean Air Partnership

The State of Climate Action Implementation in Ontario Municipalities

2023 Report



About The Clean Air Partnership

Clean Air Partnership (CAP) is a registered charity that works in partnership to promote and coordinate actions to reduce greenhouse gases for healthy communities. Our applied research on municipal policies strives to broaden and improve access to public policy debate on air pollution and climate change issues. Clean Air Partnership's mission is to transform cities into more sustainable, resilient, and vibrant communities where resources are used efficiently, the air is clean to breathe, and greenhouse gas emissions are minimized.

About The Clean Air Council

The Clean Air Council is a network of 42 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.

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Executive Summary

Municipal climate action is critical to meet Canada’s local, provincial, and national greenhouse gas (GHG) reduction targets. By actively planning, implementing, and monitoring climate action initiatives, municipalities not only help lower local emissions but also contribute to fostering a sustainable, low-carbon future for our communities.

By highlighting climate actions, we aim to inspire and support other municipalities in achieving similar advancements. As of January 2025, the Atlas features 188 actions implemented by CAC municipalities, an increase from 132 in 2022. This includes 56 newly added actions and updates on progress made in 2023. Each action highlighted in this report is linked to its [corresponding entry in the Atlas](#) for further exploration.

This initiative aims to highlight ongoing municipal efforts to reduce greenhouse gas emissions while emphasizing the urgent need to accelerate and expand ambitious climate actions. It is worth noting that other jurisdictions are implementing impactful strategies that have yet to be adopted in Ontario. For instance, cities like New York, NY are introducing congestion charges to limit automobile traffic in core downtown areas, while Vancouver, BC has implemented a ban on natural gas in new buildings, driving the transition toward sustainable construction practices and raising awareness of the need for building decarbonization. San Diego, CA has eliminated parking requirements for buildings built close to public transit and encourages new developments to invest in safe and convenient transportation options, like biking, walking, and public transit.

The annual report highlights regional progress in climate action and pinpoints areas where additional efforts are needed. While we actively track and update actions advanced by the CAC members, we encourage all Canadian municipalities to contribute actions for inclusion in future versions. New actions may be added through the Atlas portal at www.cleanairpartnership.org/atlas.

Introduction



Major Emission Sources

Total emissions have been broken down and classified into seven sectors or emission sources, as used in standard GHG accounting protocols.



Land Use - Land use planning shapes the patterns of energy use and development within communities. Land use emissions are attributed to activities and changes in land use, such as deforestation, urbanization, and alterations in land management practices.



Transportation - Emissions from the transportation sector primarily come from burning fossil fuels for our vehicles. Transportation emissions are heavily influenced by municipal land use planning.



Energy - The processes of energy generation, transmission, and distribution generate GHGs. Depending on the combination of sources used in energy generation, each province emits a different quantity of GHGs per unit of energy generated. The greenhouse gas intensity of Ontario's electricity grid was 25 grams of CO₂e per kilowatt-hour for electricity generated in 2020.



Buildings - GHG emissions from residential and commercial buildings arise primarily from using fossil fuels for space and water heating and electricity for cooling, lighting and appliances.



Industry - GHGs from industry arise from burning fossil fuels for energy and emissions from certain chemical reactions necessary to produce goods from raw materials.



Waste - GHGs such as methane are released from landfills through the decomposition of organic waste. In addition, anaerobic decomposition of wastewater and incineration of waste also produces emissions.



Agriculture, Forestry and Other Land Use (AFOLU) - AFOLU category is unique as it includes both carbon sources and sinks. AFOLU encompasses a range of activities, including agricultural practices, forestry management, and other land use changes such as urbanization and land degradation. Restoration and preservation of natural ecosystems enhances its carbon sequestration potential, bolstering GHG mitigation.

Ontario's Emissions



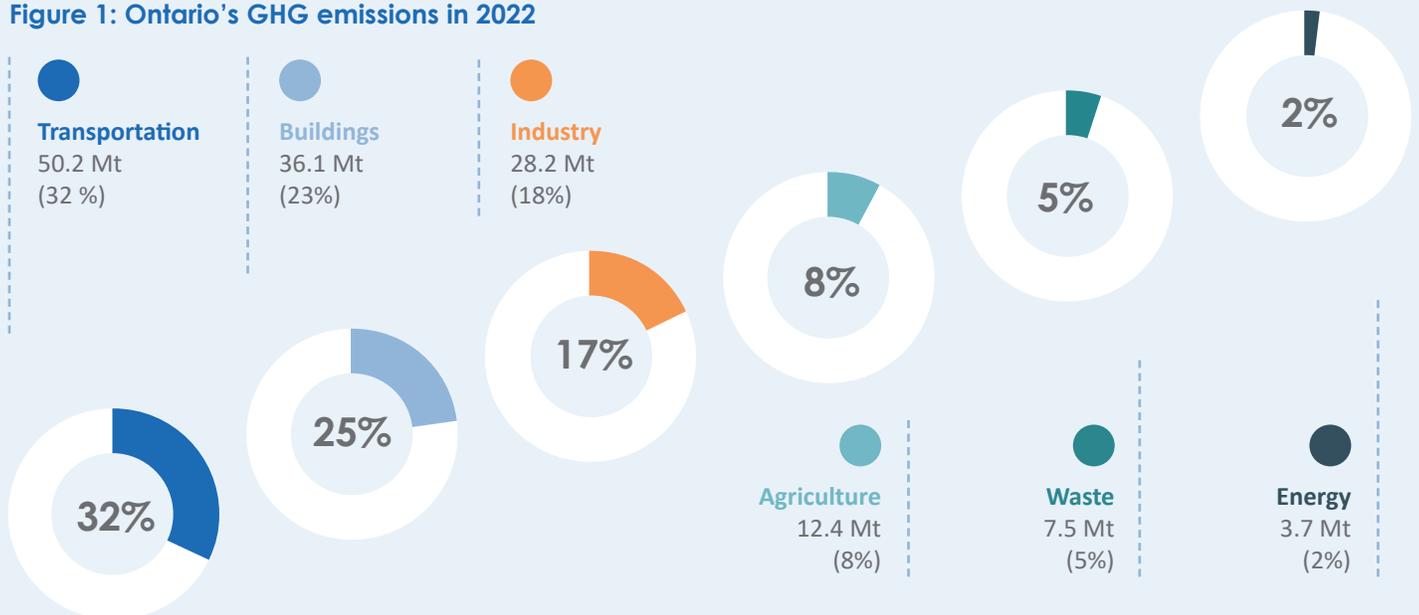
Ontario, Canada's second-largest province, spans over a million square kilometers and is home to approximately 14.2 million people. In 2022, the province's greenhouse gas (GHG) emissions totaled **157 megatonnes** of carbon dioxide equivalent. The Greater Toronto and Hamilton Area (GTHA), which houses nearly half of Ontario's population and serves as the second-largest financial hub in North America, accounts for roughly 50% of the province's total emissions.

Role of Municipalities in Climate Action

Municipalities across Canada are at the forefront of climate action, setting emissions reduction targets, declaring climate emergencies, and implementing climate strategies. Through tools like land-use planning, transportation policies, and zoning bylaws, municipalities play a pivotal role in shaping a low-carbon future. For example, they can mandate the inclusion of electric vehicle charging stations in new or retrofitted buildings and require zero-emission heating systems in new developments. By leveraging their regulatory powers and localized influence, municipalities are driving transformative change to address climate challenges and build more sustainable communities.

In recent years, municipal governments have shown increasing climate leadership by setting ambitious net zero targets, developing and implementing climate action plans and driving down GHGs in their communities.

Figure 1: Ontario's GHG emissions in 2022



This report highlights the emissions reduction actions implemented by [Clean Air Council municipalities](#) in 2023. It also serves as a valuable resource for other small and large local governments across Canada seeking to advance sustainability and reduce emissions in their communities.

Scope of this Report

Inclusion Criteria

This report highlights large-scale GHG reduction initiatives led by our 42 CAC member municipalities. It focuses exclusively on climate mitigation actions championed by these members. As the CAC network continues to grow, ambitious efforts from new member municipalities are regularly added to the database. Looking ahead, as climate mitigation innovation progresses, new categories and actions will be added into the Climate Action Atlas to demonstrate this growing ambition and innovative approaches. In 2023, we have added a new Net-zero Community category to highlight Toronto's first ever net-zero community.

The database includes both fully implemented

initiatives and projects at advanced stages of implementation as of 2023. For projects still underway, we have included those with an assigned budget and significant progress. The database captures actions undertaken by municipalities independently or in collaboration with other municipalities, as well as public and private sector partners.

Exclusion Criteria

This report highlights bold and innovative climate actions implemented or underway in 2023 that demonstrate or have the potential to significantly reduce emissions. Excluded are early-stage projects without committed budgets, standard municipal energy efficiency upgrades (such as LED retrofits, and mechanical system replacements) adaptation actions, and municipal plans, policies, or feasibility studies. The focus remains solely on impactful mitigation efforts driving measurable emissions reductions.

Because of the limited role of municipalities in regulating industrial emissions, industrial emission reduction actions are excluded, however, it will be populated should these actions be undertaken by municipalities in the future.

Municipal planning decisions made today will have environmental impacts far into the future.

Highlights

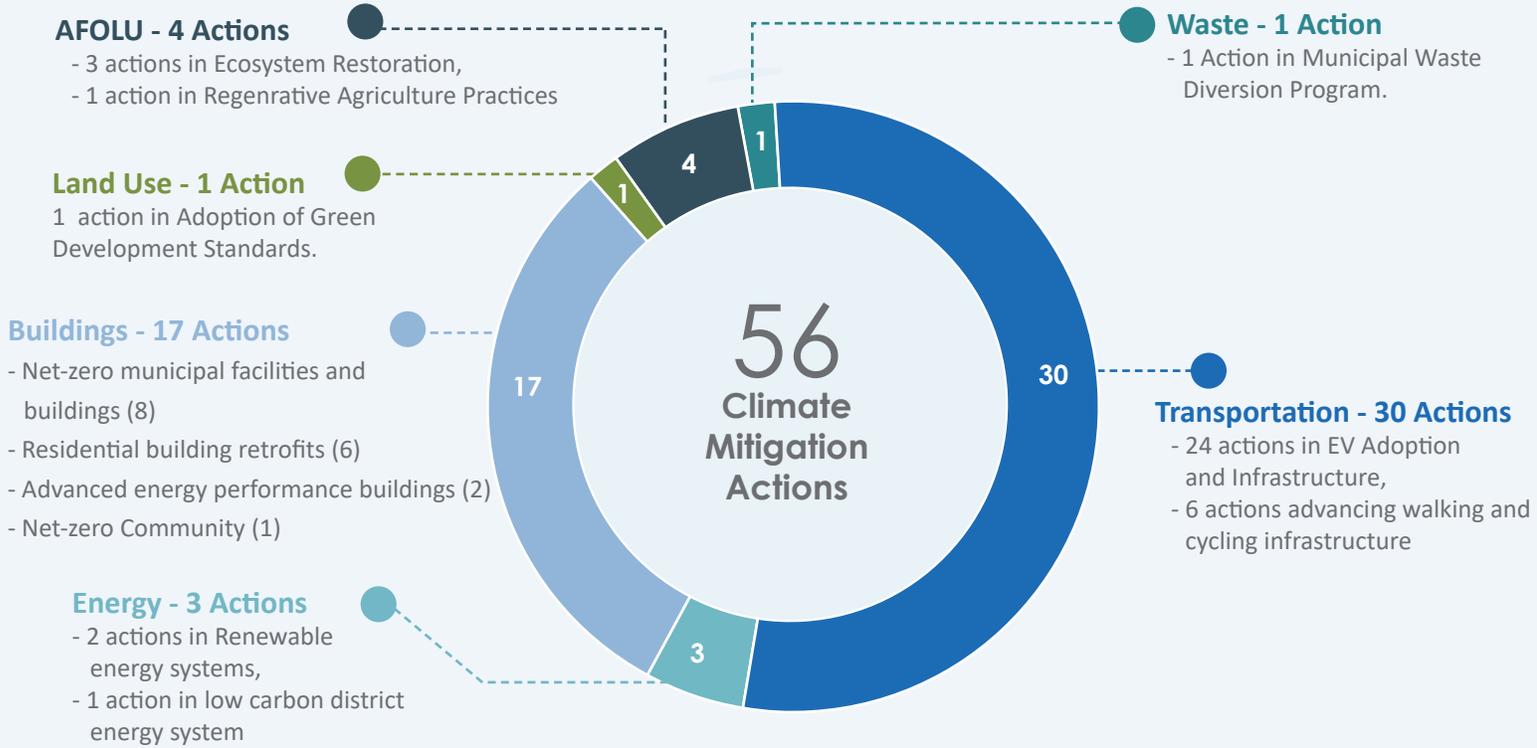


Overview

The [Climate Action Atlas](#) consists of 188 ambitious climate mitigation actions taken by the CAC member

municipalities from 2015 to present. Of these, 56 actions were newly added and updated to report on the progress made in 2023.

Figure 2: Climate Actions Per Sector in 2022



Municipalities Advancing Green Development Standards:



Municipalities with Net Zero Buildings and Facilities



Municipalities with Electric Ice Resurfacers



Updates on Actions Ongoing in 2023

For larger-scale multi-year actions, the atlas provides annual updates on the progress of the project to ensure transparency to the public. In 2023, we have updated 24 actions that are currently underway.

16 (69%) of these actions belong to the [transportation sector](#) and include fleet electrification and EV charger installations by municipalities including Aurora, Brampton, Burlington, Clarington, Mississauga, Newmarket, Richmond Hill, Peel Region, Pickering and Toronto. Federal funding through the Zero Emission Vehicle Infrastructure Program, available until 2027, is a key driver of municipal fleet electrification. Across the CAC network, municipalities are expanding their EV fleets and charging infrastructure by forming innovative partnerships with utilities and private companies. Many more actions expected in this sector in the coming years.

In the [AFOLU sector](#), two notable updates are reported in the ecosystem protection and restoration category. Dufferin County has advanced its Experimental Acres initiative, while Richmond Hill has undertaken projects at sites such as Beaver Woodland, David Dunlop Observatory, Elgin Mills Greenway, Phyllis Rawlinson Park, and Saigeon Trail. These municipalities are innovating agricultural practices, planting native trees, creating wildlife habitats, and enhancing ecosystem functionality.

In the [Buildings sector](#) (17 actions), many municipalities are constructing net zero new corporate buildings to reduce emissions from their corporate portfolio which has been highlighted in the update. We also provide updates on the successful adoption of interest-free grants and loans from three residential retrofit programs: Greener Homes Durham, Better Homes Kingston, and Better Homes Ottawa.

Two actions were updated in the [Energy sector](#). In 2023, Caledon and Peel Region expanded its renewable energy projects and installed solar panels on their municipal facilities.

In the [Land Use sector](#), one action was updated. The City of Pickering began working with partners to update their Integrated Sustainable Design Standards. The revised standards came into effect in January 2023 and allow the City to review development through a sustainability lens, based on modern, green technology criteria and best practices.

Waste sector had one new action highlighting Mississauga's efforts to divert waste during the renovation of the Hazel McCallion Library.

Some Common Trends Observed in 2023

In our 2023 update, majority of actions were observed in the Transportation and Buildings sectors - which are among the largest contributors to GHG emissions.

This year, 30 actions were recorded in the transportation sector, including 14 new initiatives and 16 updates, focusing on municipal fleet electrification and the expansion of charging infrastructure. The growing adoption of EVs and development of charging networks is largely driven by [federal funding](#) support. Municipalities are advancing heavy-duty fleet electrification by introducing electric transit buses, garbage trucks, and ice resurfacers as replacements for older fleet vehicles.

17 actions were recorded in the buildings sector. In 2023, municipalities accelerated their commitment to net-zero building construction, breaking ground on and completing eight new net-zero facilities.

These included community centers, recreation facilities, police service buildings, and fire halls, showcasing leadership in sustainable infrastructure development.

Municipalities are scaling up their residential GHG reduction efforts by launching community retrofit programs. In 2023, we observed 6 actions (3 new and 3 updates) in the buildings sector to advance building retrofits and reduce emissions from the residential and commercial buildings.

Municipalities are electrifying fleets and installing charging infrastructure. Municipalities are empowering communities to reduce building emissions by offering residential retrofit programs that provide substantial loans and grants, enabling homeowners to undertake energy-efficient home upgrades.

Sectoral Focus - Land Use



Land-use: Land use decisions play a pivotal role in shaping municipal emissions, influencing transportation patterns, building efficiency, and the preservation of natural ecosystems. Poorly planned developments—such as sprawling, car-dependent communities with limited public transit options—lead to increased vehicle kilometers traveled and greater reliance on fossil fuel-powered vehicles, driving up transportation emissions.

Zoning regulations and development policies also impact energy use. Low-density, inefficient building designs increase energy demands and reliance on fossil fuels for space and water heating, contributing to higher emissions in the buildings sector. Additionally, urban expansion into green spaces, forests, and agricultural lands reduces carbon sinks like trees and vegetation, further exacerbating GHG concentrations.

To address these challenges, municipalities must prioritize sustainable urban planning practices. Strategies include compact, mixed-use development with accessible public transit, preservation of natural areas, and maximizing infrastructure efficiency by concentrating higher-density developments along transit corridors. These measures not only lower emissions but also enhance access to amenities such as schools, shops, and parks.

Green Development Standards

Green Development Standards are local design requirements aimed at improving energy efficiency and creating sustainable communities. Integrated into the planning approvals process, GDS encourage new developments to meet specific environmental, social, and economic criteria. These standards often include mandatory and voluntary energy efficiency and GHG performance measures, enabling significant emissions reductions in new construction

while fostering more resilient, low-carbon communities.

As of 2023, eleven municipalities within the CAC network have successfully developed and implemented Green Development Standards (GDS), reflecting their commitment to advancing sustainable urban growth. These municipalities represent a mix of both medium and large communities, including Halton Hills, East Gwillimbury, Pickering, Toronto, and Ottawa. By integrating GDS into their planning and approval processes, these municipalities are promoting energy-efficient building designs, reducing greenhouse gas emissions, and fostering environmentally and economically sustainable developments.

Local governments must prioritize sustainable urban planning, promote compact, mixed-use development, accessible public transportation, and preserve green spaces to reduce land use emissions.



Planning and designing a new development in accordance with the local Green Development Standards.

CASE STUDY

Pickering Integrated Sustainable Design Standards

The City of Pickering’s [Integrated Sustainable Design Standards \(ISDS\)](#) are a two-tiered green development standard system which mandates and encourages sustainable design and performance in all new developments in the city.

Launched on January 1, 2023, the purpose of the ISDS was to replace the 2007 Sustainable Development Guidelines and develop a new set of standards that allows the City to review development through a lens that includes modern, green best practices and technology. The ISDS support many existing City policies, including the City of Pickering Official Plan, Integrated Transportation Master Plan, Stormwater Management Design Guidelines, the City’s Boulevard Tree Planting Standards, and the Age Friendly Community Plan.

The ISDS focus on 7 key principles of environmental, social and economic sustainability. They include education, energy & resilience, neighbourhood, land use & nature, transportation and waste.

Pickering ISDS will advance building practices that reduce greenhouse gas emissions, build infrastructure that is resilient to future climate change and create a healthier environment for residents.

Sectoral Focus - Transportation



Transportation: Municipalities play a vital role in reducing transportation emissions, a significant contributor to GHGs. By implementing a range of climate actions, municipalities are achieving significant emissions reductions in their transportation sector.

Fleet Electrification

Municipalities are transitioning their fleets to low-carbon options by replacing aging internal combustion engine vehicles with hybrid or electric vehicles (EVs). This includes light, medium, and heavy-duty vehicles such as electric buses, garbage trucks, and ice resurfacers. By adopting electric fleets, municipalities can significantly reduce corporate transportation emissions while mitigating climate risks and promoting cleaner air.

Expanding EV Charging Infrastructure

With over 201,000 EVs on the road in Ontario, public EV charging infrastructure is critical to supporting EV adoption. While many EV owners charge at home or work, public chargers are essential for those without

access to private charging and for drivers on the go. In 2023, eleven municipalities expanded their EV charging networks using federal ZEVIP funding, helping to address accessibility gaps and encourage broader EV use.

Upgrading Public Transit

Modernizing and expanding public transit networks is another key strategy for reducing emissions. Measures include adding new routes, increasing service frequency, and improving affordability and convenience. These upgrades reduce traffic, lower GHG emissions, and enhance transportation equity by providing accessible, cost-effective options for residents. The integration of advanced technologies, such as real-time passenger information systems and contactless payments, further boosts transit system efficiency and ridership.

Enhancing Walking and Cycling Infrastructure

Investments in active transportation infrastructure, such as sidewalks, multi-use trails, and dedicated bike lanes, encourage low-carbon mobility and

Municipalities can undertake many actions to decarbonize transportation, such as switching to low carbon electric fleet vehicles, supporting community adoption of electric vehicles, improving public transportation systems and providing active transportation

healthier lifestyles. Municipalities are also piloting micromobility projects, including e-bike and scooter rental programs, while offering educational programs to raise awareness and promote uptake. By supporting active transportation, municipalities reduce reliance on private vehicles and contribute to emissions reductions.

AVL Systems for Fleet Optimization

Automatic Vehicle Location (AVL) systems help municipalities optimize fleet management by tracking vehicles in real time, reducing idle time, and minimizing fuel consumption. These systems provide insights into fuel use and emissions, enabling year-over-year trend analyses and informed decision-making. AVL technology supports efficient routing, reduces vehicle kilometers traveled, and cuts emissions from municipal fleets.

CASE STUDY

Oakville's Electric Buses

The Town of Oakville received its [first 15 electric buses in 2023](#), which are currently in use for On-Demand Services.

The 20-foot Karsan e-Jest electric buses are a European-style, battery-powered bus built by Karsan, a market-leading bus and coach manufacturing company. They are equipped with a BMW power train providing an emission-free range of 210 kilometres and feature a unique and innovative design with a low floor, key for accessibility.



Oakville's Electric Buses



Waterloo Region's Micromobility Program

CASE STUDY

Waterloo Region's Micromobility Project

Waterloo Region and the Cities of Kitchener, Cambridge and Waterloo [launched an electric bike and scooter rental program](#) in partnership with Neuron Mobility from April to October 2023. The program provided a new environmentally sustainable travel choice for residents, helped reduce greenhouse gas emissions and encouraged active transportation in our community.

Up to 500 e scooters and 500 e bikes were stationed at approximately 150 stations throughout the Region. In 2023, over 190,000 rides were taken, and over 360,000 km travelled.

Micromobility programs help to achieve climate change goals, while also supporting the expansion of multi-modal transportation.

Sectoral Focus - Buildings



Buildings: Buildings accounted for approximately 20% of Ontario’s total GHG emissions in 2022, with the primary source being fossil fuel use for heating, cooling, lighting, and powering various systems. Municipalities play a pivotal role in reducing these emissions by directly managing their own buildings and influencing privately owned properties through innovative programs and regulations. By advancing building retrofits and promoting net-zero energy construction, municipalities are driving the shift toward sustainable building practices.

Net-Zero Municipal Buildings

Net-zero energy buildings are integral to climate action, designed to generate as much energy as they consume annually using renewable energy sources like solar, wind, and geothermal. In 2023, eight new municipal net-zero facilities were under construction across CAC municipalities. These projects include community and recreation centers, fire stations, police buildings, and daycare centers, powered by renewable energy systems such as rooftop solar panels. By eliminating high-carbon energy sources like natural gas and adopting net-zero carbon designs, these facilities achieve high energy efficiency and serve as models of sustainability, positioning them among the most advanced in North America.

Residential Retrofit Programs

To address emissions from aging residential and commercial building stock, municipalities are offering retrofit programs that reduce energy consumption and improve efficiency. Supported by funding such as FCM’s Community Efficiency Financing program, these initiatives provide building owners with upfront loans and flexible repayment options. The growing market interest in energy-efficient buildings, coupled with municipal

leadership, is accelerating progress in retrofitting for sustainability.

Net-Zero Communities

Municipalities are also partnering with developers and energy companies to create net-zero neighbourhoods powered by renewable energy and serviced by distributed geothermal systems for heating, cooling, and hot water. These low-carbon communities deliver multiple benefits, including enhanced energy efficiency, reduced emissions, and improved air quality.





Insulation helps block outdoor air from entering the home and prevents indoor air from escaping, thereby improving energy efficiency.

CASE STUDY

Better Homes Ottawa Program

The [Better Homes Ottawa Loan Program](#) is a City of Ottawa loan program for home energy efficiency retrofits. It supports local residents to reduce energy consumption and greenhouse gas emissions.

The program offers low-interest, 20-year loans of up to the lesser of \$125,000 or 10 per cent of the current value of the home to cover the cost of home energy improvements like thermal envelope upgrades, mechanical systems, renewable energy, EV chargers, and the addition of rental suites.

In 2023, Better Homes Ottawa Loan program supported Ottawa homeowners to complete 100 energy retrofit projects with over \$3 million disbursed in low interest loans. Now in its third year, this City of Ottawa program has supported 191 home retrofit projects to-date, seeing an average per-home greenhouse gas reduction of 39%. These reductions save local residents money, reduce energy consumption, and make for a cleaner, more climate-friendly region.

Better Homes Ottawa Program makes it easier and affordable for residents to make energy improvements to their homes.



CASE STUDY

Etobicoke Civic Centre Precinct

In 2023, construction began on the geo-exchange district energy system that will serve the Etobicoke Civic Centre Precinct – Toronto’s First Net Zero Community.

The community is designed around a walkable work-live-play community that projects about 3 million square feet of mixed-use development, including 2,300 to 2,500 residential units, a new two-acre park, office space and retail space. The ECC is a multi-zone complex composed of five program elements (municipal offices including gathering and civic function space, a community recreation centre, a Toronto Public Library district branch, a child care centre, community services), plus an outdoor civic plaza.

Within the Precinct, the new Etobicoke Civic Centre will be designed to achieve TGS Version 3 Tier 4, and it will anchor the geo-exchange district energy system serving the entire mixed-use precinct. This project includes both advancement in building efficiency and energy systems. In 2023, the City’s development partners broke ground on the first phase of housing, which will achieve TGS Version 3 Tier 3, as well as the Canada Green Building Council’s Zero Carbon Building standard.

Visualization of Etobicoke Civic Centre - Toronto’s first Net Zero Community

This new community will house a district energy plant managed by Enwave Energy Corporation which will provide energy to the entire precinct.

Sectoral Focus - Energy



Energy: Municipalities in the CAC network are actively advancing small- and large-scale renewable energy projects to reduce GHG emissions. These initiatives include the deployment of renewable energy systems like solar, wind, and geothermal energy, as well as low-carbon district energy networks that efficiently heat and cool buildings. By generating energy locally from renewable sources, municipalities are making significant progress toward achieving their climate commitments.

Renewable Energy Systems

The installation of renewable energy systems is becoming increasingly common across the CAC network. Municipalities are leveraging solar panels, solar thermal systems, geothermal loops, and other technologies to generate clean, low-carbon electricity. These systems are used to power

municipal buildings, community centers, and other facilities, reducing reliance on fossil fuels and lowering energy-related emissions.

Net-Zero Carbon District Energy Systems

Many municipalities are adopting innovative low-carbon or net-zero district energy systems powered by renewable energy sources. District energy systems generate hot and/or chilled water at centralized plants and distribute it to multiple buildings through closed-loop underground thermal grids. This energy is then used for space heating, domestic hot water, and air conditioning. These systems utilize resources such as solar thermal energy, sewer heat, cold lake water, and ground-source heat to produce thermal energy for entire neighbourhoods.



Mississauga's Lakeview Village District Energy System

CASE STUDY

Lakeview Village District Energy System

The City of Mississauga, Lakeview Community Partners Limited, Enwave Lakeview Corporation, and the Region of Peel have begun constructing a groundbreaking [district energy system](#) at Lakeview Village in Mississauga.

This innovative system will use centralized heating and cooling through a network of pipes, improving energy efficiency, reducing consumption, and cutting GHG emissions. Once operational, it will be Ontario's first and Canada's largest district energy system, and the first in North America to use wastewater treatment for heating and cooling buildings.

CASE STUDY

Caledon's Renewable Energy Projects

The Town of Caledon has five renewable energy projects including three ground-mounted micro Feed-in Tariff (micro FIT) solar projects, a solar wall at Mayfield Recreation Complex and a ground source heat pump system at the Ontario Provincial Police (OPP) facility in Caledon East, which was certified Gold in Leadership in Energy and Environment Design (LEED).

In 2023, the Town installed solar panels at the following locations:

- 100kW solar installed at Work Yard 2
- 50kW solar installed at Caledon OPP detachment
- 10kW installed at Mono Mills Fire Station



Caledon's Renewable Energy Installation

Sectoral Focus - Waste



Waste: Ontario’s municipal governments play a pivotal role in managing the collection, recycling, composting, and disposal of household waste. Organic waste decomposition releases significant amounts of methane and other GHGs, which contribute to climate change. By implementing robust recycling and composting programs, municipalities are effectively reducing the environmental impact of solid waste. Ontario municipalities have made progress in [reducing waste](#) going into landfills through circular economy strategies, reuse and repair initiatives, waste diversion programs, and energy-from-waste projects. CAC municipalities are now adopting innovative technologies to collect fugitive emissions from wastewater, landfills or agricultural waste and converting it into energy. Captured heat and gases are then converted into clean energy, aligning with broader goals of decarbonization and resource efficiency.

Waste Diversion

[Municipal waste diversion programs](#) direct waste away from landfills or incinerators through reuse,

recycling, composting or anaerobic digestion. CAC municipalities are currently advancing waste diversion programs and hosting share, repair and reuse hubs to divert waste from landfills.

Energy Generation from Waste

Municipalities across the CAC network are implementing innovative solutions to convert waste into energy. One such approach is the production of renewable natural gas (RNG), which serves as an environmentally responsible alternative to conventional natural gas. RNG is produced from organic materials, including agricultural waste, municipal landfill gas, forestry waste, and other biomass sources.

Toronto and Markham are advancing wastewater energy transfer approaches that rely on heat pump technology to recover and repurpose underground thermal wastewater energy to heat and cool a network of buildings. These systems recycle previously untapped warm water flowing through sewers which acts as a source of renewable energy.

Municipal governments in Canada manage household waste. Decomposition of organic waste releases large quantities of methane and other GHGs. Diverting waste by recycling and composting can help reduce the impact of solid waste on the environment.



CASE STUDY

Mississauga's Hazel McCallion Library Waste Diversion

Mississauga recently completed the Hazel McCallion Central Library renovation project and diverted 120,000 kg of City-owned items from landfill.

Book carts, office desks and office chairs were retained for internal use by the city. Items that could not be reused internally were donated to many non-profit community organizations across the Greater Toronto Area with the help of [Material Exchange Program](#) (MEX) which offers a network of non-profit partners to contact and build relationships with.

In total, 120,064 kg was diverted from landfill as a result of this project which included over 400 pieces of furniture.

Mississauga reused and donated City owned items to reduce waste going to landfill.

This circular economy approach focuses on repairing, refurbishing, repurposing or recycling products to create a system to minimize waste by using items for as long as possible.

Sectoral Focus - Agriculture, Forestry and other Land Use



AFOLU: The AFOLU (Agriculture, Forestry, and Other Land Use) sector encompasses both sources and sinks of greenhouse gas (GHG) emissions. While the agricultural contribution to GHG emissions is relatively small in most CAC municipalities, advancing AFOLU-related initiatives is critical to achieving low-carbon targets. In rural areas, municipalities are collaborate with farmers and landowners to implement sustainable practices that preserve natural assets, which act as vital carbon sinks. Urban-focused CAC municipalities, despite lower share of agricultural emissions, have initiated projects to boost carbon sequestration in agriculture and natural ecosystems.

Regenerative Agriculture

Regenerative agriculture practices focus on enhancing soil health and sequestering carbon. Key practices include:

- Maintaining continuous vegetation cover and minimizing soil disturbance (e.g., no-till farming, cover cropping).
- Diversifying crop rotations and increasing perennial crop frequency.
- Implementing grass buffers, agroforestry, and improved livestock grazing management.
- Utilizing organic compost to enrich soil health and carbon storage.

Ecosystem Protection and Restoration

Protecting and restoring ecosystems significantly boosts their carbon sequestration potential. This includes:

- Conserving existing ecosystems and creating new ones.
- Removing invasive species, reducing deforestation, and promoting afforestation/ reforestation.

Collaborating with conservation authorities and environmental organizations to manage projects focused on sustainable ecosystem management and wildlife habitat creation.

Municipalities are reducing AFOLU emissions by promoting sustainable agriculture, investing in urban forestry, and implementing land-use planning policies to preserve natural assets and enhance carbon sequestration.

CASE STUDY

London's Ecosystem Protection and Restoration

In November 2023, the City of London purchased 55 hectares of rural agricultural land including 17 hectares of the Tenants Pond Environmentally Significant Area (ESA), which will now be protected in perpetuity. In addition to the preservation of the existing natural heritage, the remaining 38 hectares of farmland are intended to be naturalized in the years ahead to provide compensation for the removal of natural heritage required to facilitate City infrastructure projects elsewhere in London.



London's ecosystem protection and restoration efforts.

Conclusion



Municipalities of all sizes across Ontario are advancing climate action, as highlighted in this Report. Our Report focuses on what is currently underway in Ontario. Significant progress has been achieved in advancing climate action in 2023. Many municipalities are leading by example, constructing net-zero buildings to reduce corporate greenhouse gas (GHG) emissions while demonstrating leadership within their communities. By 2023, eleven municipalities in Ontario have advanced green development standards mandating sustainable new development and futureproofing new housing stock from costly retrofits in the future.

We are also seeing a growing role for community members, who are increasingly demanding accountability from municipalities to ensure GHG reduction efforts are prioritized in both municipal operations and community-wide initiatives. Municipalities are recognizing that investments in climate mitigation are not just environmental but also deliver social, cultural, and economic benefits that align with the services communities value most.

With these efforts to decarbonize cities and create healthier communities, we look to the future with optimism. In 2024 and beyond, we anticipate even greater momentum to transform how we build new communities, navigate urban spaces, and manage natural and agricultural ecosystems. We envision innovations in construction that deliver future-proof buildings, widespread retrofits for millions of existing structures, more walkable and bikeable neighborhoods that reduce traffic and air pollution, better waste management, and healthier natural ecosystems.

By prioritizing climate action, resilience, and innovation, we can transform our cities into thriving, sustainable, and equitable communities that meet the needs of both present and future generations.

By working together to drive innovation and sustainability, we can create vibrant, inclusive, and climate-resilient communities for future generations.



Clean Air Partnership