Orangeville Community Climate Action Plan

2024-2029

Orangeville

Acknowledgements

The Town of Orangeville would like to thank the County of Dufferin for their support, time, and knowledge shared throughout the development of the Orangeville Community Climate Action Plan.

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Mino Kamik Medicine Wheel Garden

INDIGENOUS LAND ACKNOWLEDGEMENT

We would like to begin by respectfully acknowledging that the Town of Orangeville resides within the traditional territory and ancestral lands of the Tionontati (Petun), Attawandaron (Neutral), Haudenosaunee (Six Nations), and Anishinaabe peoples. We also acknowledge that the Town of Orangeville resides within the treaty lands named under Treaty 18: the Nottawasaga Purchase of 1818. These traditional territories upon which we live and learn, are steeped in rich Indigenous history and traditions. It is with this statement that we declare to honour and respect the past and present connection of Indigenous peoples with this land, its waterways, and resources.

Contents

Glossary

The following table provides an overview of the key terms used within the plan:

Adaptation	Adjusting to actual or expected climatic conditions. Adaptation measures help to manage the effects, minimize impacts, and take advantage of new opportunities provided by a changing climate.
Carbon Dioxide Equivalent (CO2e)	A metric used to compare emissions from various greenhouse gases on the basis of their global-warming potential, by converting amounts of other greenhouse gases to the equivalent amount of carbon dioxide.
Climate Change	Climate change is the change in average weather patterns over a long period of time (+30 years). In the Orangeville Community Climate Action Plan, climate change refers to human-induced climate change.
Co-Benefit	Additional benefits associated with climate action that goes beyond direct contributions to climate change mitigation or adaptation.
Equity	The fair and respectful treatment of all people. Involving the creation of opportunities and reduction of disparities in opportunities and outcomes for diverse communities.
Greenhouse Gas Emissions (GHGs)	Atmospheric gases that absorb and emit radiation, contributing to the greenhouse effect.
Impacts	Refers to the effects of existing or forecasted changes in climate on built, natural, and human systems.
Justice	Addressing the root cause of inequalities to remove systemic barriers.
Low-Carbon Resilience	A strategic alignment that coordinates adaptation and mitigation strategies in planning, policy, and implementation processes to maximize effectiveness and to achieve co-benefits.
Mitigation	Includes the promotion of policy, regulatory and project-based measures that contribute to the reduction of GHGs in the atmosphere by reducing the sources of GHGs or enhancing the sinks that accumulate and store GHGs.
Net-Zero	Achieved through the reduction of anthropogenic emissions of GHGs with the goal of balancing emissions produced and emissions removed from the atmosphere. It is important to note net-zero emphasizes a commitment to reducing greenhouse gas emissions as much as possible.
Resilience	The ability of a system and its component parts to anticipate, absorb, accommodate, or recover in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions. To transform and enhance the capacities of the community to prepare and respond to future climate impacts.

Introduction

The climate crisis requires urgent action. In May 2018, the Town of Orangeville, herein referred to as the Town, became part of the Partners for Climate Protection (PCP) program, joining a national network of over 500 municipalities across Canada in a commitment to climate action. Through the PCP program the Town is moving through a five-step Milestone Framework to support local greenhouse gas (GHG) reductions while also creating jobs, improving air quality, resident health, and financial savings.[1]

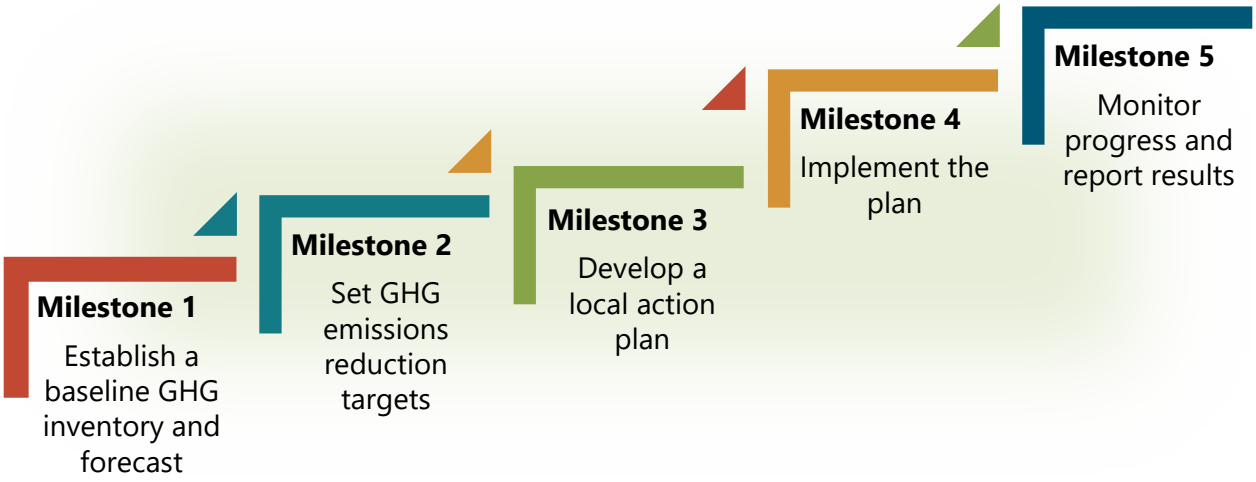


Figure 1. Partners For Climate Protection: Milestone Framework

The Orangeville Community Climate Action Plan, completing Milestone 3, lays out a pathway to reach net-zero emissions by 2050, while also increasing community resilience to the impacts of climate change.

A Coordinated Approach

The Orangeville Community Climate Action Plan aligns with the Dufferin Climate Action Plan[2], a County-wide mitigation and adaptation strategy. Through this alignment, the Town can maximize the efficiency, reach, cost-effectiveness, and credibility of climate action initiatives. Another advantage of the partnership approach is the reduction of municipal risk and ability to build community capacity through the leveraging of municipal funding opportunities.

The Opportunity

Moving towards a net-zero future is a monumental task, but it is also an enormous opportunity to tap into the numerous co-benefits of climate action. Community climate action can create healthy and connected neighbourhoods, protect the local environment, drive the local economy, and address systems of inequality in the community.

[1] Partners for Climate Protection. 2020. https://fcm.ca/en/programs/partners-climate-protection
[2] Dufferin Climate Action Plan. 2021. www.dufferincounty.ca/dufferinclimateactionplan

The Climate Challenge

Climate change is the long-term shift in weather conditions and the changes in the frequency and severity of extreme weather events.[3] The main driver of climate change is from GHGs emitted by humans. In the atmosphere, GHGs absorb heat radiated from the earth, producing a greenhouse effect. It is a natural process that creates the warm conditions on Earth making life possible. However, human activities linked to our energy use, waste management practices, and land-use decisions have increased GHG concentrations to dangerous levels, amplifying the greenhouse effect. The rate at which humans emit GHGs in the atmosphere is so rapid that it threatens to warm the global climate to where humans nor the environment can adapt to.

Figure 2. Flood Event, Orangeville, June 23, 2017

Climate projections are a way to help us understand what the future could look like under a range of future emission scenarios. They capture the relationship between human choices, our emissions, and climate change. Local climate projections for the Town indicate warmer year-round temperatures, increased variability in precipitation patterns and more frequent extreme weather events, including more days with extreme heat and ice, and an increased demand for energy required for cooling and heating homes and buildings.[4]

Key climate impacts that Dufferin County (Town of Orangeville) will experience include:[5]

- Heat and droughts
- Loss of biodiversity
- Illness and disease
- More ice days
- Mental health
- challenges
- Infrastructure damage
- Economic disruptions
- Soil erosion and nutrient loss
- Lengthened growing and frost-free season

[3] Government of Canada. 2020. https://www.canada.ca/en/environment-climate-change/services/climate-change/causes.html
[4] Climate Data, 2020. https://climatedata.ca/
[5] Environment and Climate Change Canada. 2019. Canada in a Changing Climate Report https://changingclimate.ca/CCCR2019/

Dufferin County's Future Climatic Projections

The Climate Atlas of Canada[6] was used to access downscaled regional climate data for Dufferin County. The Climate Atlas of Canada combines climate science, mapping, and storytelling together with Indigenous knowledge and community-based research and video to inspire awareness and action.

Local climate projections are telling us that we can expect warmer year-round temperatures, including more frequency days with extreme heat. Annual precipitation is expected to increase with more frequent and intense rainfall and snowfall events.

While climate change does present some opportunities, such as longer frost-free and growing seasons, it is important to note "a single extreme event can eliminate any benefits from improved 'average conditions'".[7] In identifying these potential vulnerabilities, it is also essential to acknowledge these impacts are often felt disproportionately within a community due to a variety of inequalities. Therefore, climate justice must be central to climate action planning.

[6] Climate Atlas of Canada. 2022. https://climateatlas.ca/
[7] Natural Resources Canada, 2019. Canada in a Changing Climate.
https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/Climate-change/pdf/CCCR_FULLREPORT-ENFINAL.pdf

SEPTEMBER 2021

FUTURE CLIMATE PROJECTIONS DUFFERIN COUNTY

This infographic was created by ICLEI Canada

Sources: Canadian Climate Data and Scenarios Network, Climate Atlas of Canada Tool, IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.

ANNUAL MEAN TEMPERATURE

Mean temperatures are projected to increase annually and in every season.

8.1°C
2051-2080

10.3°C
2021-2050

6.0°C
Annual Baseline

SEASONAL MEAN TEMPERATURES

WINTER
DEC - FEB

-1.9°C
2051-2080

-4.4 °C
2021-2050

-6.8°C
Annual Baseline

SPRING
MAR - MAY

8.4°C
2051-2080

6.4°C
2021-2050

4.5°C
Annual Baseline

SUMMER
JUN - AUG

22.3°C
2051-2080

20.1°C
2021-2050

18°C
Annual Baseline

FALL
SEP - NOV

12.1°C
2051-2080

10.1°C
2021-2050

7.9°C
Annual Baseline

Baseline period: 1990s (1976-2005).

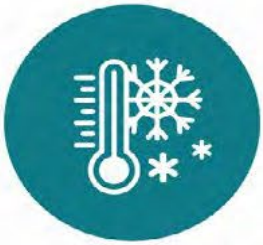
TEMPERATURE EXTREMES

DAYS ABOVE 30°C

41 Days
2080s

19 Days
2050s

5 Days
Baseline



DAYS BELOW -15°C

6.6 Days
2080s

16 Days
2050s

29 Days
Baseline

ICING DAYS

41.3 Days
2080s

60.4 Days
2050s

80.3 Days
Baseline

FROST DAYS

113.9 Days
2080s

138.9 Days
2050s

163.4 Days
Baseline

ANNUAL MEAN FREEZE-THAW CYCLES

There will be a decrease in freeze-thaw cycles, where the daily max. temperature is higher than 0°C and the daily min. temperature is less than or equal to -1°C.

59.4 Days
2080s

65.0 Days
2050s

68.4 Days
Baseline

188.3 Days
2080s

168.0 Days
2050s

141.7 Days
Baseline

GROWING SEASONS

First frost dates will be later, and last frost days will be earlier.

ANNUAL MEAN PRECIPITATION

Annual precipitation is expected to increase. Winter and Spring are projected to get significantly wetter, with a slight decline in the Summer.

986 mm
2051-2080

960 mm
2021-2050

904 mm
Annual Baseline

Baseline period: 1990s (1976-2005).

SEASONAL MEAN PRECIPITATION

WINTER DEC - FEB	SPRING MAR - MAY	SUMMER JUN - AUG	FALL SEP - NOV
242 mm	**256 mm**	**234 mm**	**254 mm**
2051-2080	2051-2080	2051-2080	2051-2080
226 mm	**242 mm**	**238 mm**	**254 mm**
2021-2050	2021-2050	2021-2050	2021-2050
205 mm	**220 mm**	**235 mm**	**244 mm**
Annual Baseline	Annual Baseline	Annual Baseline	Annual Baseline

HEAVY RAINFALL DAYS

Days with precipitation over 10mm are considered Heavy Rainfall days, and are projected to increase.

28.8 Days
2080s

28 Days
2050s

25.7 Days
Baseline

PRECIPITATION EVENTS

Precipitation events in general are projected to become more intense and extreme.

FREQUENCY

Precipitation will fall at a faster rate (mm/h)

INTENSITY

Shorter storms will have an increasingly high intensity

DURATION

Return periods of heavy storm will shorten (increased frequency)

FREEZING RAIN EVENTS

Severe freezing rain events (>6 h per day) are projected to increase up to 30% by 2100. Freezing rain events are expected to increase slightly during January, slightly change in December, and decrease in November, March, and April.

WATER TEMPERATURES

Lake basin temperatures will increase. This can negatively impact wetlands, habitats, and biodiversity.

23%

Loss of coldwater stream habitat (<19°C)

WATER LEVELS

Lake Ontario water levels are expected to be lower as water shortages and temperatures increase. Ice cover break-up dates are expected to be earlier while freeze-up dates are expected to be later. Projected warming, particularly in winter months, and less ice cover results in greater loss of water through evaporation.

LOWER WATER

In the long term, warmer temp translates into expectations of lower water levels in the Great Lakes system.

LOSS OF WETLAND

Loss of wetland water budget and abundance of wetland birds, fish, and vegetation, communities.

MAXIMUM SURFACE WATER TEMPERATURE

Maximum surface water temperature includes all wetlands and tributaries.

28.9°C

2051-2080

27.1°C

2021-2050

23.9°C

Lake Basin max. surface temp in 2014

Water temperature baseline period: 1990s (1981-2010).

Greenhouse Gas Profile

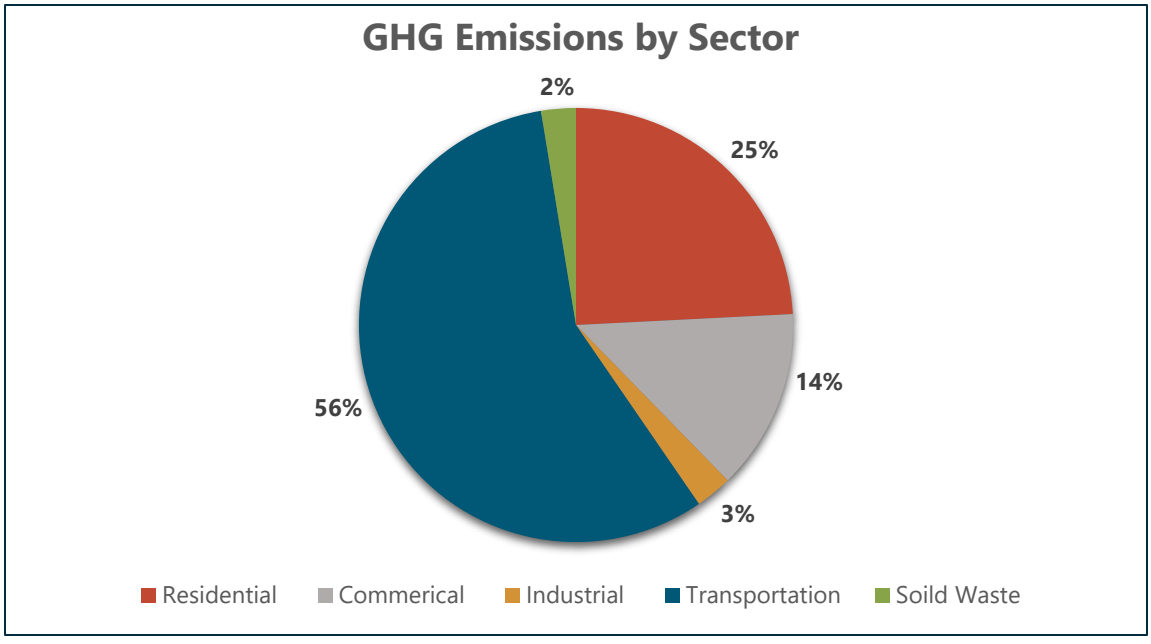
The Town's GHG inventory[8], records where emissions come from within the geographical boundaries of Orangeville, revealing the greatest sources of emissions by energy type and sector. This information was used to focus emission reduction strategies on the highest emitting areas and provides an important benchmark from which to measure the success of the Orangeville Community Climate Action Plan over time.

In 2016, approximately 148,264 tonnes of carbon dioxide equivalent (tCO_2e) were emitted within the Town of Orangeville

Note: Emissions data for Agriculture, Forestry, and Other Land Use (AFOLU) sector were unavailable by municipality. A detailed summary of the Town's GHG emissions and AFOLU emissions at the County-level is available in the Dufferin County GHG Inventory (2020).

The sectors contributing the most to GHG emissions in Orangeville are:

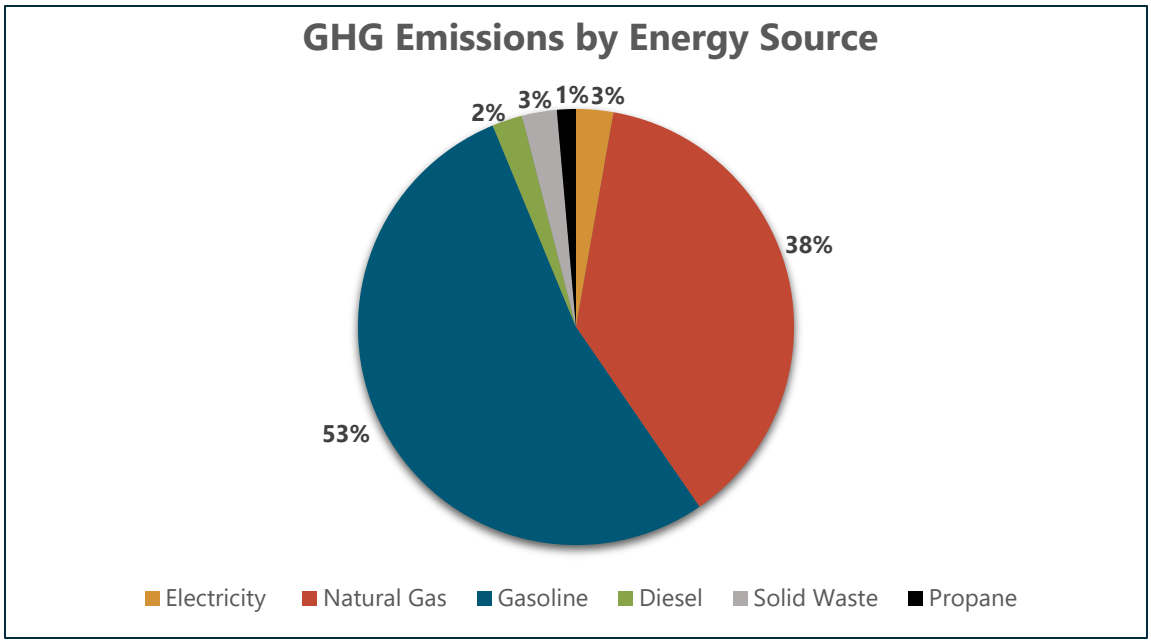
1. Transportation Sector 84,511 tCO_2e
2. Residential Sector 35874 tCO_2e
3. Commercial Sector 20,014 tCO_2e



[8] Clean Air Partnership. 2020. Dufferin County Greenhouse Gas Inventory. https://www.cleanairpartnership.org/wp-content/uploads/2020/11/Report-3_Dufferin_Low-Resolution.pdf

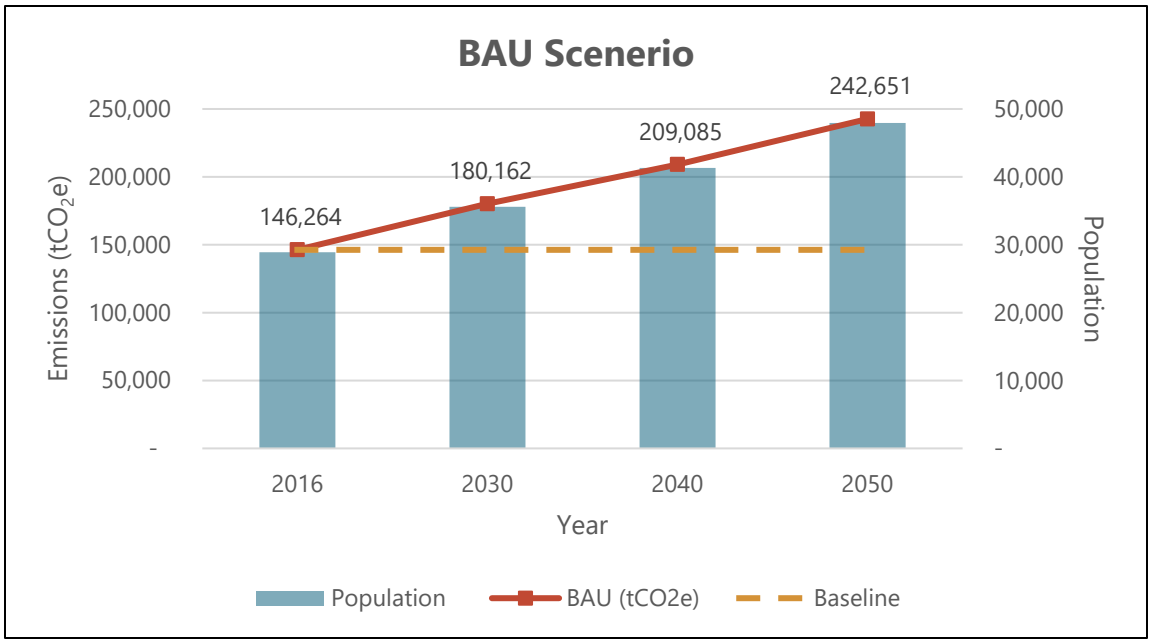
The energy sources contributing the most to GHG emissions in Orangeville are:

1. Unleaded (Gas) 79,090 tCO_2e
2. Natural Gas 55,833 tCO_2e



Business as Usual (BAU) Forecast

Without climate action, models project that local GHG emissions will rise by 60% by 2050. It is projected that 242,651 tonnes of $CO2_2e$ will be emitted by 2050 with an annual population growth rate of 1.5%.



The business-as-usual scenario results in a significant increase in local GHG emissions, incompatible with a net-zero future. This high emissions scenario represents a world in which our community may experience the worst impacts of climate change – heatwaves, droughts, storms, floods, and widespread loss of natural ecosystems and biodiversity.

Planning for Change

The Orangeville Community Climate Action Plan is a strategy to reduce GHG emissions and build climate resiliency in the Town. Community climate action planning creates healthy and connected neighbourhoods, protects the local environment, drives the local economy, and addresses systems of inequality in the community.

"the solution to climate change is community"

Taking action on climate change is an opportunity to build a safe, healthy, and equitable future for citizens and the environment. Collective success requires action from all members of society.

Orangeville's Approach to Climate Action

In alignment with the Dufferin Climate Action Plan, the Orangeville Community Climate Action Plan is built upon two core frameworks to support the realization of local climate goals:

Low-Carbon Resilience	Justice and Equity
Low-carbon resilience is the strategic alignment of climate adaptation and mitigation to enhance the effectiveness of both strategies, avoid risks, and general economic, ecological, and social benefits.[9] Through this approach, climate action can achieve multiple co-benefits, expand access to funding, and increase return on investments.	Climate justice includes creating solutions to the climate crisis that are fair for everyone. To achieve this, the impacts and solutions for climate change must be considered through political, social, cultural, racial, environmental, and economic lenses. The goal of climate action through equity ensures equity seeking groups/individuals equitably benefit from climate action and the benefits of actions support the reduction of historical or current disparities. Through an equity and justice framework, the Town will strive to ensure that the burdens of climate change and the benefits of climate action are not experienced disproportionately throughout the community.

[9] Harford and Raftis. 2020. Low Carbon Resilience: Transformative Climate Change Planning for Canada. https://act-adapt.org/lcr-report/

Co-benefits of Climate Action

Taking action on climate change has a variety of co-benefits for the community. Co-benefits are benefits associated with climate action that goes beyond direct contributions to climate change mitigation or adaptation. The following figure provides a (non-exhaustive) list of co-benefits that are associated with the actions outlined in the Orangeville Community Climate Action Plan:

Engagement

Community engagement provides transparency, captures ideas, and empowers residents to have their say. Dufferin County engaged with the public, key stakeholders, and their lower-tier counterparts to gather their perspectives and input to identify the needs, vulnerabilities, resources, and opportunities that should be prioritized in climate change planning. Details of the public engagement activities is available in the Summary of Public Comments Report (2021)

Dufferin's public engagement activities included:

- Online surveys and engagement forums
- Promoting climate initiatives, education, and engagement on various digital platforms
- Hosting virtual open house events

Greenhouse Gas Reduction Targets

The Town's 2016 GHG inventory serves as the baseline for community reduction targets. Recognizing different mitigation actions require varying levels of time, resources, and support, the Town will adopt a three-phase emissions reduction timeline to reach the 2050 target in alignment with targets set by the County of Dufferin.

2030

10% below
2016 levels

2040

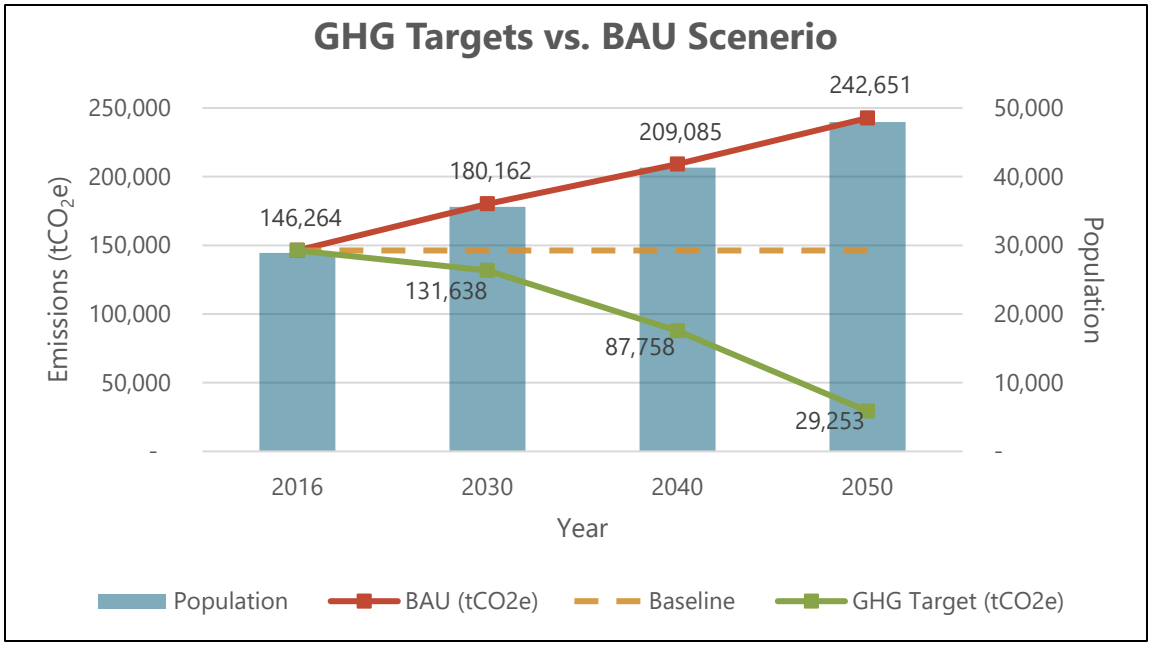
40% below
2016 levels

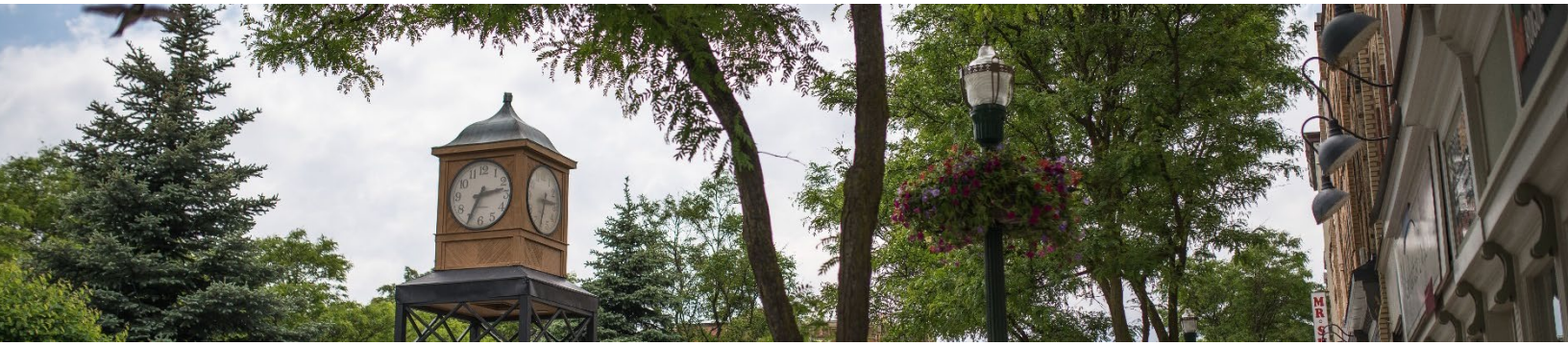
2050

Net-Zero

80% below 2016 levels
+
20% sequestered or offset

The Town will strive to mitigate emissions by 80% by 2050, while striving to become emission net-zero through sequestering and offsetting the remaining 20% emissions to align with federal and international targets. Tree planting will be an important sequestration strategy for the Town.





Five Year Implementation Strategy

In order to shift away from business-as-usual and respond quickly and effectively to the climate crisis, the Town will focus on five priority initiatives outlined in the Dufferin Climate Action Plan over the next five years:

FIRST FIVE PRIORITY INITIATIVES
Collaborate with the County of Dufferin to develop and deliver a home energy retrofit program to encourage and make energy efficiency measures more accessible for residents.
Accelerate the transition to low-GHG transportation by developing an electric vehicle charging network across Dufferin and neighbouring municipalities.
Empower the community to take climate action by institutionalizing climate action in municipal planning and supporting community awareness, education, and knowledge sharing initiatives.
Support climate-resiliency initiatives in agricultural and natural systems to enhance food security, support local farmers, and protect natural systems.
Create green development standards to ensure new development is environmentally, socially, and economically sustainable.

In addition, the following tables outline the supporting actions for the first five priority initiatives the Town will complete over the next five years, alongside other local municipalities, in a coordinated effort to implement these initiatives and to achieve local climate goals.

Investment Required
$ = Low Cost (> $30,000)
$$ = Medium Cost ($30,000 to $100,000)
$$$ = High Cost (+$100,000)

The estimated investments refer to anticipated costs incurred over the next 5 years. It is important to note that the financial impact to the Town will be dependent upon external funding and partnership opportunities and will be at the discretion of Town Council at the time of project initiation. The estimated required investments consider:

- Capital Costs
- Operating Costs
- Staff Capacity

It is important to note that the current GHG inventory for Dufferin County (Orangeville) is based on the latest available local data and provides a strong baseline for Orangeville's Community Climate Action Plan. Increasing capacity to accurately calculate, track, and monitor GHG sources and sinks will help to develop a deeper quantitative understanding as to how the actions outlined in this plan impact community GHG levels at the sector level. It will also allow for strategic implementation to maximize the reduction potential of each action. Data is at the core of measuring success over time and is a priority to the implementation of the plan.

1. Collaborate on the development of a home energy retrofit program to encourage and make the uptake of deep energy retrofitting and energy efficiency measures more accessible for residents.			
Action	**Departments**	**Timeline**	**Investment Required**
Support County staff as required in the development of a housing stock study	Planning, Transportation and Development	2024	$
Provide support in the review process and provide insights on the home energy retrofit program model with County staff	Planning, Building, Transportation and Development	2024	$
Pass an LIC bylaw through Council	Clerks, Transportation and Development	2025	$
Work with County staff to set up the structure to attach the loan to their property tax system for repayment	Treasury, Clerks	2025	$
Manage payments to homeowners once they are accepted into the program	Treasury, Building, Transportation and Development	2026	$$
Encourage local residents to participate in the home energy retrofit program	Communications, Transportation and Development, Planning, Building	2026	$
Help County staff identify priority areas for program targeting in Orangeville	Planning, Transportation and Development	2024	$
2. Accelerate the transition to low-GHG transportation by developing an electric vehicle (EV) charging network across Dufferin and neighbouring municipalities.			
Action	**Departments**	**Timeline**	**Investment Required**
Leverage funding opportunities to install EV charging stations as they arise	Transportation and Development	Ongoing	$$
Work with County staff to identify strategic locations for EV chargers	Transportation and Development	Ongoing	$
As opportunities arise, promote funding programs for local ICI sectors to install EV charging stations	Communications, Transportation and Development	Ongoing	$
Support County-led public education campaigns on EV adoption	Communications, Transportation and Development	Ongoing	$

3. Empower the community to take climate action by institutionalizing climate action in municipal planning and supporting community awareness, education, and knowledge sharing initiatives.			
Action	**Departments**	**Timeline**	**Investment Required**
Institutionalize local commitment to climate action in municipal plans and policies during updates	Various Departments	Ongoing	$
Share community awareness, education, and knowledge creation opportunities via municipal communication channels	Various Departments	Ongoing	$
Work with Climate Action in Dufferin to create a climate change page on Town's website for residents to access planning documents and available resources	Communications, Transportation and Development	Ongoing	$
Co-host climate events with County staff	Various Departments	Ongoing	$
4. Support climate-resiliency initiatives in agricultural and natural systems to enhance food security, support local farmers, and protect natural systems.			
Action	**Departments**	**Timeline**	**Investment Required**
Support research projects by providing and reviewing data as required	Various Departments	Ongoing	$
Develop a natural asset management plan based on a natural asset inventory	Various Departments	2026	$$
Support water conservation programs	Various Departments	Ongoing	Varies
Work with County staff to develop and/or update stormwater management plans with climate lens	Capital Works, Transportation and Development	2026	$
Work with County staff to develop a climate lens to water quality and quantity protection initiatives	Various Departments	2027	$
Participate in grant applications and provide support to projects as required	Various Departments	Ongoing	$
Share information to residents about events and educational opportunities around regenerative and ecological practices and climate-friendly water management systems	Various Departments	Ongoing	$
Ensure tree planting requirements are executed through new construction	Planning, Transportation and Development	Ongoing	$

5. Create green development standards to ensure new development is environmentally, socially, and economically sustainable.			
Action	**Departments**	**Timeline**	**Investment Required**
Work with County staff to develop regional green development standards	Various Departments	2024	$
Review existing development standards and update using a climate lens	Various Departments	2026	$
Consider requiring a 'climate impacts' section in all development applications and explore options to incentivize application of green development standards by local developers	Various Departments	2028	$

Orangeville's Priority Actions

In addition to the above actions, the Town is committed to the ongoing implementation of the following climate initiatives, as stated in the corresponding council approved Town documents:

Town Document	Action	Departments	Investment Required
Corporate Climate Change Adaptation Plan	Promote planting of native vegetation along waterways to reduce erosion risk, maintenance, and enhance biodiversity	Various Departments	$
	Maintain and update a tree inventory of tree species to benchmark changes, flag concerns and prioritize mitigation actions	Infrastructure Services	$
	Prioritize electrification of the Town's fleet and transit where possible and expand charging infrastructure	Infrastructure Services	$$
Sustainable Neighbourhood Action Plan	Undertake a feasibility study for renewable energy generation for municipally owned buildings	Community Services	$$$
	Provide financial and/or in-kind support to community tree planting initiatives to protect and increase the tree canopy	Various Departments	$$
Official Plan	Promote best practices in sustainable development including the use of energy-efficient systems	Various Departments	Varies
	Promote alternate transportation options including car-pooling, car-sharing, etc.	Various Departments	$
	Encourage alternative methods to traditional stormwater management techniques, such as engineered stormwater wetlands designed to balance the functions of stormwater management with habitat creation and enhance local biodiversity	Infrastructure Services	$$$

The Path Forward

Municipally Led, Community Driven

Climate action is most effective and widespread when implementation is a shared responsibility between the local government and the community. Collaboration with a wide range of community partners is the key to efficiency, efficacy, and equity.

The Town is committed to collaborating with the County and other municipalities to achieve our shared climate goals. The Town will support County led outreach efforts to build a climate action culture in our community and participate in opportunities for collective growth and mobilization.

To achieve our climate goals, it is important that diverse voices are included in the climate change conservation, including Black, Indigenous, and persons of colour (BIPOC), members of the lesbian, gay, bisexual, transgender, queer, and two-spirited (LGBTQ2+) community, and those who identify as disabled, or living with a disability. Together, we can ensure that everyone can access and benefit from climate solutions in the Orangeville community.

Leveraging Funding

Grants can create additional cashflow of financial support into important projects. They can fuel projects that would otherwise be unable to proceed without additional support and can improve project outcomes. The Town of Orangeville can leverage funding from various Federal and Provincial programs, as well as third-party organizations such as:

Government of Canada: Climate Action and Awareness Fund
Federation of Canadian Municipalities (FCM) - Green Municipal Fund
Province of Ontario - Ontario Community Environment Fund

Staff Capacity

Sufficient staff capacity is a key driver of successful climate action implementation, and conversely, the lack thereof as a key barrier to implementation.[10] Climate action can advance by having enough climate staff to coordinate climate actions internally and externally, manage technical projects, apply and administer grants, and integrate climate action into municipal processes. It is recommended Council continue to support the securement of funding for necessary staff to ensure the successful implementation of the actions outlined in this plan.

Measuring Progress

To ensure steady progress towards our climate goals, the monitoring and evaluation of the implementation of the Orangeville Community Climate Action Plan is essential. The Town will meet with Dufferin County annually to report on progress and strategize next steps, from which the County will develop a Report Card including the status of the actions in the plan, and a brief commentary on required next steps, as well as amendments made to action items, if any.

The Orangeville Community Climate Action Plan will be reviewed and updated every 5 years to report on progress, set next steps, and ensure climate planning continues to align with community priorities. These annual report card and 5-year plan updates will also provide an opportunity for the County to review implementation success from an equity and justice perspective, reflecting on lessons learned, and further opportunities to work towards climate justice in the community.

Moving towards a net-zero future is a monumental task but also an enormous opportunity to tap into numerous co-benefits of climate action. A dynamic community embraces low-GHG transportation options, supports, and enhances local agriculture, grows sustainable and vibrant urban centers, and protects land, water, and air, stimulates local economies, creates healthy and equitable neighbourhoods, and is resilient in the face of climate change.

[10] Clean Air Partnership. 2019. "Assessing the State of Climate Action in Ontario Municipalities: Drivers and Barriers to Implementation Report" https://www.cleanairpartnership.org/wp-content/uploads/2019/04/Drivers-and-Barriers-to-Implementation-Report-V4.pdf

Appendices

Appendix A. Funding Programs

Facilitator	Program
Enbridge	Home Efficiency
Government of Canada	Canada Greener Homes Initiative
	Deep Retrofit Accelerator Initiatives
	Education and Awareness - Clean Transportation and Clean Fuels
	Incentives for Medium and Heavy Duty Zero Emission Vehicles
	Zero Emission Transit Fund
	2 Billion Tree Program
	Disaster Mitigation and Adaptation Fund
	Low Carbon Economy Fund
	Light Duty Zero Emission Vehicle Incentive Program
Green Municipal Fund	Stormwater Quality Community Project
	Water Conservation Community Project
	Transportation Networks and Commuting Options
Hydro One	Community Fund
Intact Insurance	Intact Foundation
Ontario Energy Rebates	Energy Rebate Program
Peter Gilgan Foundation	Climate Change Grant Program
RBC	Tech for Nature
Save on Energy	Retrofit Program
Scotts Miracle Gro	Scotts Gro for Good Grant Program
TD Bank	TD Friends of the Environment Foundation Grant
Tree Canada	Community Tree Grants
Wildlife Habitat Canada	Habitat Conservation Stamp Initiative
World Wildlife Fund	Nature and Climate Grant Program

Appendix B. Expanded Implementation Schedule

1. Develop a home energy retrofit program to encourage and make the uptake of deep energy retrofitting and energy efficiency measures more accessible for residents.						
Action	**Departments**	**Timeline**	**Investment Required**	**Supporting Partners**	**Key Performance Indicators**	**Sector**
Support County staff as required in the development of a housing stock study	Planning, Transportation and Development	2024	$	· Dufferin County · Local Municipalities · Regional Municipalities · Conservation Authority · FCM · Utility Providers · Planners · Contractors	· # of retrofitted homes (uptake) · # of training supported · # of participants · # of residents engaged · # of retrofitted units	· Residential
Provide support in the review process and provide insights on the LIC program model with County staff	Planning, Building, Transportation and Development	2024	$			
Pass an LIC bylaw through Council	Clerks, Transportation and Development	2025	$			
Work with County staff to set up the structure to attach the loan to their property tax system for repayment	Treasury, Clerks	2025	$			
Manage payments to homeowners once they are accepted into the program	Treasury, Building, Transportation and Development	2026	$$			
Encourage local residents to participate in the home energy retrofit program	Communications, Transportation and Development, Planning, Building	2026	$			
Help County staff identify priority areas for program targeting in Orangeville	Planning, Transportation and Development	2024	$			

2. Accelerate the transition to low-GHG transportation by developing an electric vehicle (EV) charging network across Dufferin and neighbouring municipalities.						
Action	**Departments**	**Timeline**	**Investment Required**	**Supporting Partners**	**Key Performance Indicators**	**Sector**
Leverage funding opportunities to install EV charging stations as they arise	Transportation and Development	Ongoing	$$	· Dufferin County · Local Municipalities · Orangeville Hydro · Utility Providers · Plug'n Drive · EV Supply Vendors · Local Businesses	· # of funding applications submitted and/or approved · # of people reached through educational campaigns · Use of regional EV stations · # of EV stations installed	· Transportation
Work with County staff to identify strategic locations for EV chargers	Transportation and Development	Ongoing	$			
As opportunities arise, promote funding programs for local ICI sectors to install EV charging stations	Communications, Transportation and Development	Ongoing	$			
Support County-led public education campaigns on EV adoption	Communications, Transportation and Development	Ongoing	$			
3. Empower the community to take climate action by institutionalizing climate action in municipal planning and supporting community awareness, education, and knowledge sharing initiatives.						
Action	**Departments**	**Timeline**	**Investment Required**	**Supporting Partners**	**Key Performance Indicators**	**Sector**
Institutionalize local commitment to climate action in municipal plans and policies during updates	Various Departments	Ongoing	$	· Dufferin County · Local Municipalities · Regional Municipalities · Conservation Authority · Sustainable Orangeville · Local Businesses	· # of engaged residents · # of events hosted · # of views on climate webpage · # of social media posts · # of plans and policies updated with climate actions	· Residential · Commercial · Industrial · Transportation · Solid Waste
Share community awareness, education, and knowledge creation opportunities via municipal communication channels	Various Departments	Ongoing	$			
Work with Climate Action in Dufferin to create a climate change page on Town's website for residents to access planning documents and available resources	Communications, Transportation and Development	Ongoing	$			
Co-host climate events with County staff	Various Departments	Ongoing	$			

4. Support climate-resiliency initiatives in agricultural and natural systems to enhance food security, support local farmers, and protect natural systems.						
Action	**Departments**	**Timeline**	**Investment Required**	**Supporting Partners**	**Key Performance Indicators**	**Sector**
Support research projects by providing and reviewing data as required	Various Departments	Ongoing	$	· Dufferin County · Local Municipalities · Regional Municipalities · Conservation Authority · Not-for-profit Groups · Sustainable Orangeville · MNAI · Environmental Groups · Planners · Developers · Industry Experts	· # of research studies completed · # of people engaged in events · # of projects initiated · # of natural assets inventoried · Amount of land protected and/or enhanced · # of trees planted · Amount of water conserved · # of stormwater management actions implemented · % increase in greenspace · # of water conservation projects initiated and/or completed · # of grant applications submitted and/or approved · % of urban tree canopy · # of trees planted through development applications	· Residential · Commercial · Industrial · Solid Waste
Develop a natural asset management plan based on a natural asset inventory	Various Departments	2026	$$			
Support water conservation programs	Various Departments	Ongoing	Varies			
Work with County staff to develop and/or update stormwater management plans with climate lens	Capital Works, Transportation and Development	2026	$			
Work with County staff to develop a climate lens to water quality and quantity protection initiatives	Various Departments	2027	$			
Participate in grant applications and provide support to projects as required	Various Departments	Ongoing	$			
Share information to residents about events and educational opportunities around regenerative and ecological practices and climate-friendly water management systems	Various Departments	Ongoing	$			
Ensure tree planting requirements are executed through new construction	Planning, Transportation and Development	Ongoing	$			
5. Create green development standards to ensure new development is environmentally, socially, and economically sustainable.						
Action	**Departments**	**Timeline**	**Investment Required**	**Supporting Partners**	**Key Performance Indicators**	**Sector**
Work with County staff to develop regional green development standards	Various Departments	Ongoing	$	· Dufferin County · Local Municipalities · Regional Municipalities · Planners · Developers · Local Businesses · Conservation Authority · Contractors · Builders Association	· # of policies created/updated · # of buildings built to GDS · # of policies with a climate lens · # of development applications with 'climate impacts' section · $ on incentives for GDS · % of development applications in alignment with GDS	· Residential · Commercial · Industrial · Transportation · Solid Waste
Review existing development standards and update using a climate lens	Various Departments	2026	$			
Consider requiring a 'climate impacts' section in all development applications and explore options to incentivize application of green development standards (GDS) by local developers	Various Departments	2028	$			