Port Hope's Sustainable Future

DRAFT Community Climate Action Plan

MUNICIPALITY OF PORT HOPE

ICLEI Local Governments for Sustainability
Les gouvernements locaux pour le développement durable
CANADA

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Acknowledgements

Port Hope celebrates the combined efforts of everyone involved in developing the Community Climate Action Plan (CCAP) which represents the leadership of and collaboration between key stakeholders including municipal staff, the Environmental Advisory Committee, consulting team and community leaders.

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Glossary

Terms

Term	Definition
Active transportation	Using an individual's power to get from one place to another. This includes walking, biking, skateboarding, rollerblading, jogging and running, snowshoeing, and cross-country skiing.
Adaptation	Any process taken to increase the resilience of people, infrastructure, communities, and ecosystems, allowing them to better adjust to the impacts of a changing climate and prepare for future impacts.
Baseline	Estimation of the current (2018) energy use, energy costs, and greenhouse gas emissions.
Business-as-usual	The Business-as-usual (BAU) scenario is developed to understand future energy consumption, energy costs, and emissions for the Barrie community - based on changes in population and employment. It considers the impacts of provincial and federal government commitments and assumes no local action to reduce energy or emissions.
Carbon sequestration	The long-term removal of carbon dioxide (CO_2) from the atmosphere through storage in solid or liquid form.
Circular economy	An economy that strives to eliminate waste and pollution; circulate products and materials; and regenerate nature.
Co-benefits	The added benefits to the community from climate action, above and beyond the direct benefits of a more stable climate. Some examples of climate action co-benefits include cleaner air, improved human health, and a stronger local economy.
Complete streets	Streets planned to balance the needs of all road users, including pedestrians, cyclists, transit-users, and motorists.

Deep energy efficiency retrofit (DEER)	A project involving multiple energy efficiency and/or renewable energy measures in an existing building and building processes, designed to achieve substantial reductions in energy use
Emission intensity	The emission rate of a given pollutant relative to the intensity of a specific activity or industrial production process. The measure is used to derive estimates of air pollutants or GHG emissions based on the amount of fuel combusted. It can also be used to compare the environmental impact of different fuels or activities. For example, grams of carbon dioxide released per megajoule of energy produced.
Gigajoule (GJ)	A gigajoule (GJ) is a derived unit of energy in the International System of Units. It equals one billion Joules. The amount of energy represented by one GJ is equivalent to 278 kWh.
Greenhouse Gas Emissions	Emissions of gasses known to cause warming by trapping heat in the lower atmosphere that otherwise would be lost in space. The main greenhouse gases are carbon dioxide (CO_2), methane (CH_4), chlorofluorocarbons (CFCs), and nitrous oxide (N_2O). The most abundant greenhouse gas is CO_2 – carbon dioxide. Measured in tonnes of carbon dioxide equivalent (tCO_2e).
Ground-mounted solar	Ground-mounted solar panels are anchored to the ground rather than rooftop systems. They can range from single units to much larger arrays covering a field or parking lot.
Heat pumps	Devices that can warm and cool buildings by transferring heat. There are three types: air-to-air, water source, and geothermal – each providing an outside medium for heat transfer. They transfer available heat to spaces requiring heating and transfer heat out of spaces requiring cooling. Because they are heat transfer systems, they are an energy-efficient alternative to furnaces and air conditioners.
Mitigation	Any process taken to limit or prevent greenhouse gas emissions from entering the atmosphere, as well as any enhancing activities that remove these gases from the atmosphere (carbon sequestration).
Net-zero emissions	A system that generates no greenhouse gas emissions or offsets all its emissions through actions and technologies that remove the amount generated from the atmosphere.
Net-zero ready	Net-zero Ready provides building owners with an achievable first step towards a Net-zero building. Buildings that are Net-zero Ready are built to a high energy efficient standard. The building owner can incorporate renewable energy in the building later and at a lower cost due to reduced energy requirements. Examples include a Passive House or Canadian Green Building Council Zero Carbon Building.
Offset	Through carbon offsetting, emission reductions are sold to the purchaser in an "offset". Offsets (measured in tonnes of CO_2e) effectively reduce the purchaser's net emissions.

Solar photovoltaic (PV)	A device that converts sunlight into electrical energy. A single PV device is known as a cell and can generate a few watts of power. Solar panels can be connected to form solar arrays. Multiple solar arrays can connect to the electricity grid as part of a PV system.
Stationary Energy	Stationary energy sources are those used in buildings – including homes, stores, offices, and schools. Stationary energy is one of the largest sources of GHG emissions in many communities.
Transportation demand management	The application of policies, programs, and services that redistribute the travel demand on the transportation network, resulting in fewer trips by car and reduced congestion.
Vulnerable Populations	Groups who have a limited capacity to adapt to climate change due to systemic inequalities, thereby making them more vulnerable to negative impacts on health, safety, and security.
Waste diversion	Preventing waste from entering a landfill through reuse, repair, recycling, or composting.

Abbreviations

Abbreviation	Full Reference
BAU	Business-as-usual
CCAP	Community Climate Action Plan
DEER	Deep Energy Efficiency Retrofit
EAC	Environmental Advisory Committee
EV	Electric Vehicle
FCM	Federation of Canadian Municipalities
GDS	Green Development Standard
GHG	Greenhouse Gas
GJ	Gigajoule
GPC	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories
IESO	Independent Electricity System Operator
IPCC	Intergovernmental Panel on Climate Change
LID	Low Impact Development
OBC	Ontario Building Code
ODT	On-Demand-Transit
PV	Photovoltaic (solar power generation)
tCO_2e	Tonnes of Carbon Dioxide Equivalent
ZEV	Zero Emission Vehicle

1. Executive Summary

Port Hope's Community Climate Action Plan (CCAP) has been developed to keep the place we live, work, and play safe and welcoming for generations to come. Human activity around the world—namely, the burning of fossil fuels—is the primary driver accelerating the rise in global temperature[1]. Luckily, Port Hope has not yet experienced the level of climate impacts that other parts of Canada and the world are already facing. However, left unabated, human caused climate change will bring more frequent extreme weather events and intensifying negative impacts closer and closer to home—this requires us to take urgent action.

The international community, including Canada, has agreed to take action to limit the increase of global average temperature by no more than 2°C, to stay within the "safe" upper limit of global heating. This means achieving net-zero greenhouse gas emission globally by 2050. Fortunately, municipalities like Port Hope are well positioned to take leadership on reducing local greenhouse gas (GHG) emissions, as well as ensuring communities are protected from unavoidable climate impacts such as flooding, forest fires and extreme heat. Taking action on climate change is an ideal opportunity to work on improving our community and the strategies we decide to prioritize should be those that come with a wide range of social, economic and health co-benefits, while minimizing trade-offs such as making life less affordable or losing our community's sense of cultural identity.

The municipality of Port Hope is already taking action to address the causes of climate change. Existing local climate actions in Port Hope include the implementation of energy reduction and cost savings opportunities for municipal buildings, the implementation of a fleet energy management strategy, and incorporating energy conservation and GHG reduction in utility operations. But there is more that can and must be done to stay within the safe upper limit of global warming. Port Hope's CCAP is a living document that sets GHG targets and outlines our pathways for reducing GHGs to achieve these targets. This document provides a detailed GHG emissions inventory, outlines emissions reduction targets for 2035 and 2050, and lays out a climate action strategy with implementation guidelines for achieving 17 proposed climate strategies to reduce emissions across Port Hope.

Recognizing the international and federal commitments to net-zero GHG emissions by 2050, Port Hope has set a goal of reducing these emissions to net-zero, along with an interim 2035 goal. Port Hope's GHG targets are as follows:

[1] Friedlingstein, P., et al. (2022). Global Carbon Budget 2022. *Earth System Science Data, 14*(11), 4811–4900. https://doi.org/10.5194/essd-14-4811-2022

46% reduction in community greenhouse gas emissions by 2035 relative to 2018 levels; and net-zero greenhouse gas emissions by 2050.

In addition to the above GHG targets, Port Hope's CCAP Vision Statement describes what the community wants to achieve across both of our wards through the implementation of this plan. Port Hope residents are proud of their community and this vision recognizes our strong sense of environmental stewardship and the value that residents place on the infrastructure and services provided by the municipality of Port Hope.

Vision Statement: *Port Hope envisions a healthy and thriving future, where we take care of our trees, gardens and green spaces, protect our farmland and local food systems, and ensure that our community remains safe, affordable and accessible for everyone. Our future is one where we produce less waste, support local businesses, embrace more active ways of getting around, are less car-dependent, and cherish our connection to nature.*

The 17 strategies in Port Hope's CCAP were developed based on extensive community input and best practices in GHG mitigation. The actions outline a pathway towards net-zero GHG emissions and if implemented can result in significant cost savings for the municipality as a result of reduced energy costs, insulation from rising energy costs, and improved energy resiliency, as well as numerous co-benefits including improved air quality, improved human health and well-being, protecting and enhancing natural assets, reducing waste, strengthening the local and building stronger community connection. Successful implementation of the actions in this plan will require broad community involvement and a strong governance and oversight structure, implementation plan, and monitoring and review framework. The entities overseeing Port Hope's CCAP will vary according to each climate action/strategy and will require collaboration across different stakeholder groups. This plan will be community-led and municipality facilitated. General oversight and coordination for implementation of the plan will be the responsibility of the municipality with assistance from the Environmental Advisory Committee (EAC), whereas implementation of specific strategies and actions will require the lead of community members and organizations relevant. The EAC and Staff Lead will be responsible for the monitoring and review of this plan and will provide regular updates to Council.

2. Introduction

Why Develop a Community Climate Action Plan

The development of Port Hope's Community Climate Action Plan (CCAP) has come in response to community members' vocalized desires for action to be taken that ensure the safety and sustainability of our community not for just the coming years but for generations

to come. 2024 was the hottest year on record[2] and as the climate continues to change there will be more instances of extreme heat, drought, flooding and other severe weather events such as the storm that destroyed 600 acres of the Ganaraska Forest in 2022. Climate change is being driven primarily by the use of fossil fuel energy, such as petroleum and natural gas, that emit greenhouse gases (GHG) which trap heat within the atmosphere leading to the warming of the planet. In order to avoid the most serious impacts of climate change we must reduce our reliance on fossil fuel energy. Taking action now will help ensure Port Hope's greenspace, agricultural lands, habitats and ecosystems are preserved for current and future generations.

Energy is an essential part of our daily lives, powering our homes and appliances, driving our local economy and fuelling our modes of transportation. However, the impacts of energy use on the environment, climate and society can no longer be ignored and our relationship with energy needs to be re-imagined in order to maximize the positive benefits to our environment, health and economy. This CCAP serves as our community's long-term strategy to realise a more sustainable, low-emissions, and energy-efficient future that protects and strengthens Port Hope's vast natural assets and prime agricultural lands, provides new economic opportunities, supports local businesses and farmers, reduces energy costs and builds stronger community connection. This plan cannot be achieved without collaboration across the community. We all have a role to play, and this Plan will focus on what the community can do to achieve an improved way of living for all of Port Hope's residents across both the rural and urban wards.

The CCAP details how our community currently uses energy and forecasts how we will use it in the years to come. It specifies steps that will reduce emissions produced across Port Hope, mainly from our cars, trucks, and buildings, but also from other sources such as waste and land use. Emissions reductions will be accomplished via a wide range of intersecting measures that focus on our built, social, economic, and natural systems. These measures not only address improving energy efficiency but also entail initiatives, procedures, policies and practices that will serve to safeguard our natural assets and upgrade our infrastructure.

We recognize that this is a difficult situation to operate in, with many constraints and competing priorities, not to mention a steep learning curve. But we are choosing to take the necessary steps to meet the goal of reaching net-zero emissions by 2050, not only to align with the efforts of our fellow Canadian municipalities and of those nations around the world facing existential crises, but because it is the right thing to do for our community and will benefit future generations.

[2] World Meteorological Organization. (2025). WMO Confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level. https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level

Port Hope Context

Port Hope is a municipality in Southern Ontario, Canada located at the mouth of the Ganaraska River on the north shore of Lake Ontario, in the west end of Northumberland County. As part of Northumberland County, Port Hope benefits from its strategic location along major transportation routes, including Highway 401 and VIA Rail, linking it to larger urban centers while retaining its unique rural character. Our picturesque municipality is renowned for its rich heritage, vibrant cultural scene, and strong sense of community. With a population of approximately 18,000, Port Hope offers a blend of small-town charm and modern amenities, attracting residents and visitors alike. The town's historic downtown core, scenic waterfront, abundant green spaces and extensive farmland are cornerstones of its identity, providing a high quality of life and fostering a strong connection to nature.

Figure 1: Map of Port Hope's municipal boundary

What Causes Climate Change

Climate change refers to the long-term changes in global weather patterns that result from the build-up of heat trapping greenhouse gases (GHGs) in our atmosphere. The greenhouse effect is the process through which heat is trapped near the Earth's surface by GHGs. The greenhouse effect is essential to life on Earth but the rapid increase of GHGs being released to the atmosphere from human activity since the industrial revolution has increased the concentration of carbon dioxide in the atmosphere by nearly 50% since 1750[3]. This expansion of the greenhouse effect slows heat loss from the Earth back to space resulting in warmer temperatures over time. While natural phenomena are part of what cause this to happen, human activity since the 1800s—in particular, the burning of fossil fuels—has been the main driver. The four major greenhouse gases that contribute to the greenhouse effect include carbon dioxide ($C0_2$), methane, (CH_4), Nitrous Oxide (N_20), and chlorofluorocarbons (CFCs). Water vapour is another important GHG, however, it is not a direct cause of climate change because the warming oceans increase the amount of it in our atmosphere[4].

Adaptation and Mitigation

Two complementary approaches to address climate change at the local level are *climate change adaptation* and *climate change mitigation* (Figure 2).

Climate Change Adaptation involves measures that help us anticipate, prepare for, and recover from the impacts of climate change. Adaptation examples include maintaining early warning systems, enhancing the resilience of buildings and infrastructure to be able to withstand extreme weather events; restoring natural landscapes that act as buffers; and updating operating & maintenance procedures to reflect changing conditions. This work can also be understood as "managing the unavoidable".

Climate Change Mitigation involves measures and incentives that reduce our GHG emissions and improve energy efficiency. Mitigation examples include conducting energy efficiency retrofits in our buildings; fuel switching away from fossil fuel sources of energy such as natural gas and petroleum; reducing waste and reigning in over-consumption; promoting higher uptake of active transportation; and transitioning to renewable energy sources. Investing in climate mitigation measures not only has the potential to reduce energy consumption costs across the community and improve air quality, it also can reduce the total amount and cost of adaptation work needed in the future – in other words, "avoiding the unmanageable".

[3] NASA. (2024). *The Causes of Climate Change*. https://science.nasa.gov/climate-change/causes/
[4] Ibid.

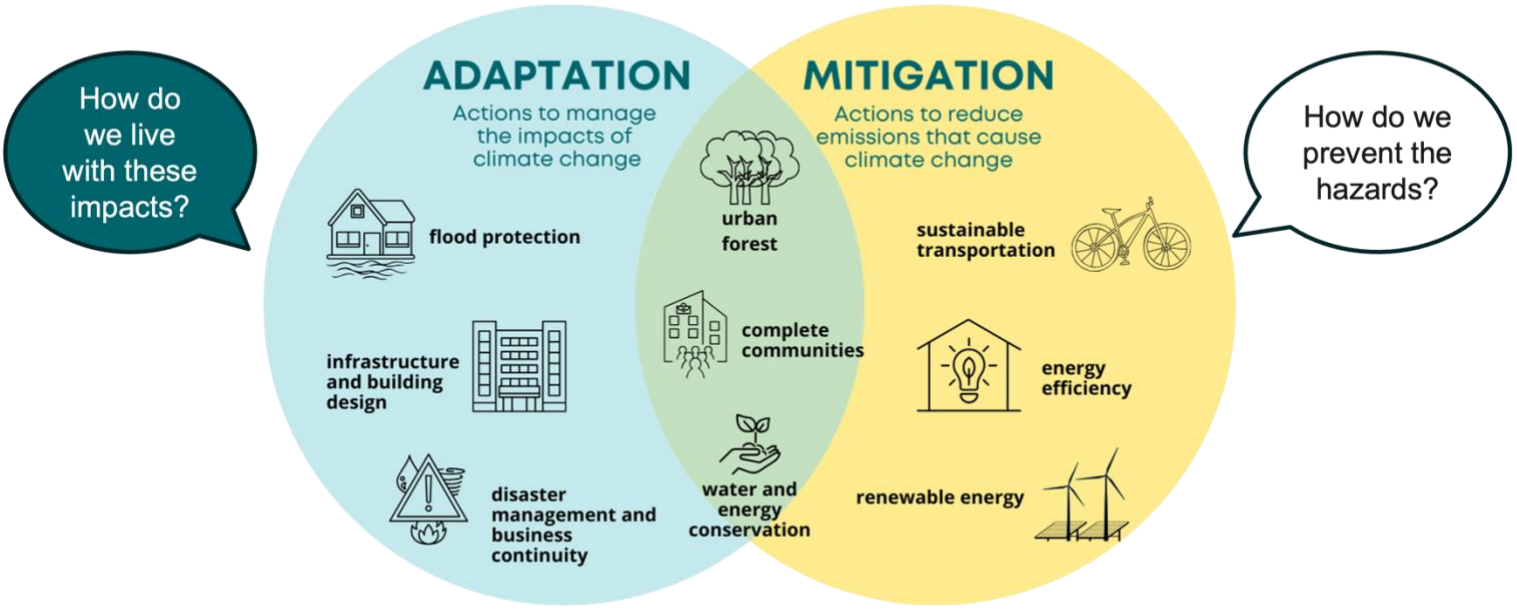

Figure 2: Climate mitigation and adaptation Venn diagram

This plan is focused primarily on climate change mitigation; however, it is acknowledged that climate adaptation measures will also need to be developed and integrated into our community's strategies and plans going forward. Some preliminary adaptation works to be done include identifying Port Hope's exposure and vulnerabilities to regional climate impacts and outlining projects, policies and programs that will help reduce risks and increase the resilience of our community members and infrastructure.

The Impacts of Climate Change and Cost of Doing Nothing

The impacts of climate change across Canada, Ontario and Port Hope are becoming more apparent every year. In Port Hope, mean temperatures, days with extreme heat and total annual precipitation have been increasing steadily since 1971, and precipitation is becoming more intense and frequent (Table 1) Globally, we are nearing the 1.5 C threshold that scientists have identified as the safe upper limit for global warming. 2023 broke records for GHG levels, surface temperatures, ocean heat and acidification, sea level rise, Antarctic Sea ice cover and glacier retreat[5]. To stay below this limit GHG emissions must drop by half by 2030 and reach net-zero by 2050. As citizens of a developed country, we

[5] WMO. (2024). *State of the Global Climate 2023*. https://library.wmo.int/records/item/68835-state-of-the-global-climate-2023

also have an ethical responsibility to reach net-zero emissions before 2050. Mitigating the causes of climate change and achieving net-zero emission will take significant financial investment as well as significant technological and societal change. However, the costs of doing nothing far outweigh the required investments.

Table 1: Summary of Climate Change Trends since 1971 for Port Hope and Projections under the RCP 8.5 scenario

Climate Parameter	Summary of Projected Changes
Temperature 	• The annual mean temperature was 6.5 °C during 1971 and 2000 and is expected to be 11.6 °C by the end of the century. • The mean temperatures, minimum temperatures, and maximum temperatures for all four seasons have been increasing since 1971 and are projected to increase. • Days with extreme heat have been increasing, and by the end of the century, days above 25°C, 30°C, and 35°C will be approximately 95 days, 42 days, and 8 days, respectively. • Days with extreme cold have been decreasing, and by the end of the century, days below 0°C, -10°C, and -20°C will be approximately 99 days, 16days, and 1 day, respectively. • Freeze-thaw days have been decreasing, and the trend is projected to continue due to overall warmer temperatures. • Growing season length is expected to increase from 157 days per year during 1971 and 2000 to 207 days per year by the end of the century, indicating earlier start dates and later end dates.
Precipitation 	• The annual total precipitation was 1023mm during 1971 and 2000 and has been increasing. The trend is projected to continue, and it is expected to reach 1242mm by the end of the century. • The total precipitations for each of all four seasons have been increasing since 1971 and are projected to increase. • Precipitation has been becoming more intense and frequent, and the trends are expected to continue.

Recent extreme weather events in Canada provide clear evidence of escalating financial risks. These disasters, ranging from catastrophic wildfires (e.g., Jasper in 2024; Canadian Wildfire Season in 2023; Lytton in 2021; Fort McMurray in 2016) to catastrophic storms and floods across Ontario, Quebec, and the Atlantic provinces are becoming more frequent and severe.

The financial burden of climate change is projected to skyrocket in the coming decades:

- **By 2050, Canada could face a total of approximately $140 billion (CAD)** in economic losses due to climate impacts[6].
- **By the end of the century, climate-related costs may reach $865 billion annually** under a high-emissions scenario (RCP8.5)[7].

For Port Hope, these figures are more than just national statistics; they are a warning sign. With increasing extreme weather and heat waves intensifying across Ontario, local governments and communities must prepare for substantial financial/ market costs as well as non-market, social, and environmental consequences. For example, increased demand on emergency health services; increased mental health impacts across the community; loss of recreational spaces due to flooding, etc.

Benefits of Climate Mitigation

Taking action on climate change is good for the economy and provides numerous environmental, social, and health benefits to Port Hope. The Haliburton, Kawartha, Pineridge District Health Unit has identified climate change as posing a serious threat to the environment and our health[8]. It also disproportionately impacts vulnerable populations. By taking local action, we have an opportunity to lessen negative health impacts, improve overall health for residents of Port Hope and create new economic opportunities.

Improved health & wellbeing

- Reducing reliance on fossil fuels improved air quality by reducing local air pollution[9].

- Improved access to and options for active transportation improves physical and mental health by increasing physical activity. The health benefits of physical activity are well known, and regular physical activity reduces mortality rates, risk of premature death and risk of developing chronic conditions including diabetes, cardiovascular diseases, and cancer. Active transportation allows people to incorporate physical

[6] GHD. (2022). *Aquanomics*. GHD. https://aquanomics.ghd.com/

[7] Sawyer, D., Ness R., Clark, D.G., & Beugin, D. (2020). *Tip of the Iceberg: Navigating the Known and Unknown Costs of Climate Change for Canada.* Canadian Institute for Climate Choices. https://climatechoices.ca/wp-content/uploads/2020/12/Tip-of-the-Iceberg-_-CoCC_-Institute_-Full.pdf

[8] HKPR District Health Unit. (2023). Understanding climate change and its impact on our health. https://www.hkpr.on.ca/health-topics/climate-change/

[9] Grabow, M. L., Spak, S. N., Holloway, T., Stone, B., Mednick, A. C., & Patz, J. A. (2012). Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States. *Environmental Health Perspectives, 120*(1), 68–76. https://doi.org/10.1289/ehp.1103440

activity into their daily schedule and there have been numerous studies documenting the health benefits of active travel[10,11].

- Increased access to green spaces and natural areas has been shown to play a pivotal role in mental health and well-being[12].

Reduced energy costs

- Improving energy efficiency in our homes and businesses reduces energy costs. Energy efficiency programs in Canada have been shown to generate $3 to $5 of savings for every $1 of program spending[13].

- Each year millions of dollars leave the local economy to pay for energy for heating, cooling, lighting, transportation, manufacturing and industrial production. Increased energy efficiency and local energy generation keeps energy dollars circulating in our local economy[14].

- Increased energy efficiency will also help insulate Port Hope against rising fuel, natural gas, and electricity prices in Ontario, and helps alleviate energy poverty which is defined as households that spend a disproportionate amount of income on home heating and power.

Increased energy resiliency and energy security

- With more local renewable energy generation Port Hope will be less affected by power outages and disruptions, and less impacted by the rising price of energy in Ontario.

Economic Growth and Innovation

- Investment in energy efficiency, buildings, and renewable energy creates new employment opportunities and attracts high-quality workers in building and construction industries, and the clean energy/cleantech sector. The energy efficiency sector in Canada employed 466,000 workers in 2023 representing a 6.9% growth rate

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[10] Pucher, J., Buehler, R., Bassett, D. R., & Dannenberg, A. L. (2010). Walking and Cycling to Health: A Comparative Analysis of City, State, and International Data. *American Journal of Public Health, 100*(10), 1986–1992. https://doi.org/10.2105/ajph.2009.189324

[11] Celis-Morales, C. A., Lyall, D. M., Welsh, P., Anderson, J., Steell, L., Guo, Y., Maldonado, R., Mackay, D. F., Pell, J. P., Sattar, N., & Gill, J. M. R. (2017). Association between active commuting and incident cardiovascular disease, cancer, and mortality: prospective cohort study. *BMJ*, 357, j1456. https://doi.org/10.1136/bmj.j1456

[12] Barton, J., & Rogerson, M. (2017). The importance of greenspace for mental health. *BJPsych. International, 14*(4), 79–81. https://doi.org/10.1192/s2056474000002051

[13] Acadia Center. (2014). *Energy Efficiency: Engine of Economic Growth in Canada*. https://acadiacenter.org/resource/energy-efficiency-engine-of-economic-growth-in-canada/

[14] QUEST. (2016). *Community Energy Planning: The Value Proposition*.

from 2018[15]. In comparison, 213,000 are employed in the mining, quarrying, and oil and gas extraction sector.

- More diverse, resilient, and competitive local economy as other regions in Ontario and Canada begin to shift towards a low-carbon economy.

- New economic opportunities can also be realized in sustainable agriculture and naturalization.

Food Security

- Reducing food waste, redirecting excess food, and strengthening the local food economy improves local food security.

Increased climate awareness and responsibility

- With greater education and direction around climate mitigation measures, community members will gain a greater understanding of climate change, Port Hope's capacity for implementing local climate action, and how we can contribute to improving our community through this plan.

- Reduced collective impact on climate change, resulting in a healthier natural environment and a sense of local pride for taking tangible actions to improve the community.

Conservation of Natural Heritage and Surrounding Ecosystems

- Improved protection, enhancement, and development of natural and naturalized areas that sequester carbon, improve biodiversity, regulate our climate, and provide ecosystem services (e.g., water purification, pollination, etc.).

Governance on Climate Change Mitigation

The call for developing this plan came in response to concerns about ensuring Port Hope's safety and sustainability for future generations raised by local community members. Fortunately, Port Hope is not alone in facing this challenge, nor does it need to spend valuable resources re-inventing the wheel. Countless cities and towns across the province and country are actively developing plans and implementing climate mitigation strategies. Our community can learn from what is already being done, from what is working and what is not. We can take inspiration from a host of best practices, focusing on specific actions that actually make sense for Port Hope and decide how to roll these out in a way that respects our local community's needs and realities.

[15] ECO Canada. (2024). *Energy Efficiency Employment in Canada*.

Ultimately this plan and the implementation of its strategies will be community driven. But planning work has built off plenty of relevant climate action work that's been developed over the years as well as evidence-based regional, national and international guidelines, all aiming to avoid the worst-case scenarios of a global climate breakdown. The following paragraphs outline ways in which other levels of government are committed to climate mitigation and provide direction for aligning targets across the world.

International

Canada was one of 195 nations that signed the Paris Agreement in December 2015 at the COP21 Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). The Paris Agreement intends to keep the rise in the average global temperature well below 2°C and support efforts to maintain it below 1.5°C above pre-industrial levels.

National

The Canadian Net-Zero Emissions Accountability Act, which was passed into law in June 2021, established a legally binding target of net-zero greenhouse gas emissions by 2050 and a promise to cut emissions by 40 to 45 percent from 2005 levels by 2030. The Pan Canadian Framework on Clean Growth and Climate Change was put in place by the federal government to help achieve the goal of meeting Canada's 2030 target while growing the economy and constructing resilience to adapt to climate change.

Provincial

The Made-In-Ontario Environment Plan—unveiled by the province in 2018—focuses on protecting Ontario's air, water, species, and natural environment. Along with setting an emissions reduction target of 30% lower than 2005 levels by 2030, it also seeks to reduce solid waste in the region and better prepare communities for climate change. As of 2020, the following progress has been made toward continuing the plan's implementation:

- Federal recognition for finalizing the emissions performance standards program to ensure accountability for large, industrial GHG emitters.
- The creation of an enhanced emissions testing program that requires regular emissions tests for commercial trucks, buses, and other major polluters.
- Establishing a new waste management model, putting the responsibility of product and packaging lifecycles on producers.
- Publishing a discussion paper that serves as the basis for Ontario's first low-carbon hydrogen strategy, in an effort to boost employment and assist the province achieve its greenhouse gas reduction goal.

Two other measures in Ontario related to climate change mitigation include the Provincial Policy Statement (PPS) and the Planning Act. The PPS (2020) gives municipalities guidance on how to control and direct land use and development. Municipalities are directed to support energy conservation and efficiency, air quality improvement, GHG emissions

reduction, and prepare for the effects of climate change through land use and development planning.

The Planning Act (amended in 2021) is provincial legislation that provides a legal framework for land use planning in Ontario, specifically the control of land uses, and who can control them. The Act requires municipalities to include climate policies in their Official Plans that specify precise steps to be followed to meet climate change goals.

Role of Local Governments

Although climate change efforts are necessary across all levels of government, local governments are especially well-positioned to respond to climate change. The Federation of Canadian Municipalities (FCM) estimates that over 50 percent of emissions are under the direct and indirect influence of local governments, and since local governments are the level closest to the community, they are also on the front lines of response efforts when preparing for both short- and long-term impacts of climate change. Local governments have the tools and mechanisms that are needed to design and implement approaches that mitigate the causes of climate change. Port Hope, by working with the community to determine what is important to the community and which strategies make sense to pursue in Port Hope is an essential part of this Plan's development, can make a big difference by investing in energy efficiency and cutting GHG emissions in areas such as building energy use, land use, transportation, waste, and agriculture.

3. Port Hope CCAP Vision Statement and GHG Reduction Targets

Through a series of stakeholder engagement sessions and focus groups, community members were asked to come up with ideas and priorities to be included in a vision statement that reflects our values and the future we want to see for Port Hope. The following vision statement is the result of combining these expressed priorities, sentiments and ideas.

Vision Statement

Port Hope envisions a healthy and thriving future, where we take care of our trees, gardens and green spaces, protect our farmland and local food systems, and ensure that our community remains safe, affordable and accessible for everyone. Our future is one where we produce less waste, support local businesses, embrace more active ways of getting around, are less car-dependent, and cherish our connection to nature.

GHG Emission Reduction Targets

This plan outlines a pathway to net-zero GHG emissions by 2050 with a mid-term target of a 46% reduction in emissions from 2018 levels.

Plan Approach

Port Hope's Community Climate Action Plan follows ICLEI Canada and the Federation of Canadian Municipalities' (FCM) Partners for Climate Protection (PCP) program 5-Milestone Framework[16]. The PCP Framework provides a structural approach and comprehensive methodology for municipal scale climate change mitigation planning and was developed specifically for local governments in Canada.

Plan Development

As per the PCP program's Framework, an emissions inventory and business-as-usual (BAU) was developed to understand current and future projected GHG emissions. With the completion of the inventory and a goal for net-zero emissions by 2050 already identified, the strategies in this plan were developed based on a combination of community input and feedback, and best practices in GHG mitigation and energy planning. Based on the strategies and actions identified by the community a mid-term emissions reduction target was set based on an energy and emissions modelling exercise that outlines a steady-state decarbonization pathway to achieve net-zero emissions by 2050. From this work, The completion of the CCAP meets the requirements for community Milestones 1 to 3 of the PCP program, after which Milestone 4: Implementing a Plan and Milestone 5: Monitoring the Impact can be undertaken. Figure 3 provides an infographic of the PCP Milestone Framework.

Community Engagement

In order for this community plan to represent the needs and preferences of Port Hope's community members, numerous engagement exercises and sessions were organized throughout 2024. The first was a public open house held at the Town Park Recreation Centre on May 30th, 2024. At this event, 30 members of the public offered their perspectives on Port Hope's future, they identified existing climate actions and areas for potential improvement across Wards 1 and 2 and provided valuable feedback on the development of this plan.

A public survey was also launched in the spring and ran until the end of November 2024. The survey gathered community members' perspectives on climate action in Port Hope relating to energy efficiency, low-carbon technologies, waste reduction, and nature-based solutions. 153 community members participated in the survey.

[16] Partners for Climate Protection. (2025). The PCP Milestone Framework. https://www.pcp-ppc.ca/program

Figure 3: The Partners for Climate Protection 5-Milestone Framework

Eight different focus group sessions were held between July to November 2024 to obtain insights into each focus groups' perspectives and priorities on actions to be included in the plan. Focus group themes and representation included the agricultural community, industry leaders, equity and accessibility champions, environmentalists and others, in order to obtain a breadth of insights from community members who have different concerns or priorities. During the focus group sessions, community members were able to learn about the plan's development process, asked questions, provided valuable feedback and brainstormed actions ideas. Community members shared their thoughts on action prioritization and implementation considerations in key areas, including buildings, transportation, local food systems and nature-based solutions, waste and water, and industry.

Additionally, a series of youth engagement activities were facilitated in two of Port Hope's schools, Beatrice Strong and Port Hope High School. In total, 47 students participated in

feedback workshops that were led by their teachers. Their ideas and perspectives are represented in some of the imagery found throughout this plan.

Timeline for Work

The development of the CCAP consisted of five phases (Figure 4). *Phase 1: Project Initiation & Background Research* involved a kick-off meeting, background information gathering and the creation of an engagement strategy. *Phase 2: Jurisdictional Scan* involved compiling a list of climate mitigation plans and abatement measures for analysis and providing a jurisdictional scan report to the EAC. *Phase 3: Stakeholder & Community Engagement* consisted of delivering a community survey, running eight focus group sessions, a public open house, providing feedback exercises for school classrooms, and developing a stakeholder engagement summary report. *Phase 4: Reporting and Submissio*n involved the refinement and finalization of GHG mitigation strategies, scenario modelling and a follow up meeting with the EAC. Finally, Phase 5: Plan Development has consisted of drafting the CCAP, including an implementation plan, review of the proposed mitigation strategies by the EAC, focus groups, and wider community, and plan finalization and presentation to council.

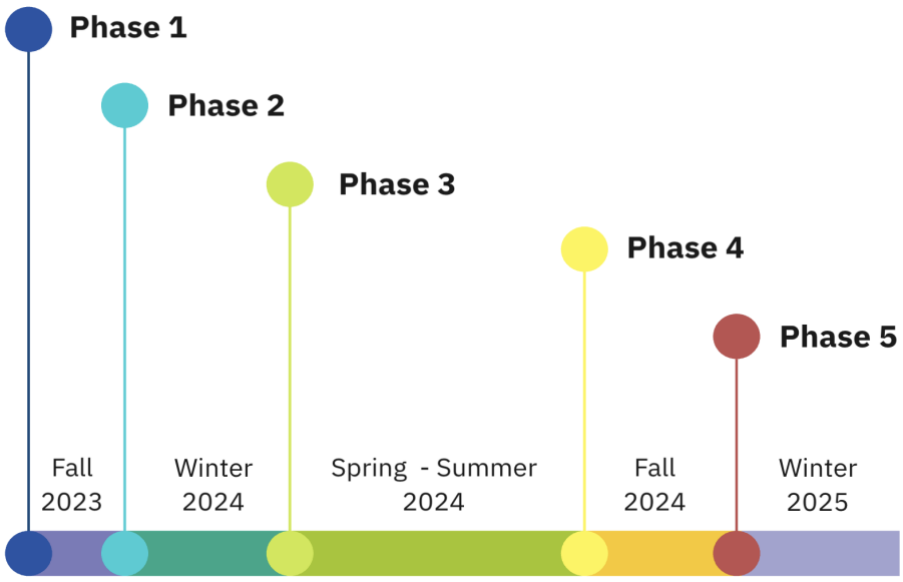

Figure 4: Port Hope Climate Action Plan Project Schedule

4. Port Hope's Current GHG Emissions

In 2018 Port Hope's residents, businesses and industries used 3,776,825 GJ of energy to heat and power homes and buildings, and for transportation. This combined with waste and wastewater emissions resulted in GHG emissions of 98,918 tC02e (tonnes of carbon dioxide equivalent). Total energy spending on electricity, natural gas, gasoline and diesel is estimated at $108,557,628. On a per capita basis, Port Hope residents, businesses, institutions and industry used 218 GJ per year, spent $6,477 on energy, and emitted 11.7 tonnes per person, putting Port Hope right on the Ontario per capita average of 218GJ.

As shown in **Error! Reference source not found.** and Figure 6 fossil fuel energy usage for transportation is the largest contributor to energy usage and GHG emissions, accounting for 48% of all emissions, 37% of energy usage and 48% of energy costs. Energy usage including electricity, natural gas, propane, fuel oil and wood for heating and powering our homes, businesses, institutions and industries is the next largest source of energy and emissions, making up altogether 63% of energy usage, 52% of energy costs, and 57% of GHG emissions. Of this, the residential and industrial sectors account for the majority of energy usage and emissions. Emissions from landfill waste and wastewater treatment processes account for 3% of total emissions. Agriculture emissions as a result of methane release from livestock and manure management account for 4% of total emissions. Breaking down energy usage by fuel types (Figure 6 and Figure 8) shows that natural gas, followed closely by gasoline, account for the majority of energy usage. In terms of energy costs, gasoline and electricity contribute the most.

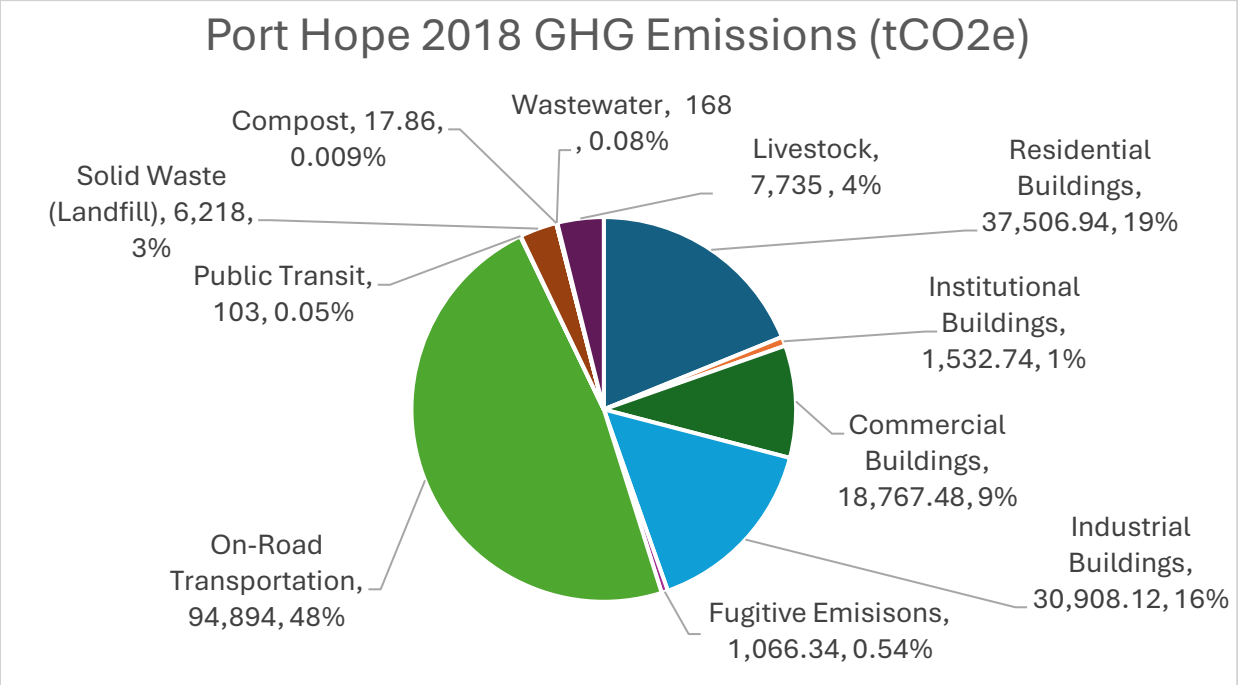

Figure 5: Port Hope 2018 Baseline GHG Emissions

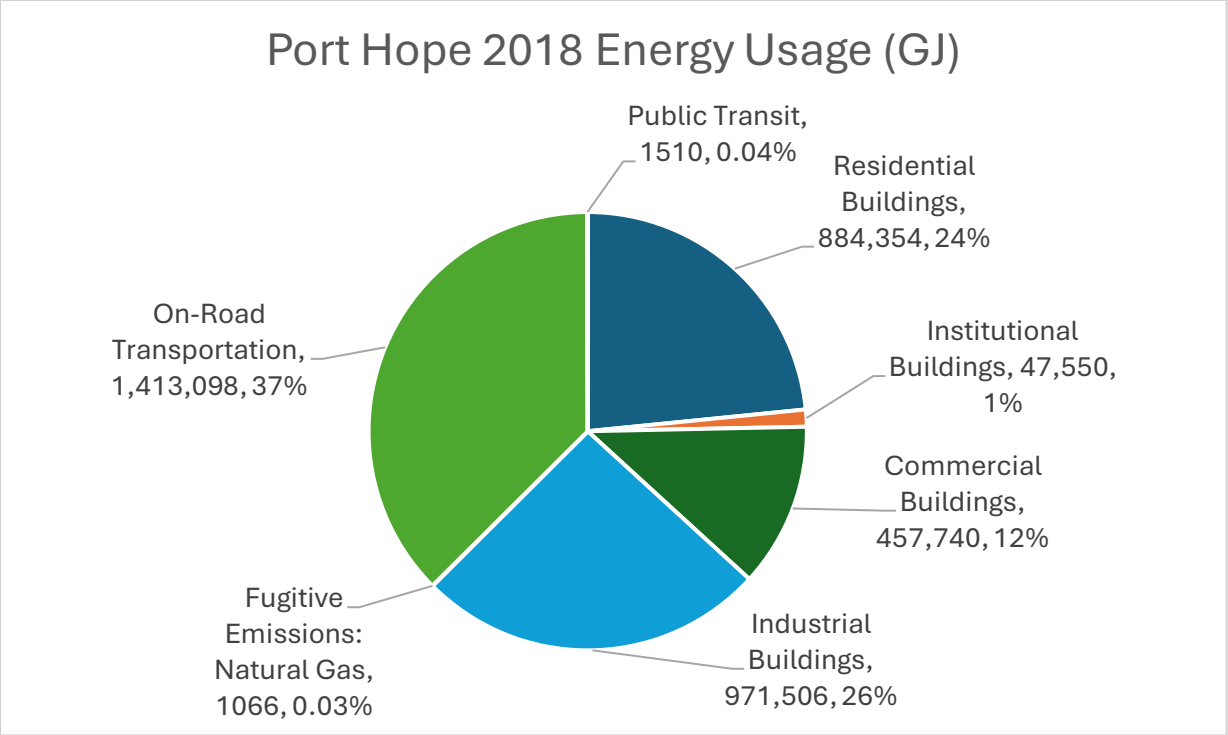

Figure 6: Port Hope 2018 Energy Usage

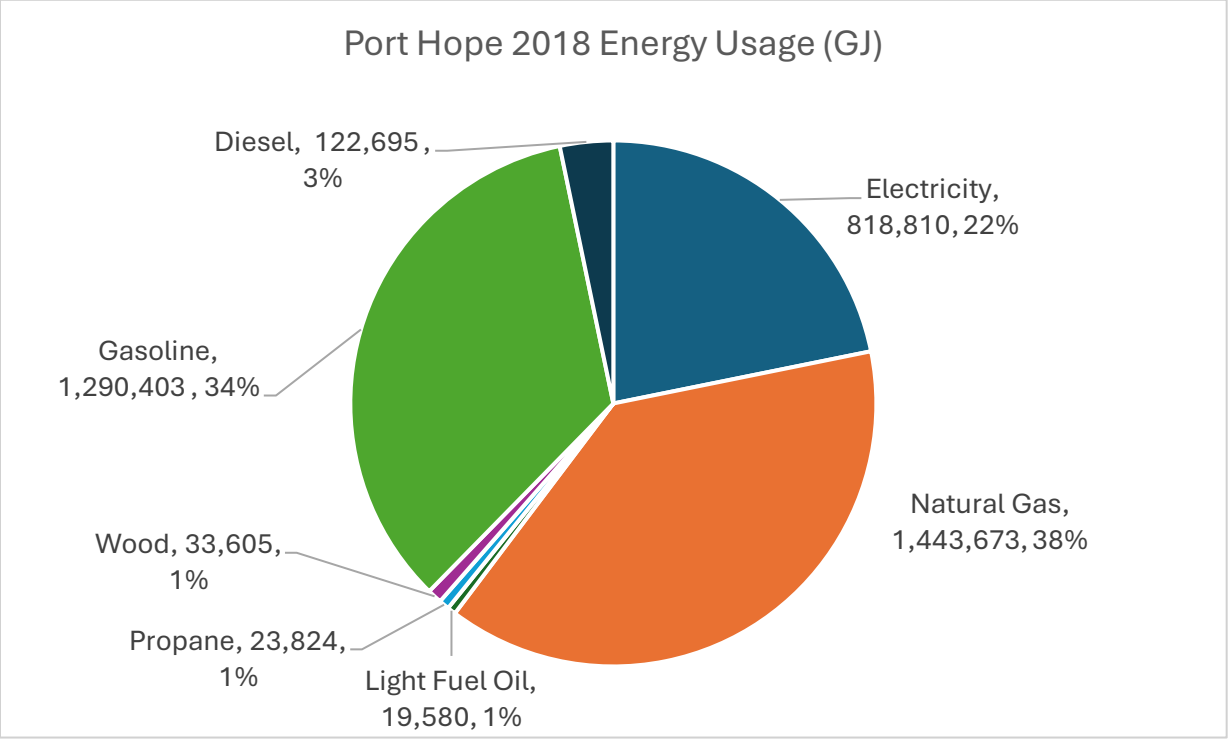

Figure 7: Port Hope 2018 Energy Use by Fuel Type

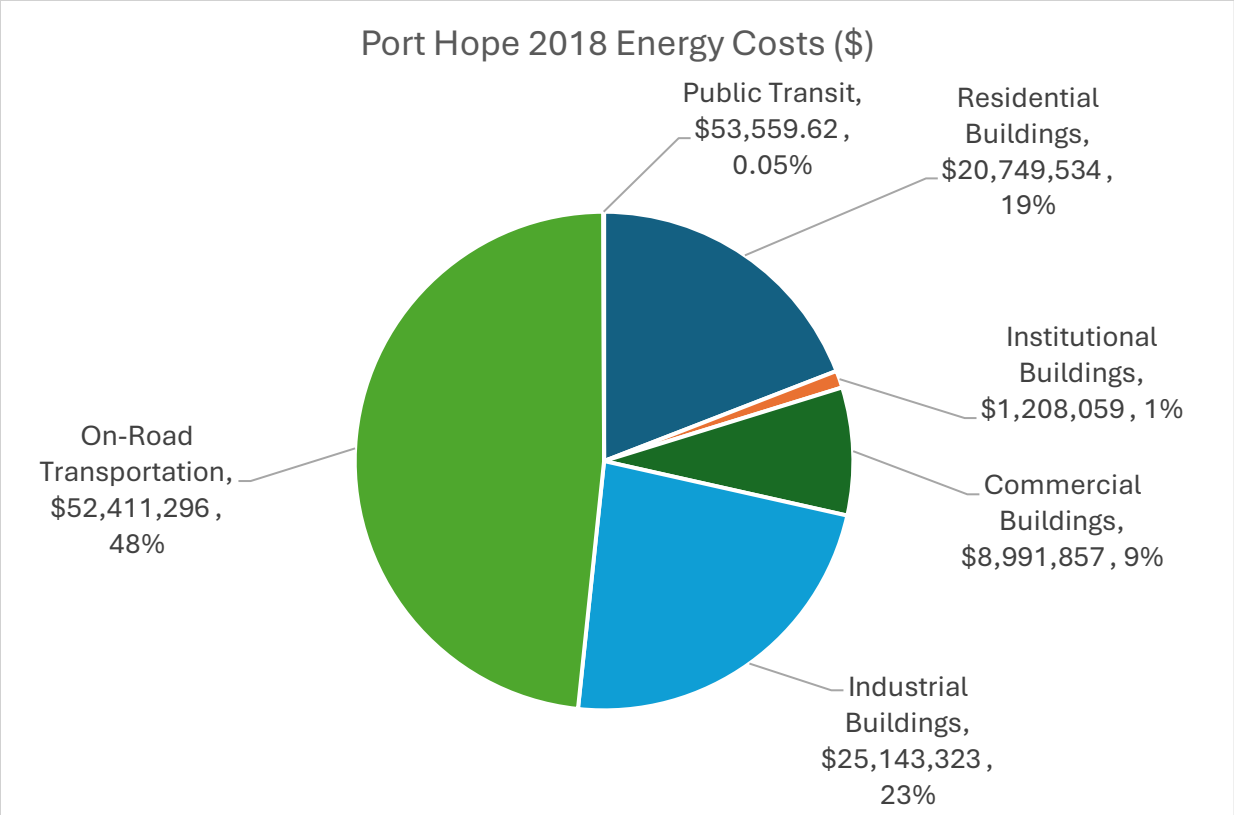

Figure 8: Port Hope 2018 Community Energy Expenditures

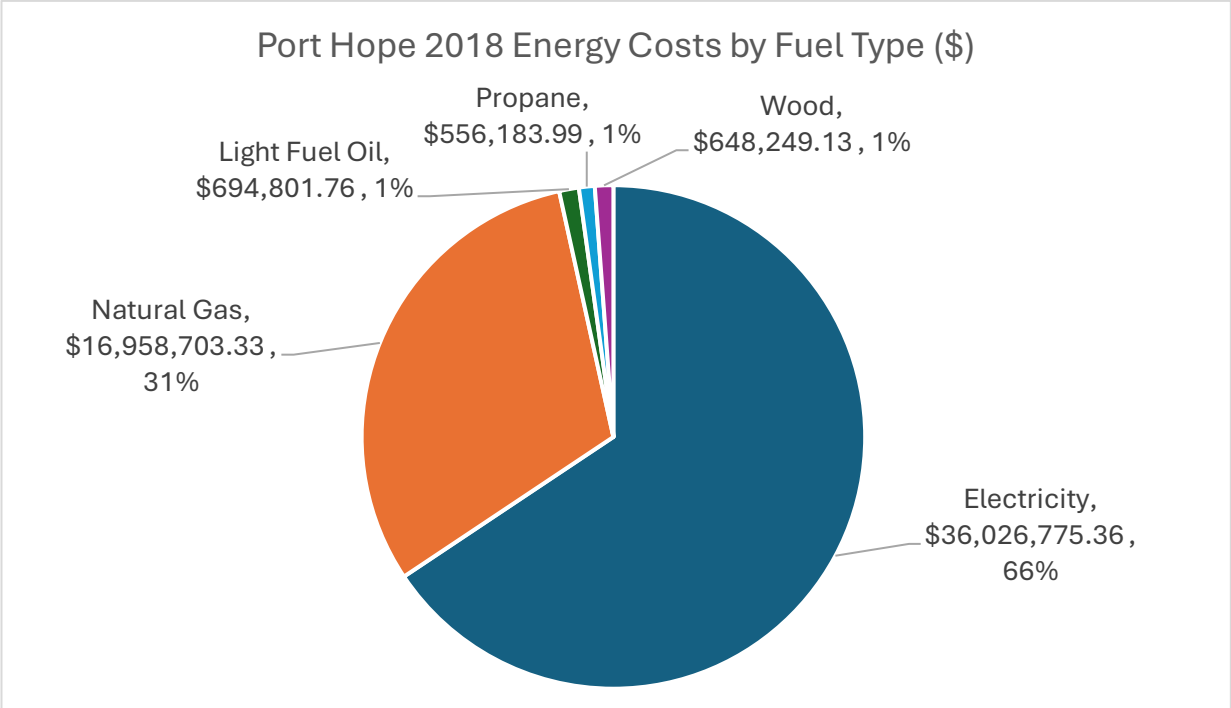

Figure 9: Port Hope 2018 energy expenditures by fuel type

Our Energy Use & Emissions in the Future

A Business-as-Usual (BAU) scenario was developed to understand Port Hope's future energy use, costs, and emissions. The BAU assumes that no action is taken to reduce energy or emissions. It is estimated that without any local action, energy use will increase by 27% from 2018 to 2050 (

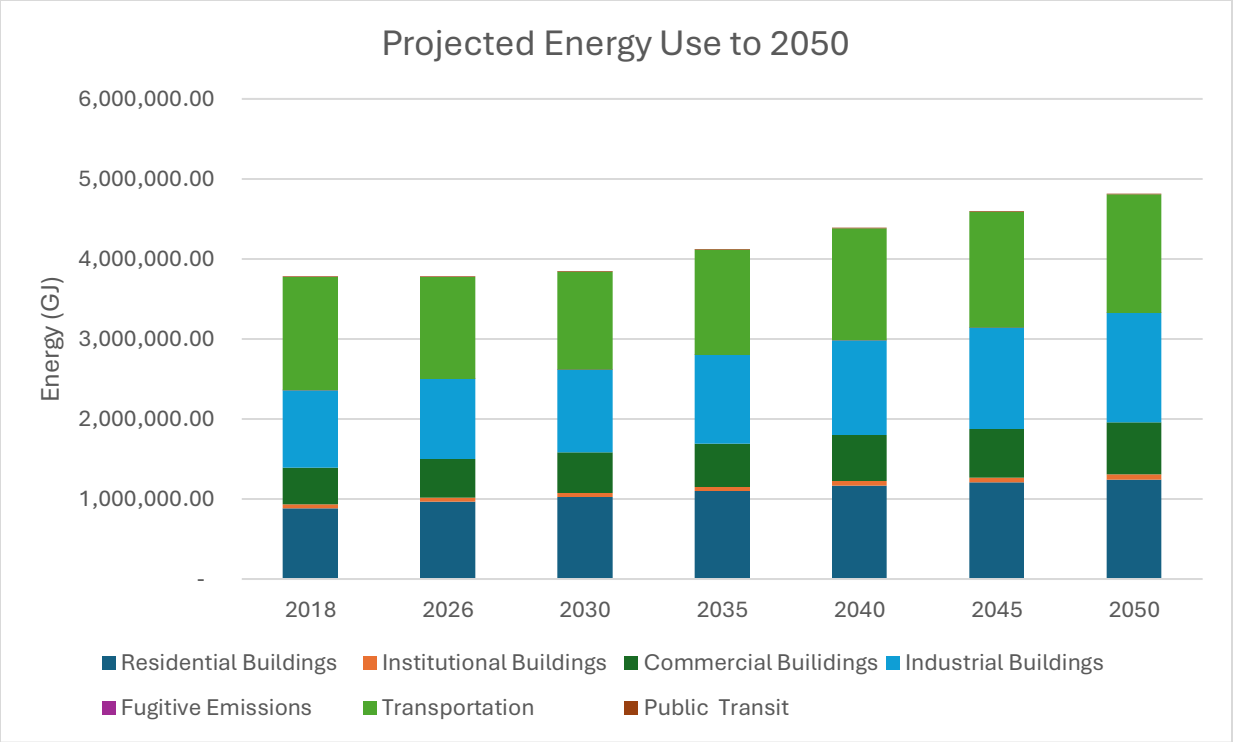

Figure 10). Larger energy use increases are offset by assumed modest background rates of energy efficiency increases in new and existing buildings, as well as vehicle fuel efficiency and electric vehicle (EV) uptake. Under the BAU Scenario it is assumed that Port Hope's existing building stock is retrofitted at the national average rate of 1% per year. The annual EV uptake in Ontario is assumed to continue at 0.24% per year, reaching 7.4% of total vehicles on the road by 2050, which offsets further energy increases due to the higher efficiency of EVs.

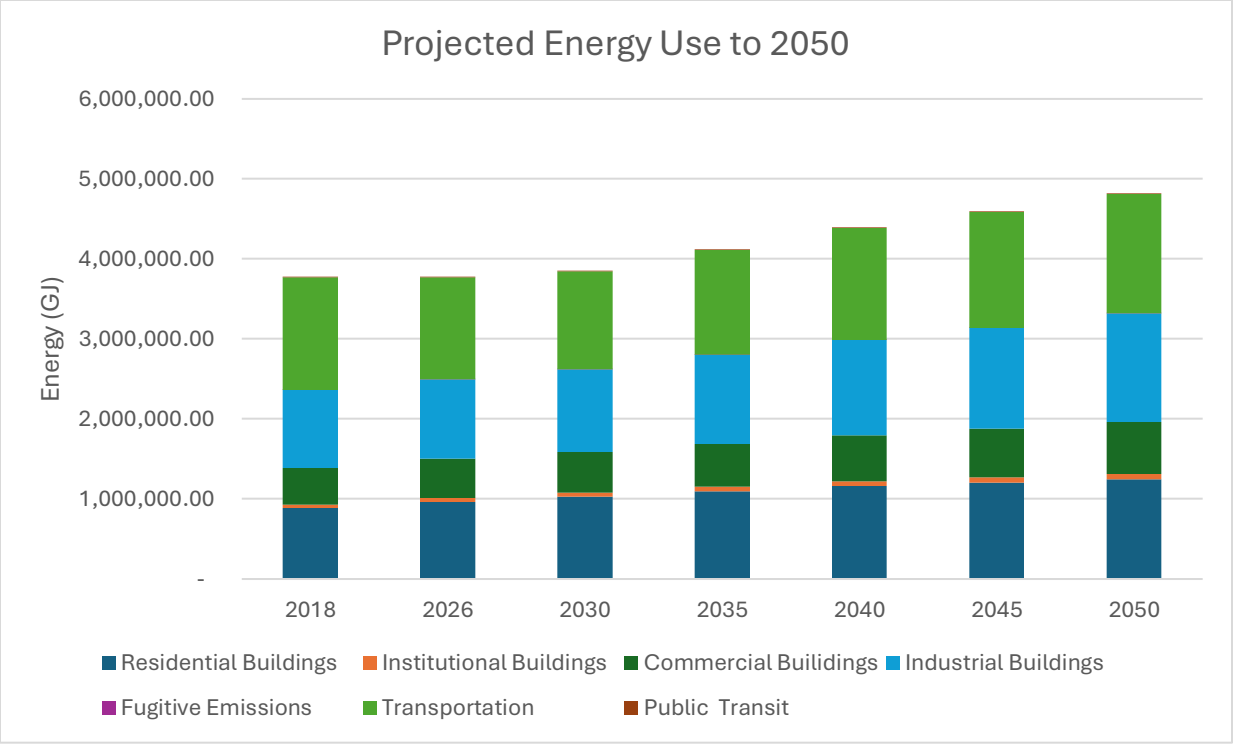

Figure 10: Business-as-Usual Energy Use in Port Hope to 2050

Total GHG emissions are estimated to increase by 22% by 2050 if no action is taken (Figure 11). As with projected energy use, further emission increases are offset by the background rate of building energy efficiency retrofits, new building efficiency increases and EV uptake. Furthermore, based on historical livestock headcounts in Port Hope between 2016 and 2021, livestock emissions have been decreasing at a rate of 1.53%. Should this trend contine, emission from livestock will decrease by 39% by 2050.

The modelled BAU scenario accounts for projected population and employment growth. Growth in Port Hope will lead to more houses, more businesses, more cars on the road, and more waste, and therefore increases to energy consumption and emissions. Changes that occur outside the influence of the municipality will also influence Port Hope's energy consumption and emissions in the future. This might include actions from higher levels of government and technology changes driven by broader economic trends. For example, in recent years Ontario's electricity grid has become more GHG emissions intensive due to increased reliance on natural gas plants while the Darlington and Bruce nuclear reactors are being refurbished. As these reactors come online again and as new nuclear plants are being explored, such as on the Wesleyville site, Ontario's electricity grid emissions will change again[17].

[25] TVO. (2019). *Why Ontario's Electricity is about to get dirtier*. https://www.tvo.org/article/why-ontarios-electricity-is-about-to-get-dirtier

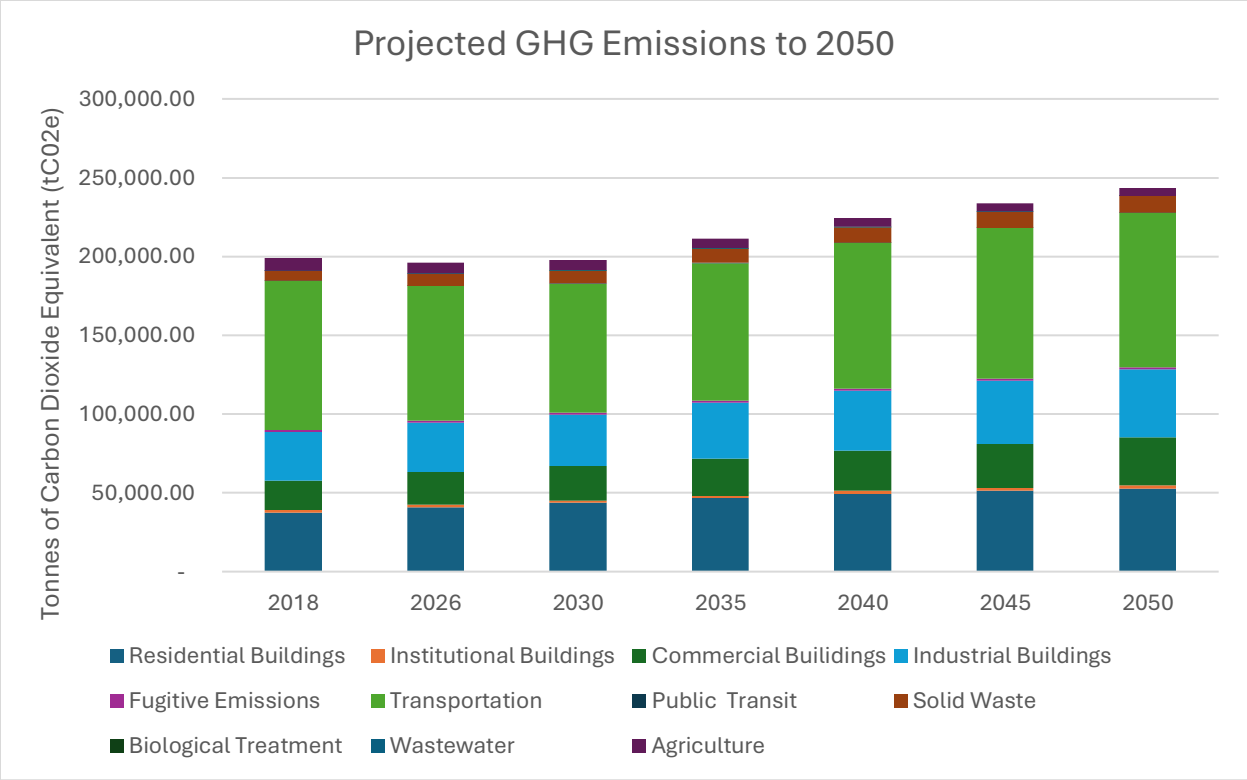

Figure 11: Business-as-Usual GHG Emissions in Port Hope to 2050

The BAU also includes a forecast of energy costs in Port Hope for residents and businesses. The Canada Energy Regulator projects what the energy prices could look like in the future under two scenarios. We have modelled a "high-cost" future where energy prices increase considerably and a "low-cost" future where energy prices increase by a smaller amount or decrease. Both cost scenarios were used to develop a range of expected energy expenditures for the Port Hope community in the BAU scenario.

Under the high-cost scenario (Figure 12), energy costs are expected to increase by 56% by 2050 from the 2018 baseline. Under the low-cost scenario (Figure 13), energy costs are expected to increase by 38% by 2050 from the 2018 baseline.

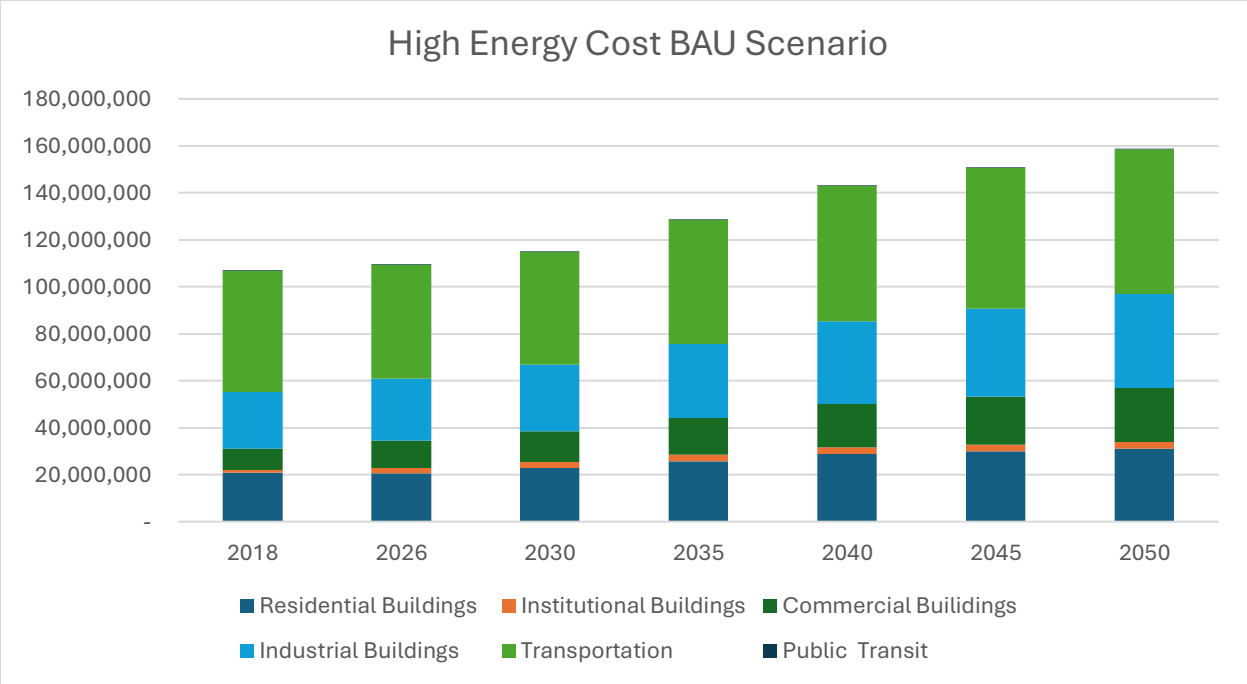

Figure 12: Projected energy costs in Port Hope under a high-cost scenario

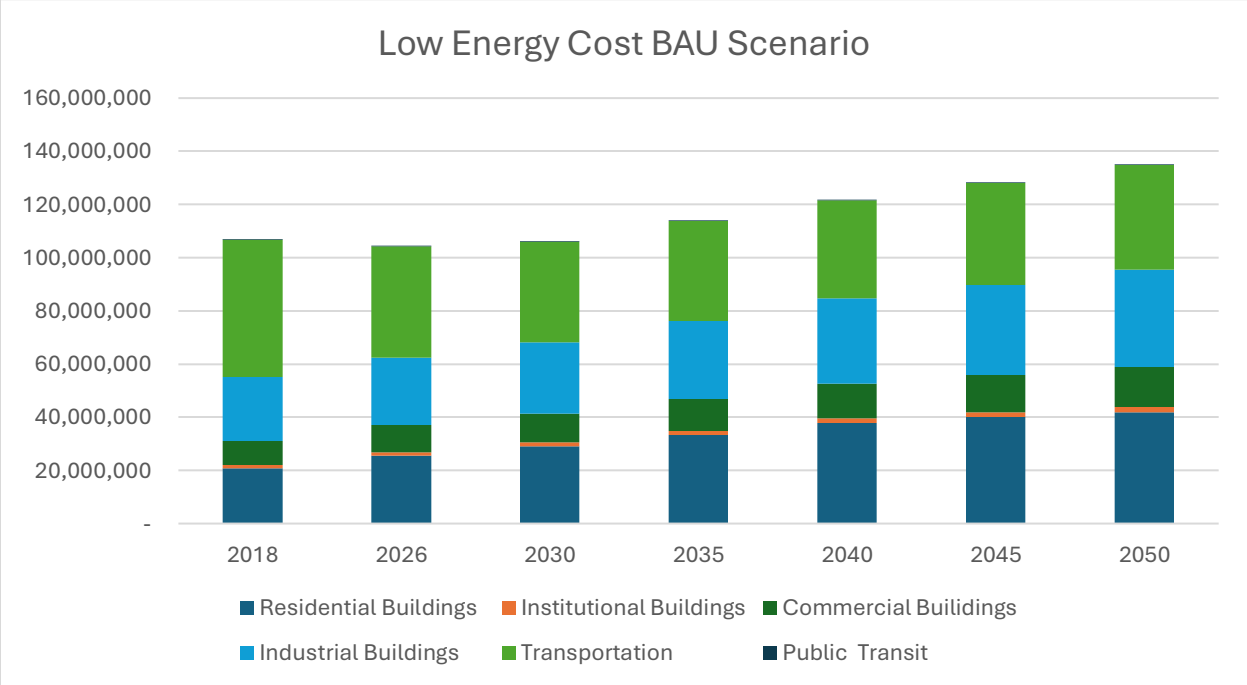

Figure 13: Projected energy costs in Port Hope under a low-cost scenario

5. Community Actions to Address Climate Change

This section of the plan focuses on the "what" of local climate action. It outlines the strategies identified throughout the development of the plan that are needed to reduce our energy use and emissions and to create a more sustainable, prosperous, and liveable future for residents and businesses in Port Hope. The strategies presented here target emissions from the community as a whole. They are organized by theme area and address emissions across the buildings, transportation, waste, and agriculture sectors, as well as land use, and natural assets. For each strategy, supporting and enabling components are provided, as well as specific actions community members can take individually to reduce energy use, energy costs and emissions.

Figure 14 and Figure 15 outline the estimated GHG emission reduction potential of implementing these strategies and the decarbonization pathway to reach net-zero emissions by 2050. As a result of implementing the strategies in this plan GHG emissions are estimated to be reduced by 46% by 2035 and 97% by 2050 compared to the BAU scenario. In addition, the cumulative impact of implementing the strategies is estimated to reduce annual energy costs by $20.5 million by 2035 and $58.4 million by 2050 (Table 2).

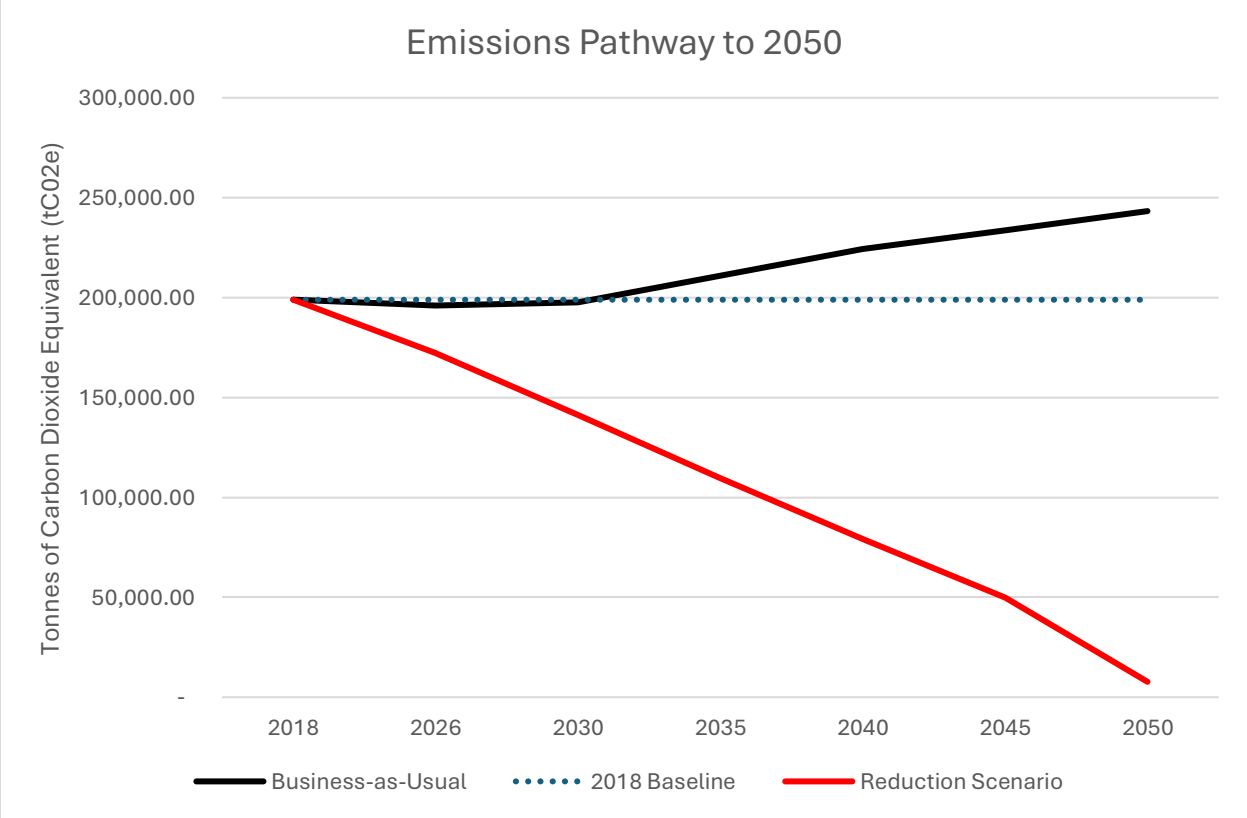

Figure 14: Net-zero by 2050 modelled decarbonization pathway compared to baseline and BAU scenario

It should be noted that not all GHG emissions can be eliminated by 2050. Some emissions will always remain as full adoption of low carbon technologies cannot be expected. Even in a full electrification scenario some emissions will remain as a result of fossil fuel electricity generation for the provincial electricity grid. In order to achieve net-zero, measures to sequester or offset carbon through nature-based solutions or renewable energy will be required.

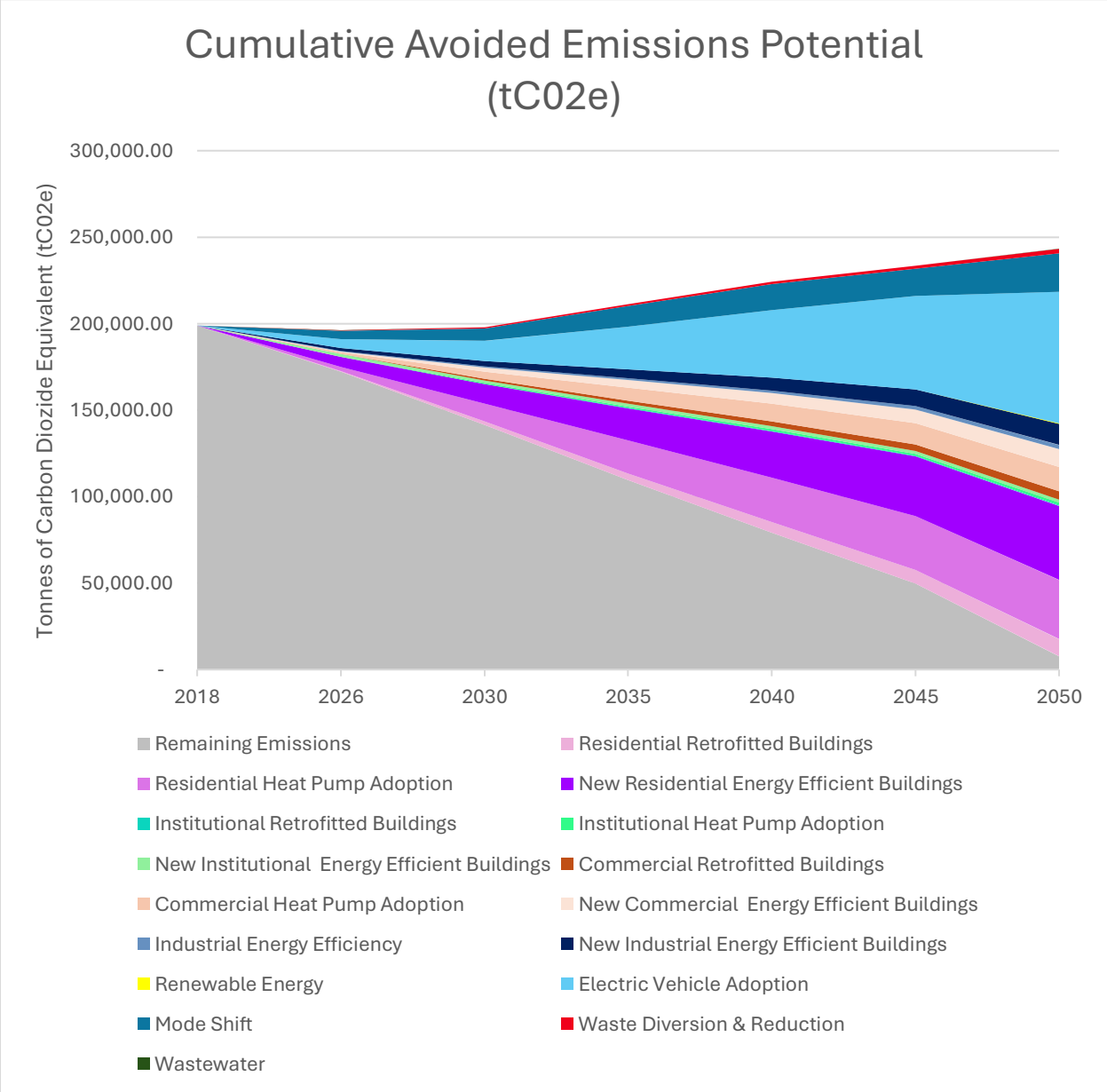

Figure 15: Modelled avoided GHG emissions potential as a result of implementing the CCAP

Table 2: Projected annual energy savings potential as a result of CCAP implementation

Annual Estimated Energy Saving Potential					
Sector	**2030**	**2035**	**2040**	**2045**	**2050**
Residential Buildings	$ 348,630	$ 2,325,848	$ 4,408,606	$ 5,892,760	$ 7,217,895
Institutional Buildings	$ 914,622	$ 975,317	$ 1,049,895	$ 1,088,366	$ 1,148,531
Commercial Buildings	$ 1,455,800	$ 2,309,396	$ 3,338,158	$ 4,226,906	$ 5,335,897
Industrial Buildings	$ 3,123,040	$ 5,531,652	$ 8,170,955	$ 10,538,266	$ 13,464,948
Transportation	$ 4,446,460	$ 9,372,745	$ 15,115,499	$ 20,841,425	$ 31,143,260
Public Transit	$ 5,514	$ 36,803	$ 66,466	$ 69,249	$ 71,615
Total	**$ 10,294,066**	**$ 20,551,760**	**$ 32,149,578**	**$ 42,656,973**	**$ 58,382,147**

Buildings and Facilities

Objective:

To reduce building energy consumption, energy costs and GHG emissions by promoting best practices in low carbon buildings and energy solutions, and through improving energy efficiency and adopting renewable energy among existing and new buildings.

Residential buildings are the second largest source of energy use and GHG emissions in Port Hope accounting for 23% of energy use, 16% of energy costs and 18% of emissions. The majority of residential buildings in Port Hope are single-family dwellings built between 1950-1980 or pre-1950, indicating a significant opportunity to improve energy efficiency and generate energy cost savings through the implementation of a deep building energy efficiency retrofit program. In addition, voluntary or mandatory guidelines, standards and/or incentives to encourage new buildings to be as energy efficient and low emissions as possible will be needed to avoid significant growth in emissions from the building stock to 2050. For businesses and institutions, there are many opportunities to improve energy efficiency and save on energy costs throughout their operations by taking advantage of the range of energy efficiency financial incentives provided by the province. In the industrial sector, collaboration and knowledge sharing between industries in conjunction with regular benchmarking will be needed to accelerate implementation of ongoing energy efficiency and GHG reduction plans.

Strategy #1: Implement Energy Efficiency Retrofits

Building energy retrofit programs reduce energy use and GHG emissions by providing support and incentives for the upgrading of building envelopes, including windows and insulation, as well as heating, cooling and ventilation systems to be more energy efficient. Retrofit programs can also promote conversion from fossil fuel heating systems such as propane, fuel oil, and natural gas furnaces to more efficient electric heat pump systems. To achieve net-zero emissions, deep energy efficiency retrofits that target 40-60% reductions in energy demand and include fuel switching to electric heat pumps for the majority of the existing residential, commercial and institutional building stock will be required. In order to maximize impact, the oldest and least efficient buildings should be targeted first. In addition to energy cost savings, building energy retrofits provide a range of co-benefits including improved indoor comfort, improved air quality and added property values.

Building energy retrofit costs, savings and payback periods vary widely depending on the type and range of measures. The types of measures implemented will be dictated by the homeowner's choice, as well as what financial incentives might be available at the time. A shallow retrofit that looks only to replace lighting, introduce smart controls, upgrades to HVAC motors and fans, and improve caulking and sealing can cost less than $5,000 for a single-family home and generate 10-20% energy savings that would result in a 1–3-year payback period[18]. The financial case for retrofits is further improved by available financial incentives and rebates available through the provincial and federal governments. In contrast a comprehensive deep energy retrofit that includes measures like replacing furnaces and boilers with heat pumps, installing renewable energy, and building envelope upgrades such as window replacement and insulation could cost $100,000, and could generate energy savings of 40-80%[19]. However, even with government financial incentives, the high upfront costs of a comprehensive deep energy retrofit creates a significant barrier to uptake, as well as a prohibitively long payback period. In practice, a typical retrofit would fall somewhere between these two extremes. Indeed, data from the retrofits undertaken as part of the Canada Greener Homes Grant shows that retrofits produced an average energy savings of 21%, indicating a need to support deeper energy retrofits with more depth of savings[20]. Therefore, it is recommended that retrofits focus on the highest impact measures feasible within the homeowner's budget.

Transitioning to an all-electric air source heat pump will have the largest impact in terms of reducing GHG emissions and saving energy. In fact, a heat pump in combination with a

[18] Pembina Institute. (2017). *Deep emissions reductions in the existing building stock*. https://www.pembina.org/reports/retrofit-strategy-bc-report-2017.pdf

[19] Ibid.

[20] Green Communities Canada. (2023). Retrofitting Canada's Homes. Progress Report #1.

solar system can exceed the energy savings of a typical deep retrofit without the need for any other building energy efficiency upgrades[16]. As with energy efficiency upgrades, the business case for heat pumps will vary widely depending on a multitude of factors including what heating and cooling equipment is being replaced, the type of heat pump, local gas and electricity costs, and the need for electrical service upgrades or duct work in the building. Each household and situation will be different and will require careful analysis by a qualified and skilled contractor to determine the costs. Nevertheless, recent studies have found that despite the higher upfront costs of heat pumps compared to natural gas furnaces and boilers, heat-pumps are the lowest cost heating and cooling option for most households in Canada[21]. This is because heat pumps provide heating and cooling in one unit, allowing for major energy and cost efficiencies. Therefore, it is often the best time to install a heat pump when replacing an old air conditioner. In these cases, the cost of a heat pump relative to an air conditioner can range from $8,000 to $11,000, with a potential payback period as low as 3.2 years for a single-family home if the cost is incremental to replacing a central air conditioner[22]. Studies for Toronto homes have also shown that standard heat pumps with gas backup are the lowest cost option for nearly all households[17]. Case studies on full household electrification scenarios from the GTHA show that over the 15-year lifetime of the heat pump, cost savings offset the upfront costs, making heat pumps at least cost competitive with natural gas furnaces[23]. In addition, expected cost reductions in heat pump technologies as well as the availability of rebates and grants will continue to improve the business case into the future.

While energy efficiency retrofits provide many benefits, they are also costly and complex to navigate, particularly for a homeowner or small business with limited time and resources. Therefore, providing education, resources and supports to streamline the process is crucial to encourage community uptake. In addition, the availability of financial supports such as grants and rebates for retrofits vary over time and community members need to be informed of the supports that are currently available.

Particularly in rural areas, where buildings are older, deep retrofits or electrification with heat pumps may be cost prohibitive due to the high upfront capital costs of the units themselves and/or for upgrading building electrical and ventilation systems to accommodate more modern, energy efficient building technologies. That said, there are

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[21] Canadian Climate Institute. (2023). *Heat Pumps Pay Off: Unlocking lower cost heating and cooling in Canada*. https://climateinstitute.ca/wp-content/uploads/2023/09/Heat-Pumps-Pay-Off-Unlocking-lower-cost-heating-and-cooling-in-Canada-Canadian-Climate-Institute.pdf

[22] Ontario Clean Air Alliance Research. (2021). *An Analysis of the Potential for Heat Pumps to Reduce the Energy Costs and Greenhouse Gas Pollution of Ontario's Electrically-Heated Homes*. https://www.cleanairalliance.org/an-analysis-of-the-potential-for-air-source-heat-pumps-to-reduce-energy-costs-and-greenhouse-gas-pollution/

[23] Ibid.

many low-cost, easy to implement energy efficiency measures that provide good value for money that can be promoted, including:

- weather stripping;
- sealing with caulking or spray foam;
- adding insulation; and
- upgrading lighting and appliances to more energy efficient models.

There are also many behavioural changes that can improve energy efficiency that are free to implement which include:

- switching off unused appliance and lights;
- not opening windows when the heating or cooling system is in use;
- turning down thermostats or programming thermostats appropriately; and
- closing curtains to prevent overheating during the summer.

Strategy #1: Implement Energy Efficiency Retrofits	
Description of Strategy, Policy, Program	Support deep energy retrofits across all community buildings by establishing an Energy Retrofit One Stop Shop webpage that provides clear and accessible information and education to guide community members through the retrofit process including: ● Resources and information on currently available grants and funding opportunities. ● Step-by-step guidance on the retrofit process for different building types including single-family residential homes, MURBS, condos, small businesses, institutional and agricultural buildings. ● Local case studies, FAQs, and energy efficiency home tours to demonstrate benefits and lessons learned. ● Engage with key target audiences such as property owners, renters, condo boards, contractors, seniors, to educate and raise awareness on building retrofit programs.
Supporting Strategies / Enabling Components	● Work with local NGOs and community groups to develop and promote the Retrofit One Stop Shop. ● Expand areas of the Community Improvement Plan for energy efficiency, and update it to allow energy efficiency upgrades for commercial and industrial buildings. ● Consider applying for funding to conduct a community-wide retrofit needs assessment for residential, commercial and institutional buildings. ● Develop a comprehensive building retrofit strategy based on the needs assessment. ● Support and provide guidance specific to retrofitting existing buildings in the agricultural community.

	• Encourage the integration of renewable energy and green infrastructure, such as solar panels and green roofs, when retrofitting if feasible.
Environmental, Economic, Social Benefits	• Reduces energy consumption and provide energy and cost savings. • Increases resource efficiency. • Provides local economic development opportunities • Contributes to the reduction of energy poverty. • Improves indoor air quality and occupant comfort.

Ways you Can Contribute

What Residents Can Do	• Use the Energy Retrofit One Stop Shop to learn about available programs, rebates, and best practices for retrofitting their homes. • Make small, low-cost changes that add up to large energy and cost savings overtime such as: Installing a smart thermostat, weather stripping, relacing incandescent lights with LED lights, using a smart power strip to turn off power to devices not in use, and buying energy efficiency appliances • Conduct a home energy audit to identify efficiency opportunities. • Apply for grants or incentives to improve insulation, upgrade windows, and install energy-efficient appliances. • Join or form community groups to share resources, contractor recommendations, and bulk purchase discounts on energy-efficient upgrades. • Consider renewable energy options such as rooftop solar panels • Consider installing a heat pump when it is time to replace your air conditioner or furnace
What Businesses Can Do	• Utilize resources from the One Stop Shop to access guidance on retrofitting buildings and facilities • Benchmark energy usage, conduct energy audits and invest in efficiency upgrades such as LED lighting, smart thermostats insulation, windows, and improved HVAC systems. • Utilize passive heating and cooling techniques where possible to reduce energy demand. • Apply for available funding and incentives to support retrofits. • Provide employee training on energy-efficient building management and operations, and energy-saving behavioural changes

Strategy #2: Develop Energy Efficient New Buildings

Supporting construction of new buildings that are built to the highest energy efficiency standard feasible is an important part of achieving net-zero emissions to ensure that all new builds minimize their GHG emissions and environmental impact, and do not create a need to retrofit the building in the future. Green Development Standards (GDS) are voluntary or mandatory measures that encourage new developments to incorporate environmentally, socially, economically sustainable design. GDS have been implemented in 15 municipalities in the Greater Toronto Area and typically include standards for energy efficiency performance and GHG intensity. They can be tailored to suit the local context and municipal needs to include a suite of broader sustainability and resilience features such as:

- renewable energy
- maintenance of tree canopy
- native plant and tree species planting
- protection and integration of green space
- soil quality
- low impact design (LID)
- green roofs
- water conservation measures
- stormwater management
- waste minimization
- public park access
- bird-friendly design
- heritage conservation
- integration of active and public transportation infrastructure
- promotion of compact, mixed-use development
- electric vehicle (EV) charging infrastructure
- EV readiness

Other approaches in Ontario have included sustainability checklists or metrics that outline measures that developers can take. Checklists and GDS can be accompanied with point systems or performance tiers that are paired with incentives to encourage adoption by developers.

Strategy #2: Develop Energy Efficient New Buildings	
Description of Strategy, Policy, Program	Strive for all new community buildings to be constructed to net-zero ready and energy efficient.

Supporting Strategies / Enabling Components	● Develop a policy that requires developers to submit a GDS checklist as part of the site plan application process to encourage all new buildings to be built to net-zero ready or as high an energy efficiency standard as possible. Consider offering incentives to developers that meet higher performance tiers of the policy such as expedited permitting processes, density bonusing, or development charge reductions. ● Consider implementing a ban on fossil gas for all new construction in Port Hope. ● Investigate and implement financing mechanisms and incentives to promote high-performance buildings. ● Prioritize building designs that reduce energy demand and increase efficiency. ● Engage with different community groups (e.g., home owners, developers) and provide educational and outreach programs on sustainable new buildings. ● Encourage the integration of renewable energy and green infrastructure where feasible such as solar panels and green roofs.
Environmental, Economic, Social Benefits	● Reduces energy consumption and provide energy and cost savings. ● Increases resource efficiency. ● Contribute to the reduction of energy poverty. ● Improve indoor air quality and occupant comfort. ● Improves resilience to extreme weather.

Ways you Can Contribute

What Residents Can Do	• Participate in community engagement sessions and educational programs about sustainable building practices. • Volunteer with local sustainability groups to spread awareness about energy-efficient building practices. • Advocate for policies that support high-performance building standards.
What Businesses Can Do	• Construct new buildings using energy-efficient materials and design principles. • Partner with developers who prioritize net-zero and energy-efficient construction. • Advocate for policies that support high-performance building standards. • Explore available financial incentives for constructing sustainable buildings.

Strategy #3: Promote Renewable Energy

Renewable energy plays an important role in the net-zero transition by providing clean and GHG emissions-free sources of electricity. As electrification of heating and transportation becomes more common and electricity demand rises as a result, local distributed

renewable energy resources at the community-level will be increasingly important in providing additional electricity generation capacity. Locally owned renewable energy has the added benefit of providing revenue generating or energy cost saving opportunities as well as local economic benefits for manufactures and installers. Other benefits for the community include increased energy independence, resilience and security.

Solar photovoltaic (PV) and battery energy storage are currently the most economically feasible technologies available on the market, however few supporting policies and incentives for renewable energy exist in Ontario, other than the net-metering policy. Net-metering provides a credit on electricity bills for on-site renewable energy generation fed into the grid. In many cases the business case for net-metering in the residential sector will not be viable, however some success in commercial-scale solar PV net-metering projects has been demonstrated in Ontario[24]. As solar PV prices continue to fall and the electricity prices continue to rise, the business case for net-metered solar PV is expected to improve. Other solar financing options to consider include power purchase agreements, solar equipment leasing and community bonds.

While renewable energy is also addressed in this plan's 'building retrofit' and 'energy efficient new building' strategies, developing a program to support adoption and educate the community on renewable energy opportunities and benefits will help accelerate implementation.

Strategy #3: Promote Renewable Energy	
Description of Strategy, Policy, Program	Look for opportunities to implement renewable energy projects and support increased uptake among community members.
Supporting Strategies / Enabling Components	● Provide education on and encourage renewable energy adoption by developing or sharing existing resources on local renewable for residents and businesses that outlines available financing/funding arrangements and opportunities as well benefits, risks and technical considerations. ● Seek opportunities to integrate renewable energy on municipal buildings and properties to reduce energy costs and demonstrate feasibility. ● Collaborate with local industry, neighbouring communities, and other levels of government on renewable energy projects that diversify the regional energy supply.

[24] Ottawa Renewable Energy Co-operative. (2025). *Solar Panel Project in Alta Vista*. https://www.orec.ca/alta-vista

	• Support opportunities for bulk purchasing of solar PV within the community and with neighbouring municipalities to reduce upfront costs.
Environmental, Economic, Social Benefits	• Reduce dependence on traditional energy sources and increases energy security and resilience. • Provides long-term savings from the adaptation of renewable energy. • Create employment opportunities and promote local economic development. • Improve indoor air quality.

Ways you Can Contribute

What Residents Can Do	• Attend workshops or access online resources about renewable energy options and financial incentives. • Install renewable energy equipment such as solar panels or solar water heaters on their homes. • Engage with municipal leaders to support policies and programs that promote renewable energy adoption. • Join or support community groups that advocate for renewable energy adoption.
What Businesses Can Do	• Install solar panels or purchase renewable energy credits to reduce reliance on fossil fuels. • Take advantage of available financial incentives to offset the cost of installing renewable energy systems. • Explore renewable energy financing options such as power purchase agreements and solar leases. • Offer educational sessions about renewable energy and encourage energy-efficient behaviors in the workplace. • Advocate for policies that support renewable energy expansion. • Collaborate with other businesses and local organizations to explore innovative ways to integrate renewable energy such as through bulk purchasing or community bonds.

Strategy #4: Decarbonize Industrial Buildings

Many of the larger industries in Port Hope are demonstrating leadership in climate action, have already developed climate action plans and are actively engaged in implementation of improved energy efficiency measures on an ongoing basis. Discussions with the industrial sector in Port Hope during development of the CCAP indicated a desire for improved communication, collaboration and knowledge sharing between industries as well as between the municipality and industry to improve coordination and to help accelerate adoption of more energy efficient technologies and processes. Interest was expressed by the industrial sector in the establishment of an industrial energy efficiency

and GHG reduction working group that would meet semi-regularly to discuss collaboration and knowledge sharing opportunities.

Strategy #4: Decarbonize Industrial Buildings	
Description of Strategy, Policy, Program	Establish an industrial working group open to all Port Hope industries to facilitate cross-sector collaboration with industries and the municipality and share knowledge on energy efficiency and GHG reduction measures, funding opportunities, benchmarking opportunities.
Supporting Strategies / Enabling Components	• Improve channels of communication and coordination between the municipality and industry by establishing regular check-ins or site tours of industrial sites in Port Hope and engaging with industry when undertaking nearby projects.
Environmental, Economic, Social Benefits	• Energy cost savings. • Improved air quality.

Ways you Can Contribute

What Residents Can Do	• Support local businesses and industries that adopt greener practices. • Promote awareness of industrial sustainability initiatives through social media and community groups. • Encourage local government representatives to prioritize collaboration with industries.
What Businesses Can Do	• Join the industrial working group and actively participate in knowledge-sharing sessions to share best practices and successful sustainability initiatives. • Conduct internal energy audits to identify energy efficiency opportunities and develop a plan to implement them. • Apply for available grants and funding for energy efficiency upgrades. • Look for opportunities to implement renewable energy on industrial buildings. • Develop sustainability goals and report progress publicly to encourage transparency. • Offer employee training on energy efficiency and carbon footprint reduction. • Engage with the municipality on upcoming projects to align with local sustainability goals. • Support research and pilot projects that explore innovative emissions reduction strategies. • Partner with other local industries and businesses to explore waste-to-energy or circular economy initiatives, or shared renewable energy projects.

Transportation

Objective:
Reduce private vehicle demand, single passenger trips and total vehicle kilometers travelled through increased public transit, carpooling programs, carsharing and rideshare services and encouraging active transportation such as cycling, walking, and skating.

Reducing transportation emissions in Port Hope will require reducing vehicle demand as well as shifting to low/zero emission vehicles. Reducing vehicle demand involves reducing the number of private vehicle trips through the provision of alternatives such as more and safer active transportation options, expanded public transit services, making regional transit such as the GO train more accessible for commuters, as well as promoting existing and establishing new carpooling and carsharing programs. Where reducing vehicle demand is not viable, encouraging adoption of low/zero emission vehicles will be critical to reducing GHG emissions. Shifting to low/zero emission vehicles involves encouraging community members to adopt low emission vehicles such as electric vehicles by establishing more EV infrastructure and educating on cost and benefits, as well as financial supports.

With the rural context of Ward 2 and the more urban nature of Ward 1, Port Hope has two very different needs in terms of transportation depending on where one is located. In the urban area, improving options for public transit, as well as enabling more safe active transportation options are critical for reducing single-passenger vehicle trips and providing viable alternatives to replace shorter car trips with cycling or walking. In the rural area private vehicles are a necessity for many. Here low/zero emission vehicles will play an important role in transitioning from fossil fuels, as well as exploring rural transit options such as on-demand transit (ODT) services.

Strategy #5: Improve Active Transportation

Active transportation is the transport of people or goods through non-motorized means such as walking, cycling, skating, running or jogging, and snowshoeing or skiing. Active transportation has major benefits for health, environment, economy, society and the transportation system. Switching only one trip per day from driving to cycling has been shown to save 0.5 tonnes of GHG emissions per person per year, representing a substantial share of average per capita GHG emissions.[25] Replacing shorter vehicle trips with active transportation options also saves money on fuel and vehicle maintenance costs, as well as improves both physical and mental health. Shifting just 5% of all vehicle

[25] Brand, C. et al. (2021). The climate change mitigation impacts of active travel: Evidence from a longitudinal panel study in seven European cities. *Global Environmental Change, 67*(102224), https://doi.org/10.1016/j.gloenvcha.2021.102224

kilometres travelled to cycling has been shown to avoid about 166 deaths per year as a result of increased physical activity and reduced local air pollution[26].

Strategy #5: Improve Active Transportation	
Description of Strategy, Policy, Program	Improve active transportation infrastructure and encourage active transportation such as walking and cycling.
Supporting Strategies / Enabling Components	● Review and update the Active Transportation Master plan as necessary and continue to implement. ● Investigate the feasibility of installing paved shoulders in rural areas and bike lanes in urban areas. ● Invest in and improve active transportation infrastructure and connectivity by designing and building safe routes for walking, cycling, and other forms of active transportation taking into consideration crossing opportunities for pedestrians and cyclists. ● Make walking and cycling routes more appealing for residents and tourists through the provision of beautification public art and historical information on walking and cycling routes. ● Provide more lighting, benches and access to washrooms along key active transportation routes. ● Establish a bike to school program with designated routes for walking or cycling to school as a group. ● Install more bike racks and provide secure bike storage in commercial areas. ● Work with local NGOs and community groups to conduct an active transportation education campaign that shares resources on the health, economic and environmental benefits of active transportation and includes a call to action or challenge for residents to incorporate active travel into their daily or weekly routine. As part of this campaign organize community events such as group rides and bike safety and maintenance workshops. ● Publish a brochure and/or webpage that provides safe cycling and walking routes and trails and guidance on safe cycling and walking behaviour. ● Work with local hiking organizations to create a culture of walking. ● Explore feasibility of establishing bikeshare program in population centres and near frequently travelled to destinations such as grocery stores and the downtown commercial area.
Environmental, Economic, Social Benefits	● Improve community safety, connectivity, and well-being. ● Improve land use and planning practices. ● Provide cost savings.

[26] Lindsay, G., Macmillan, A. and Woodward, A. (2011). Moving urban trips from cars to bicycles: impacts on health and emissions. 35 (1).

Ways you Can Contribute

What Residents Can Do	• Choose active transportation, such as walk or cycle for short trips instead of driving where possible. • Advocate for safe rural and urban active transportation infrastructure and support municipal initiatives for better sidewalks, bike lanes, paved shoulders and pedestrian crossings by attending community engagements and providing feedback. • Join community walking, hiking, or cycling groups to promote a culture of active transportation. • Support and participate in a bike to school program. • Share local events, safety tips, and benefits of active transportation and help promote awareness with neighbours and community members. • Engage and participate in community consultations on transportation planning. • Support initiatives like bikeshare programs.
What Businesses Can Do	• Provide incentives and infrastructure such as bike racks to support active transportation for employees and consumers. • Encourage and support employees to use active transportation modes, if possible, when commuting. • Work with local government to support policies that enhance active transportation options. • Work with local environmental NGOs or advocacy groups to promote active transportation. • Encourage management and employees to incorporate active transportation into their daily routines.

Strategy #6: Increase Uptake of Public Transit

Port Hope currently provides two transit routes that service the urban area of Ward 1 as well as a Cobourg Express Shuttle. A specialized transit service is also available for residents with disability. Continuing to develop accessible, affordable, and sustainable transit options in both the urban and rural areas will be essential to providing a viable alternative to private vehicle travel in Port Hope.

In the rural area, on-demand transit (ODT) services are one option to provide alternatives to private vehicle trips in rural areas that have lower transit demand than urban areas or where fixed-route services are not effective. ODT are transit services without a fixed route or schedule that allow customers to request a ride, usually using a phone call, app or website, within a set service area. Transit routes are therefore determined by user demand.

ODT services can alleviate transportation barriers particularly for disadvantage groups that may not be able to afford a vehicle and help reduce social exclusion and rural isolation[27].

Strategy #6: Increase Uptake for Public Transit	
Description of Strategy, Policy, Program	Establish and improve networks and infrastructure to encourage residents to take public transit.
Supporting Strategies / Enabling Components	● Investigate the feasibility of expanding transit routes and frequencies. ● Investigate the feasibility of expanding access to regional transit to provide more viable public transit options for commuters. ● Provide education campaigns to encourage higher ridership and increase the uptake of public transit or ride share programs. ● Review bus routes and optimize connectivity and services and make transit travel time competitive. ● Explore and evaluate a rural on-demand transit service. ● Explore and provide a transit pass program for select demographics such as youth or a workplace transit pass program.
Environmental, Economic, Social Benefits	● Improve air quality, safety, and community well-being. ● Reduce traffic and congestion. ● Enhance the connectivity of the community.

Ways you Can Contribute

What Residents Can Do	• Consider using public transit whenever possible. • Engage with local government and attend workshops to request improved service routes and schedules. • Use or organize carpooling apps and groups to reduce single-occupancy vehicle trips. • Advocate for initiatives and policies that fund public transportation improvements. • Provide feedback and suggest route improvements and participate in transit surveys. • Share benefits of public transit and ridesharing with neighbours, family, and coworkers. • Take advantage of workplace programs offering subsidized transit passes.
What Businesses Can Do	• Provide transit pass subsidies or other commuter benefits to employees. • Create a company ride-share program to encourage employees to consider carpooling.

[27] Zhang, Y., Farber, S., & Young, M. (2021). Eliminating barriers to nighttime activity participation: the case of on-demand transit in Belleville, Canada. *Transportation*. https://doi.org/10.1007/s11116-021-10215-2

	• Collaborate with local organizations and environmental groups to establish transit-friendly workplace policies. • Collaborate with ride-share platforms or local transit to offer last-mile connections. • Prioritize transit-accessible locations such as choosing office locations with strong public transit connections. • Engage with the local government to push for better transit options near business hubs.

Strategy #7: Support Low Emission Vehicle Adoption

Where reducing demand for private vehicles is not feasible, encouraging adoption of low emission vehicles will be critical to achieving net-zero emissions. Electric vehicles (EVs) are currently the most available and economically viable zero-emission vehicles on the market and therefore will play an important role in reducing transportation emissions in the near to mid-term. While EVs are still out of reach economically for many, they are a rapidly advancing technology that have seen significant cost reductions, range expansions and measures to reduce their environmental footprint over the last 20 years. In Ontario, where electricity generation produces relatively low emissions, EVs reduce emissions significantly in comparison to internal combustion engine (ICE) vehicles and use energy significantly more efficiently. In addition, EVs vastly improve local air quality. In terms of operating costs, EVs are much more affordable than ICE vehicles and have lower maintenance costs. While EVs have much higher upfront costs than ICE vehicles, on a total cost of ownership basis that compares EVs with ICE vehicles over the total lifetime of the vehicle, EVs consistently outperform ICE vehicles. In a recent total cost of ownership analysis for Canada it was found that 38 of 40 analyzed EV models cost less to own over 5 years than their gasoline counterparts[28]. EV upfront costs are also projected to continue to fall[29]. This combined with government grants such as the Federal iZEV program will help to improve the business case for EV adoption into the future.

[28]Vincentric. (2023). *2023 Canadian Electric Vehicle Cost of Ownership Analysis*. https://vincentric.com/Portals/0/Market%20Analyses/2023%20Canada%20EV%20Analysis/2023%20Vincentric%20Canada%20EV%20Cost%20of%20Ownership%20Analysis.pdf?ver=2023-12-12-182708-547

[29] Goldman Sachs. (2024). *Electric vehicle battery prices are expected to fall almost 50% by 2026*. https://www.goldmansachs.com/insights/articles/electric-vehicle-battery-prices-are-expected-to-fall-almost-50-percent-by-2025

Strategy #7: Support Low Emission Vehicle Adoption	
Description of Strategy, Policy, Program	Develop strategies to encourage the uptake and adoption of electric or low emission vehicles.
Supporting Strategies / Enabling Components	• Work with local environmental organizations and community groups such as the Northumberland EV Society to develop an EV education and awareness campaign, including a municipal webpage with information about EVs, e-bikes, and e-scooters to increase awareness of their benefits and functionality, dispel common myths, share available grants, and organize test drives. • Assess opportunities to create dedicated parking areas for electric vehicles. • Continue to install public EV chargers in Ward 1 and 2 at public facilities, parking lots and tourism destinations. Monitor and pursue available EV infrastructure funding opportunities and support third-party owned installations to expand EV charger access across Port Hope. • Develop a plan for implementing electric vehicle charging facilities to address near and longer-term plans for electrification of transportation. • Explore, build, and expand a public electric vehicle charging network. • Increase charging stations in commercial or municipal parking lots and on-street parking. • Integrate charging infrastructure into the municipality's building standards. • Support and incentivize charging infrastructure retrofits in existing buildings. • Ensure equitable access to charging infrastructure across the municipality.
Environmental, Economic, Social Benefits	• Reduce fuel consumption and provide fuel savings. • Improve air quality.

Ways you Can Contribute

What Residents Can Do	• Consider purchasing or leasing an EV or plug-in hybrid for personal transportation. • Consider e-bikes and e-scooters for short trips to reduce reliance on gas-powered vehicles. • Learn about, research, and apply for government grants, rebates, or incentives for EVs and home chargers. • Engage with organizations like the Northumberland EV Society to learn more about EVs and share experiences.

	• Advocate and request more EV chargers in your neighborhood, workplace, and public spaces. • Consider sharing rides with EV users whenever possible. • Share knowledge about EV benefits, help promote awareness and encourage others to consider switching. • Consider shopping or dining at businesses that offer EV charging parking spots.
What Businesses Can Do	• Designate EV parking spots and provide EV charging stations in parking lots to support customers and employees with EVs. • Offer workplace EV incentives, such as EV charging at work. • Consider purchasing low-emission vehicles when replacing fleet vehicles. • Educate employees about EV benefits through signage, events, and workshops. • Collaborate with local EV organizations and government programs to help accelerate EV adoption and expand EV infrastructure. • Integrate solar or other renewable sources to power EV chargers, such as solar-powered EV charging stalls. • Support and advocate for government support and incentives for EV infrastructure and adoption.

Strategy #8: Implement Transportation Demand Management

Transportation demand management means reducing the number of single-passenger vehicle trips in order to reduce fuel consumption, energy costs and GHG emissions. Carpooling, carsharing and ridesharing programs and services that help achieve this goal as well as reduce dependence on private vehicles. Aside from reducing energy consumption and emissions, carpooling has many benefits including cost savings, reduced vehicle wear and tear, reduced traffic congestion, reduced parking demand, and reduced stress associated with driving and commuting. It also promotes more social interaction.

Carsharing services are membership-based services that provide short-term car rentals which are priced based on usage. Carsharing services are primarily offered in urban areas and are most suitable for shorter trips and for those that do not need a car every day. Estimates have shown that each shared vehicle can reduce vehicle kilometres travelled

(VKTs) by 29,000 annually[30]. Rideshares are services that match passengers with vehicles for hire. A ridesharing company is currently in the process of bringing service to Port Hope.

Strategy #8: Implement Transportation Demand Management	
Description of Strategy, Policy, Program	Promote existing and establish new carpooling and carsharing programs to reduce single-passenger vehicle trips and dependence on private vehicles.
Supporting Strategies / Enabling Components	● Continue support for the establishment of a carsharing service in Port Hope. ● Encourage community participation in carpooling programs and encourage employers to establish carpooling programs by educating and sharing resources on its benefits.
Environmental, Economic, Social Benefits	● Fuel and vehicle maintenance cost savings. ● Improved air quality ● Reduces traffic congestion

Ways you Can Contribute

What Residents Can Do	• Join carpooling groups and to connect with others for commuting. • Participate in existing or new carsharing programs for errands or commuting. • Engage with family members, friends, neighbours on carpooling options. • Support and advocate for local policies that encourage carpooling.
What Businesses Can Do	• Establish employee carpooling programs and create internal networks for employees to coordinate shared rides. • Offer incentives such as priority parking, discounts for employees or customers who carpool. • Participate in sessions for employees to find carpool partners. • Educate employees and share information on the financial and environmental benefits of carpooling.

[30] Amatuni, L., Ottelin, J., Steubing, B., & Mogollón, J. M. (2020). Does car sharing reduce greenhouse gas emissions? Assessing the modal shift and lifetime shift rebound effects from a life cycle perspective. *Journal of Cleaner Production, 266*, Article 121869. https://hdl.handle.net/1887/3134558

Community Design and Land-Use Planning

Objective:
To prioritize higher density, compact, mixed-use development, infill development and brownfield redevelopment to prevent urban sprawl, protect prime agricultural land, and create more accessible, walkable and healthier communities

Community design and land-use planning refers to the underlying built form and design elements that influence how we live, work and play in our communities. Many of the environmental problems stemming from urban sprawl and vehicle fuel consumption are a result of historical land-use planning in urban areas that have resulted in car-dependent community design that limits options for transportation. Land-use planning and urban built form decisions made today will therefore also have long lasting impacts on quality of life, resilience, equity and GHG emissions going forward.

Strategy #9: Develop Higher Density, Mixed-Use Development and Complete Communities

Creating more high-density, compact, and mixed-use developments enables residents to live, work and play without travelling long distances, reduces energy use and helps contain urban development from encroaching on high value agricultural land and natural areas. The community design and land-use planning strategies play will also play a role in enabling the other strategies in this Plan.

Complete communities mean that through integrated land use planning, transportation planning, and community design, all the residents in a community can live, work, shop and access services in close proximity[31, 32]. In order to achieve this, a mix of housing types, land uses, employment opportunities and an urban form that supports walking, cycling and transit are needed. Developing higher density, mixed-use development and complete communities promote efficient land use, minimize urban sprawl, and protect agricultural lands by concentrating development within a particular area.

[31] Government of Ontario. (2019). *Create vibrant and complete communities.* https://www.ontario.ca/document/performance-indicators-growth-plan-greater-golden-horseshoe-2006/create-vibrant-and

[32] Pivo, G. (2005). *Creating Compact and Complete Communities: Seven Propositions for Success.* https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=de48d6fb844c9e0b4e1fbf2c7a510893e270b678

Strategy #9: Higher Density, Mixed-Use Development and Complete Communities	
Description of Strategy, Policy, Program	Continue to implement and strengthen the community design objectives in the Official Plan to create complete communities that support people at all stage of life to conveniently access necessities, provides a diversity of housing, and includes a wider mix of employment choices, amenities and services.
Supporting Strategies / Enabling Components	● Concentrate density in areas with the widest mix of uses and that can support additional growth. ● Ensure a mix of housing and employment options are available. ● Implement complete street design to ensure roadways are accessible and safe for all road users. ● Incentivize infill and brownfield development and identify potential development areas for them. ● Review and update zoning bylaws to encourage more compact, high-density, mixed-use development that supports smart growth principles. ● Increase focus on mixed-use and infill development in the Community Improvement Plan. ● Ensure development provides equitable access to green spaces and community spaces.
Environmental, Economic, Social Benefits	● Shorter travel times. ● Energy cost savings. ● Lower infrastructure costs. ● Easier access to necessities, amenities and services. ● More active transportation options that improve physical and mental health. ● Promote accessibility of the community.

Ways you Can Contribute

What Residents Can Do	• Advocate for smart growth by attending public meetings, providing input on zoning bylaw updates, and supporting policies that promote compact, mixed-use development. • Consider shopping at neighborhood businesses to help sustain a diverse mix of services and employment opportunities. • Consider active transportation or public transit whenever possible to support complete community designs. • Participate in local advisory groups or planning committees to ensure diverse community needs are represented. • Engage in urban greening, such as planting trees, maintaining community gardens, and supporting green infrastructure projects in the neighborhoods. • Actively use community spaces such as parks, libraries, and community centers to reinforce their importance in future planning.

	• Support redevelopment of underused spaces and advocate for sustainable, well-designed infill projects. • Support and advocate for sustainable infrastructure such as renewable energy in community planning. • Support and advocate for initiatives that help promote a more accessible and equitable community.
What Businesses Can Do	• Develop mixed-use spaces, and integrate commercial, residential, and community spaces in development projects to enhance accessibility. • Enhance community walkability by improving accessibility, installing bike racks, and creating pedestrian-friendly entrances. • Participate in Community Improvement Plans and engage in local economic development programs that support infill development. • Collaborate with the municipality and community organizations to support green spaces, markets, and event areas. • Collaborate with municipal planners to support and improve zoning practices that allow for mixed-use and higher-density development. • Partner with local retailers and markets to increase access to fresh, locally grown food. • Advocate and support zoning policies that prevent urban sprawl from encroaching on farmland. • Collaborate with local government and advocate for sustainable land-use policies for rural areas. • Use local distribution networks to cut down on food miles and emissions and support local food systems.

Agriculture and Local Food Systems

Objective:
To develop strategies that protect farmland from urban sprawl, support the advancement of sustainable agriculture practices and promote community awareness and education on local farming and food growing initiatives.

Port Hope is fortunate to be surrounded by natural landscapes and includes extensive farmland, all of which warrants ongoing protection and attention. The agricultural sector plays an important role in the larger community, its cultural identity, and in its economy, and the strategies outlined below present options for working together to ensure prosperity across Ward 2 and Ward 1.

Strategy #10: Protect Farmland from Urban Development

Throughout the community engagements concern has been expressed about losing class 1 farmland to sprawling urban development. Once this fertile land is converted to commercial, residential or industrial uses, local community members fear it will be "lost" forever. Agricultural land acts as a significant carbon sink, capturing and storing carbon dioxide in soil and vegetation. By protecting these lands from urban sprawl, we reduce emissions associated with development while maintaining the land's capacity to absorb carbon. Protecting Port Hope's farmland also sustains its capacity to produce fresh, local food, reducing the community's reliance on long supply chains that are vulnerable to global disruptions. This resilience is vital not only for regional food security but also for the environmental benefits of reducing transportation emissions associated with food imports. Additionally, safeguarding farmland in Port Hope helps preserve our cultural heritage and supports local economic prosperity. Farmland is deeply connected to this region's identity, traditions, and is part of our community fabric. Supporting local farmers strengthens the regional economy by generating jobs, retaining wealth locally, and creating opportunities for agritourism. By preventing urban sprawl, Port Hope can maintain its unique rural charm and ensure a balanced approach to growth that benefits current and future generations.

Strategy #10: Protect Farmland from Urban Development	
Description of Strategy, Policy, Program	Implement policies and practices to safeguard agricultural land from urban sprawl, ensuring long-term food security, climate resilience, and sustainable land use.
Supporting Strategies / Enabling Components	● Incorporate farmland preservation into municipal and regional land-use planning frameworks. ● When considering new developments implement collaborative planning frameworks such as watershed planning that incorporate the wide variety of community priorities and provide comprehensive frameworks and roadmaps for healthy and resilient watersheds. ● Conduct Agricultural Impact Assessments to assess the impact of converting agricultural land to other uses. ● Partner with farmers and agricultural organizations to identify priority areas for protection and develop policies that align with their needs. ● Establish clear urban growth boundaries to prevent urban sprawl and concentrate development in designated urban areas. ● Implement and enforce strict zoning laws to designate agricultural land as protected and limit non-agricultural uses. ● Consider providing financial incentives such as tax breaks or subsidies for farmers and landowners who commit to keeping their land in agriculture. ● Encourage higher-density development in urban areas to reduce the pressure on agricultural land for housing and commercial needs.

	• Run public awareness campaigns about the importance of preserving agricultural lands for food security, biodiversity, and climate resilience.
Environmental, Economic, Social Benefits	• Cultural preservation of farming traditions and heritage. • Preservation of ecosystems, improved water quality. • Flood and drought mitigation. • Carbon sequestration from enhanced soil carbon storage.

Ways you Can Contribute

What Residents Can Do	• Advocate for farmland protection by engaging in local government meetings and supporting policies that prioritize agricultural land preservation. • Join or create farmland advocacy groups to help mobilize community support for farmland conservation efforts. • Support local farmers by buying from farmers' markets. • Participate in public awareness campaigns to educate family, friends, and neighbours on the importance of farmland preservation for food security and climate resilience. • Support and advocate for policies that prioritize sustainable land use and agricultural land protection. • Practice urban gardening or community gardening to reduce demand for urban sprawl by utilizing existing urban spaces for food production. • Reduce housing footprint by supporting and choosing higher-density housing options that minimize the need for land conversion. • Encourage smart urban design by supporting mixed-use developments that concentrate growth in existing urban centers. • Engage with schools and community programs to promote education on local food systems and the benefits of preserving farmland.
What Businesses Can Do	• Source local agricultural products for restaurants, grocery stores, and other food-related businesses to support farmland viability. • Join or create farmland advocacy groups to help mobilize community support for farmland conservation efforts. • Advocate for smart land-use policies by participating in municipal discussions on sustainable development. • Invest in vertical farming or rooftop gardens in urban areas to help reduce the need for agricultural land conversion. • Partner with farmers to create procurement models that support long-term agricultural sustainability.

	• Implement green building and higher-density development practices that reduce urban sprawl and protect agricultural land. • Engage with schools and community programs to promote education on local food systems, the benefits of preserving farmland, and build awareness of farming's role in food security and environmental sustainability.

Strategy #11: Promote Learning & Awareness about Sustainable Farming

There is room for community members across Port Hope to support and connect with local farmers and to learn about ongoing and new sustainable practices that farmers are interested in advancing. These practices reduce environmental impacts of farming, can increase rates of soil carbon sequestration and can further boost soil health, water retention, and biodiversity—key components of climate resilience. Leveraging provincial and federal funding, exploring cost-sharing opportunities, generating cost savings by improving on-farm efficiencies, exploring sustainable ways to increase farm productivity, offering agritourism opportunities, and demonstrating climate leadership can all be part of the ongoing conversation.

This strategy aims to equip people with the knowledge to support sustainable food production. It also highlights the environmental benefits of reducing chemical inputs, improving soil health, and increasing biodiversity, all of which are vital for mitigating climate change. Community engagement programs, such as workshops, farm tours, and school partnerships, play a crucial role in building awareness. These initiatives connect people with the origins of their food, showcasing the link between farming practices and environmental outcomes.

Promoting sustainable farming awareness strengthens social and economic bonds within communities. It fosters a sense of stewardship for the land and support for local farmers, driving demand for environmentally responsible agricultural products. By prioritizing education and collaboration, this strategy creates a ripple effect, nurturing a culture of sustainability that benefits the environment, local economies, and future generations.

Strategy #11: Promote Learning & Awareness about Farming	
Description of Strategy, Policy, Program	Promote learning and networking opportunities for enhancing resilient and sustainable agriculture; exploring the potential to expand on what's already being done and adoption of technologies and methods that improve energy efficiency, conserve water and enrich the soil.
Supporting Strategies / Enabling Components	• Establish an Agriculture Working Group that meets regularly or semi-regularly to collaborate, share knowledge and take stock of the local agricultural and food systems. • Explore options to incentivize sustainable farming practices such as by establishing a micro grant like the Wellington County Experimental

	Acres program to encourage farmers to adopt sustainable farming practices. ● Celebrate and recognize farmer's ongoing work in sustainable agriculture. ● Support agricultural best management practices that improve soil health, minimize impacts on local ecological systems, reduce runoff and erosion, and improve adaptive capacity. ● Identify cost sharing opportunities for more efficient farming technologies (e.g., drone sprayer sharing) and streamlined applications that are not too cumbersome to complete ● Consider developing an agriculture strategy to help farmers adapt to changing climate conditions and access new funding opportunities. ● Ensure information on sustainable agriculture and farm income diversification are available to local farmers, including funding opportunities. ● Work with Northumberland County and farming organizations such as the Northumberland Federation of Agriculture and the National Farmers Union Local to promote locally grown food providers, connect local producers to local consumers and promote existing organizations and initiatives that enable the purchase of locally grown food products. ● Develop an Agri-Food Asset Map. ● Explore opportunities with local farmers to host "Open days" or "Farm-to-Table" events, where farms can engage with the general public. ● Encourage municipal councillors to participate in the annual Poli-Ag Tour.
Environmental, Economic, Social Benefits	● Sustainable agricultural practices can result in increased carbon sequestration. ● Can improve resilience to impacts of climate change. ● Reduces negative environmental impacts of agricultural activities such as runoff and wetland degradation.

Ways you Can Contribute

What Residents Can Do	• Attend local farm tours, open days, and farm-to-table events to learn about sustainable agriculture. • Support local farmers by purchasing food from farmers' markets. • Participate in community discussions, workshops, or events about regenerative and sustainable farming practices. • Volunteer with or donate to organizations that support sustainable agriculture and local food systems. • Support and advocate for initiatives and policies that support local and sustainable farming.

	• Grow a home or community garden using sustainable practices like composting, mulching, and rainwater collection. • Engage with friends and family about the importance of soil health, water conservation, and local food security. • Join or create local food and farming networks to collaborate and share knowledge.
What Businesses Can Do	• Source food ingredients from local farms that follow sustainable practices. • Partner with farms to create "farm-to-table" menus or products. • Encourage and provide incentives for employees to buy from local farmers. • For agricultural businesses, implement regenerative agricultural practices, such as cover cropping, no-till farming, and rotational grazing. • Participate in local sustainability and networking events to share knowledge. • Learn about and apply for funding and incentives that support sustainable and energy-efficient practices. • Host farm visits, open days, or educational workshops for residents and businesses to promote awareness on sustainable farming and local food systems. • Support and advocate for policies that support sustainable agriculture.

Strategy #12: Support Local Food Growers

Community food gardens and individual residents' food growing activities play a role in providing community members access to locally grown, healthy produce. In addition to the tangible benefits of providing nutrition to people, these initiatives often serve as living classrooms, offering hands-on education about sustainable growing practices. Community members can learn about composting, organic gardening, and seasonal eating, which empowers them to adopt more environmentally conscious lifestyles. This shared learning builds a deeper understanding of the connections between local food systems, climate resilience, and personal well-being, while also cultivating a sense of pride and agency among participants.

Raising public awareness about existing initiatives, exploring options to expand these projects or developing new ones can all contribute to growing the network of food hubs and gardens that reduce grocery bills, encourage healthy lifestyles and support Port Hope's future wellbeing.

Strategy #12: Support Local Food Growers	
Description of Strategy, Policy, Program	Promote the work of local community gardens, food clubs, resident gardeners and farmers, providing greater awareness on the benefits of growing food locally and opportunities to participate and have access locally produced food.
Supporting Strategies / Enabling Components	• Promote ongoing work and opportunities of existing community gardens, including community building events (e.g., "farm-to-table" events). • Promote and support existing and new community Garden Share programs that connects landholders with gardeners for local food production. • Continue to promote the farmers market and consider bringing a weekly farmers market to the downtown core to make it more accessible for all age groups. • Explore the development of local food hubs that connect local growers directly to residents, schools, and small businesses. • Identify municipal land available for additional community garden plots and talk with community garden groups to determine viability of new projects. • Review bylaws that may prevent urban agricultural including vertical farming. • Support the development of educational material and training programs for community members (including youth) to learn the foundations of how to grow and cook healthy food, working off the former 'Ag Awareness' program. • Identify and promote further development of seed sanctuaries.
Environmental, Economic, Social Benefits	• Improved community awareness of/ access to network of local food growers. • Social benefits from building relationships and strengthening community. • Opportunities for intergenerational knowledge sharing. • Potential GHG emission reductions from reduced trips to the grocery store.

Ways you Can Contribute

What Residents Can Do	• Join or volunteer at a local community garden to learn and contribute to growing local food. • Start a home or balcony garden or participate in community garden programs. • Attend farm-to-table events, workshops, or farmers markets to support local food initiatives.

	• Advocate for municipal policies that support urban agriculture, such as community gardens and vertical farming. • Support local food hubs by purchasing produce from them or spreading awareness about their benefits. • Help establish and improve a seed sanctuary. • Engage in social media campaigns to promote the benefits of locally grown food and food security. • Learn and share food preservation techniques (e.g., canning, fermenting) to extend the use of local food. • Organize or participate in neighborhood food-sharing programs, where residents trade homegrown produce.
What Businesses Can Do	• Source ingredients from local farms, community gardens, or food hubs for restaurants, cafés, and grocery stores. • Sponsor or partner with community gardens and Garden Share programs to support local food production. • Offer incentives and discounts for employees or customers who buy local food products. • Provide space for pop-up farmers markets or food hubs to increase accessibility in urban areas. • Participate in local farmers markets, including downtown markets, to increase visibility and access. • Implement composting programs that support community gardens by donating organic waste. • Fund initiatives or workshops that teach employees on how to grow and cook healthy food. • Integrate local produce into workplace cafeterias or catering services. • Advocate for urban agriculture-friendly policies and bylaws at municipal meetings policies that support small-scale and urban farming. • Partner with schools and community groups to provide farm tours and hands-on learning experiences. • Join or establish a local food hub to distribute produce directly to residents, schools, and businesses. • Collaborate with seed sanctuaries to preserve and distribute heirloom and Indigenous seeds. • Share knowledge on sustainable and regenerative farming practices with new farmers and community members. • Work with municipalities to identify underutilized land for additional food production.

Environmental Stewardship

Objective:
To preserve Port Hope's natural spaces through the protection and improvement of existing ecosystems and by promoting greater community awareness and connection to nature.

Protecting and enhancing Port Hope's natural spaces is a vital climate strategy that balances environmental preservation with community well-being. Natural areas such as the Ganaraska River system, the Wesleyville Natural Heritage Area, and the Oak Ridges Moraine are not only significant natural heritage landmarks, but they also provide essential ecosystem services for Port Hope including the purification of water, erosion and flood control, nutrient cycling, soil formation and storm water management. It is important to actively ensure that all of Port Hope's natural ecosystems remain healthy and intact while increasing community awareness about the value these natural assets.

Strategy #13: Protect Port Hope's Natural Spaces

Protecting Port Hope's natural environment, such as forests, wetlands and water bodies, while expanding the community's tree cover, vegetation and green infrastructure will safeguard the local ecosystems' health and contribute to reducing GHG emissions through carbon sequestration. Climate adaptation values also come into play here: Increased tree canopies provide shade, reduce the cooling needs required of buildings and lead to more nature-based tourism opportunities. By safeguarding these areas from degradation, Port Hope can maintain its biodiversity and bolster its capacity to withstand the impacts of an everchanging climate. Enhancing these spaces through thoughtful reforestation, invasive species management, and native planting further increases their ecological value.

Community engagement in such conservation efforts can foster a sense of stewardship while deepening the public's local ecological knowledge. Enhancing natural areas also strengthens Port Hope's social and economic fabric. Accessible, well-maintained natural spaces improve quality of life, support physical and mental well-being, and attract tourism, boosting the local economy. By prioritizing the protection and enhancement of these invaluable landscapes, Port Hope can ensure a thriving environment that benefits both the community and the planet for generations to come.

Strategy #13: Protect Port Hope's Natural Spaces	
Description of Strategy, Policy, Program	Ensure the protection and improvement of Port Hope's natural spaces, including the preservation of our forested areas, wetlands and shoreline, urban tree canopy and parks.

Supporting Strategies / Enabling Components	● Strengthen policies to protect natural spaces and require more public consultations when natural spaces are proposed for development. ● Increase naturalization and beautification of public spaces and lands favouring native tree and plant species where possible. ● Increase tree planting and restoration of degraded lands, wetlands, streams, and meadows on public lands including Town-owned Parks, conservation areas, public right of ways, and other areas. ● Review bylaws that may prevent naturalization of private properties ● Develop and distribute guidelines for naturalization of private property including native tree, shrubs wildflowers and plant species, pollinator gardens, and best practices for maintenance, pruning and care. ● Update "in Memoriam" tree planting suggestions to include native species only ● Work with local nurseries to provide native tree and plant species, pollinator friendly plants and flowers for purchase. ● Investigate the feasibility of a rebate program for native species planting and invasive species removal ● Adjust land use and planning practices to prioritize natural assets (e.g., existing trees) and the naturalization of park gardens and lawned areas. ● Review and update all current policies and standards for tree protection and maintenance, tree planting, and restoration work ● Update and maintain existing tree protection by-law to prevent loss of the tree canopy and provide guidelines for tree replacement where appropriate. ● Create guidelines for retaining fence line vegetation and natural windbreak on farms and consider creating incentives for their retention. ● Develop an action plan to create a natural asset inventory to include climate vulnerabilities and inform asset management planning. ● Identify and investigate the impacts of invasive species and implement strategies to address these species.
Environmental, Economic, Social Benefits	● Protecting natural spaces helps to preserve biodiversity. ● It can bring health benefits by helping to regulate water and air quality of the surrounding area, while also improving residents' mental health and encouraging outdoor exercise. ● It can increase property values. ● It can create jobs in conservation, landscaping and eco-tourism. ● Well-preserved natural spaces attract visitors and can increase traffic to local businesses. ● Carbon sequestration, flood resilience and relief from extreme heat.

Ways you Can Contribute

What Residents Can Do	• Plant native trees, shrubs, and flowers on their properties to support local biodiversity. • Create and maintain pollinator gardens with native species to attract bees and butterflies. • Avoid using invasive plant species and remove any that may already be in their gardens. • Participate in community tree-planting and habitat restoration events. • Advocate for stronger natural space protections by attending town meetings and providing input on local developments. • Reduce pesticide and herbicide use to prevent harm to local ecosystems. • Compost food and yard waste to enrich soil health and reduce landfill waste. • Volunteer with local environmental groups focused on conservation and restoration.
What Businesses Can Do	• Plant native trees, shrubs, and pollinator-friendly plants • Adopt sustainable stormwater management practices, such as rain gardens and permeable pavement if possible. • Avoid using invasive plant species in landscaping and promote native alternatives to customers. • Implement green roofs or living walls where possible to enhance urban biodiversity. • Work with suppliers to source sustainable materials and reduce waste that could harm local ecosystems. • Retain and enhance on-farm fence line vegetation and windbreaks to protect soil and provide wildlife habitat. • Plant native trees and shrubs around on-farm water bodies to reduce erosion and improve water quality. • Implement regenerative agriculture techniques such as cover cropping and no-till farming to enhance soil health. • Participate in local conservation programs to restore wetlands and natural landscapes. • Explore farming practices to reduce pesticide and synthetic fertilizer use to minimize impacts on surrounding ecosystems. • Integrate on-farm agroforestry practices, such as planting trees within pastures, to improve biodiversity and carbon sequestration. • Work with local conservation authorities to identify and manage invasive species on farmland.

	• Learn about and apply for grants or incentives that support conservation practices.

Strategy #14: Increase Awareness of and Connection to Natural Spaces

Beyond their environmental importance, natural spaces offer educational and recreational opportunities that connect the community with the environment. They serve as living laboratories where residents, schools, and organizations can learn about local ecosystems and sustainable practices. Protecting and enhancing Port Hope's natural spaces aligns seamlessly with the maintenance and improvement of the town's walking and cycling trail network, transforming it into a key conduit for community engagement and environmental stewardship.

Trails that traverse natural areas like forests, wetlands, and shoreline habitats not only provide recreational opportunities but also serve as educational corridors where residents and visitors can connect with the surrounding nature. interpretive signage and educational touchpoints further enhance the trail network's value. Port Hope can offer immersive experiences that foster appreciation for its unique landscapes while supporting active, sustainable lifestyles. For example, signs can provide information about local ecosystems, nearby sustainability efforts, and the historical significance of Port Hope's natural spaces. For trail users, this creates a dynamic learning experience, deepening their understanding of the relationship between natural preservation and community resilience. Signage can also highlight the town's conservation efforts, encouraging stewardship and community involvement in maintaining these shared assets.

Enhancing the trail network supports both the environmental and economic vitality of Port Hope. Accessible, well-marked trails attract eco-tourists and recreational users, boosting local businesses and promoting the town as a destination for sustainable tourism. Regular maintenance and thoughtful improvements ensure the safety and enjoyment of trail users while preserving the integrity of the surrounding natural spaces. By prioritizing this integration of natural preservation with trail infrastructure, Port Hope strengthens its identity as a forward-thinking, environmentally conscious community.

Strategy #14: Increase Awareness of and Connection to Natural Spaces	
Description of Strategy, Policy, Program	Ensure that the walking/cycling trail network through Port Hope's public parks, forested areas, wetlands and along the lakeshore are promoted, well maintained and improved.
Supporting Strategies / Enabling Components	• Assess existing trail signage to identify any signs that need to be updated and where new signage could be beneficial. • Explore options for leveraging signage content to improve community awareness and learning about local ecosystems (e.g., native plants and animals), wildlife corridors, watersheds and

	bioregions, on top of providing easy to follow directions, considering the integration of digital tools for knowledge transfer. ● Maintain existing trail network and assess where the network can be expanded or improved. ● Work with local hiking and naturalist organizations to promote existing and develop new local natural heritage programming such as guided naturalist tours, public art natural history pop-ups and along walking trails to encourage use, and 'Sound Walks'.
Environmental, Economic, Social Benefits	● Advocacy for protecting natural spaces and preserving biodiversity. ● Promotion of trail use can increase active transportation and associated physical and mental health benefits. ● Improved trail systems can give residents a stronger sense of local pride and enjoyment. ● It can create jobs in conservation and eco-tourism. ● Well-preserved natural spaces can attract visitors and increase traffic to local businesses.

Ways you Can Contribute

What Residents Can Do	• Walk, cycle, or jog on the trails to show demand and encourage their upkeep. • Participate in local trail cleanup and maintenance efforts. • Provide feedback and report damaged signs, unsafe conditions, or areas in need of improvement to local authorities. • Support initiatives to advocate for better trail connectivity. • Encourage friends, family, and other community members to explore the trails and promote trail use. • Support local nature groups that maintain and enhance parks and trails. • Consider using trails for commuting, wellness, and recreation instead of driving where possible.
What Businesses Can Do	• Encourage employee wellness and offer incentives for employees to use trails for commuting or breaks. • Help promote or organize community walks, nature talks, or cleanup days. • Develop farm stays or educational experiences linked to the trail network and use trails for eco-tourism. • Advocate for wildlife corridors and collaborate with conservation groups to ensure trails enhance habitat connectivity. • Partner with the municipality and local community groups to improve or expand trails near agricultural land.

Waste & Water

Objective:
Reduce waste generation and increase waste diversion from the land landfill, increase the efficiency of water usage, and establish innovative ways to create a local circular economy.

Reducing waste and conserving water are high priorities for Port Hope residents. Organics in waste sent to landfill decompose and produces methane, a highly potent GHG.

Strategy #15: Support the Development of Circular Economy

Circular economy approaches view waste as a resource and seeks to reintegrate it into the economy through reuse, repair or recycling. Supporting locally owned businesses and local food is an important part of this strategy. It helps create a more vibrant and connected community and is an integral part of minimizing our environmental impact by:

- Reducing transportation energy use and costs;
- Reducing packaging waste;
- Providing access to fresh, healthier local food and supporting local farmers; and
- Supporting use of products made from local ingredients

Supporting local businesses also keeps money circulating in the local economy and creates more local job opportunities.

Strategy #15: Support the Development of Circular Economy	
Description of Strategy, Policy, Program	Adopt a circular economy approach to waste reduction that encourages responsible consumption, reuse, recycling and recovery, and strengthen the local sharing economy.
Supporting Strategies / Enabling Components	● Work with community groups and local environmental organizations to set up events and/or online platforms for swap, share and repair events, such as a bike share program, community clothing swap, or a community hub with tools and expertise to fix items and workshops to share knowledge. ● Promote and support existing circular economy initiatives in Port Hope including the repair café, sewing station and library of things. ● Explore options to develop additional reduce, repair, and reuse programs such as reuse it stores for household items and construction waste that invest proceeds back into the community. ● Identify potential locations, partners, operating and governance models for these programs. ● Work with the small business community to find new ways to reuse resources such as through upcycling textiles or other materials,

	composting, and supporting redistribution of surplus foods at grocery stores and restaurants. ● Celebrate and support small businesses that address waste issues through a grant or awards program. ● Support programs that transition away from single-use plastics. ● Provide education and share resources on circular economy and how to reduce and reduce waste in our daily routines including support to phase-out single use plastics.
Environmental, Economic, Social Benefits	● Enhance community connections. ● Increase job opportunities and support economic development.

Ways you Can Contribute

What Residents Can Do	• Participate in sharing programs and use community resources such as the tool-sharing hubs • Repair instead of replacing. Attend repair cafés, sewing stations, or learn DIY repair skills. • Choose reusable over disposable and use refillable water bottles, coffee cups, and shopping bags. • Support sustainable businesses and buy from local businesses that prioritize circular economy principles. • Consider buying second-hand and use reuse-it stores, thrift shops, and online marketplaces instead of discarding items. • Participate in neighborhood clothing, book, or toy swaps to keep items in circulation. • Support municipal initiatives that promote waste reduction and sustainability. • Share knowledge and experiences about waste reduction with family and friends.
What Businesses Can Do	• Establish networks to exchange surplus materials. • Prioritize selling products that support circular economy. • Educate employees and provide training on waste reduction, circular economy, and sustainability. • Engage in sustainable efforts and participate in circular economy programs for businesses. • Share or repurpose farm equipment and participate in community equipment-sharing programs. • Repurpose excess crops or byproducts as livestock feed. • Partner with local businesses and supply surplus produce to restaurants and food recovery programs.

Strategy #16: Increase Waste Diversion

Waste reduction and diversion initiatives reduce waste send to landfill, helping to prolong the life of the landfill and avoiding GHG emissions. Curbside pickup including waste, compost, recycling, and yard and leaf waste is currently provided in the urban area of Port Hope by Northumberland County. Rural residents must drop off their waste and recycling at the Hope Transfer Station

Strategy #16: Increase Waste Diversion	
Description of Strategy, Policy, Program	Develop strategies to increase waste diversion in the community and reduce the waste that goes to the landfill.
Supporting Strategies / Enabling Components	• Provide resources to educate residents and businesses on the benefits of waste diversion and more clear guidance on how to properly sort recycling. • Work with Northumberland County to regularly review and optimize current waste collection and assess feasibility of collecting additional waste streams. • Assess feasibility of providing compost drop-off at the Hope Transfer Station. • Initiate Terracycle free recycling box centers for harder to recycle items such as batteries. • Support backyard composting and provide education and workshops on how to properly compost. Consider making backyard composters available to residents for purchase from the municipality. • Create a municipal partnership with schools to develop waste initiatives, such as a Youth Ambassador program.
Environmental, Economic, Social Benefits	• Increase the resource efficiency. • Reduce greenhouse gas emissions.

Ways you Can Contribute

What Residents Can Do	• Learn about proper waste sorting measures for recycling, composting, and waste disposal. • Reduce single-use items and consider using reusable bags, containers, and bottles to minimize waste. • Compost at home and start backyard composting to divert organic waste from the landfill. • Participate in and attend community workshops on proper waste sorting and composting techniques. • Support and advocate for community waste initiatives • Use TerraCycle and special recycling programs for hard-to-recycle materials at designated collection points. • Educate children and family members about sustainable waste practices.

What Businesses Can Do	• Implement waste sorting stations and ensure proper bins for compost, recycling, and waste are available and clearly labeled. • Reduce packaging waste and use compostable, recyclable, or minimal packaging materials. • Offer incentives for reusable containers such as providing discounts for customers who bring their own cups or containers. • Collaborate with TerraCycle or similar initiatives for hard-to-recycle items. • Provide employees training on waste reduction, proper sorting, and ways to reduce workplace waste. • Implement a composting system for food scraps and organic waste. • Set waste reduction goals and track and report progress on waste diversion efforts. • Collaborate with schools and community initiatives such as support local youth programs promoting waste reduction. • Partner with food banks and local restaurants and donate surplus or imperfect produce to reduce food waste.

Strategy #17: Implement Water-Efficient Strategies

Conserving water means less wastewater which helps maintain water quality in rivers, lakes and other aquatic ecosystems. It also reduces the amount of water that needs to be treated by wastewater systems which saves energy. It is important to remember that water is a finite resource that needs to be conserved to ensure availability for future generations. Preventing excessive consumption lessens strain on local water sources and ecosystems by reducing the need to extract, treat and distribute it. Water conservation also involves strategies to reduce runoff pollution by helping to capture runoff using landscaping solutions and being aware of pollutants that find their way into storm drains.

Strategy #17: Implement Water-Efficient Strategies	
Description of Strategy, Policy, Program	Educate on and support initiatives to increase water conservation.
Supporting Strategies / Enabling Components	• Work with the GRCA to establish another rain barrel sale program. • Support adoption of rain gardens. Work with the GRCA to create guidance and best practices for properly constructing rain gardens. • Support water conservation through public education and awareness. • Support new buildings to install greywater systems and rain/stormwater water reuse systems.

	• Provide incentives and remove barriers to implement green infrastructure such as using rain barrels, planting native vegetation, and shifting away from traditional lawns. • Encourage or mandate developers to incorporate bioretention methods to reduce stormwater runoff.
Environmental, Economic, Social Benefits	• Increase the resource efficiency. • Reduce energy use and GHG emissions. • Lower utility costs and provide cost savings. • Encourage sustainable behaviours.

Ways you Can Contribute

What Residents Can Do	• Consider installing rain barrels and collect and use rainwater for gardening and outdoor cleaning. • Consider creating a rain garden. • Regularly check and repair leaking faucets, toilets at home. • Adopt water-efficient practices at home. • Use water-efficient appliances such as low-flow toilets and showerheads. • Adopt water-efficient irrigation measures such as drip irrigation instead of sprinklers to minimize evaporation. • Share information about water conservation programs and encourage participation. • Advocate and support local initiatives that promote water conservation, such as workshops and incentives.
What Businesses Can Do	• Recycle wastewater for landscaping, cleaning, and other non-potable uses. • Install water-efficient equipment such as automatic faucets, low-flow toilets, and waterless urinals. • Educate employees and provide training on water-saving habits and encourage participation in conservation programs. • Participate in green infrastructure projects and invest in permeable pavements, green roofs, and bioretention areas on property areas if possible. • Use efficient watering systems such as drip irrigation to minimize water consumption. • Collect and store rainwater to supplement irrigation. • Engage in community and government initiatives that provide incentives for sustainable water use.

7. Implementation Plan

Introduction

The implementation plan outlines key components and structures needed to enable successful implementation, including governance, financing, progress monitoring, potential partners and action prioritization. To ensure that the actions in this Plan are implemented effectively over the long-term, significant effort and collaboration are needed from all community members including businesses, institutions, residents and the Municipality of Port Hope. We all have a part to play in ensuring the successful implementation of the actions in this plan and to help ensure the well-being of current and future generations. This section of the plan outlines the proposed governance model, monitoring and review recommendations, funding and financing options and communications and engagement strategies. A summary of the 17 core strategies of the CCAP along with key implementation considerations are outlined in Table 5.

Governance

Local governments are essential actors in climate action as they have influence over as much as half of the emissions that occur within the municipality[33]. As such, the Municipality of Port Hope will play an important role in enabling and facilitating the community-led actions in this plan to reduce GHG emissions, create opportunities for sustainable economic growth, and protect and enhance the natural environment. Some of the roles the Municipality of Port Hope will play in the implementation of this plan include:

- Creating and facilitating spaces for community connection, knowledge sharing and collaboration
- Developing and implementing policies that encourage and enable others to act sustainably.
- Providing or sourcing funding to implement various actions and strategies, as well as dedicated staff resourcing.
- Advocating higher levels of government to implement climate-supportive policies.
- Leading by example, reducing emissions and energy use within their buildings, vehicles, and operations.
- Monitoring and sharing progress with the wider community.

Experiences from implementation of climate action plans in other municipalities indicates that partnerships and collaboration across the entire community is needed to be successful. The following proposed governance structure draws on the following implementation best practices from other municipalities:

[33] Linton, S., Clarke, A., & Tozer, L. (2020). Strategies and Governance for Implementing Deep Decarbonization Plans at the Local Level. *Sustainability, 13*(1), 154. https://doi.org/10.3390/su13010154

- Ensure there is a dedicated staff resource within the municipality focused on climate action, which works with other departments to coordinate and implement actions.
    - This may include the use of a climate lens in all municipal departments.
- Cross-sector collaboration, where the municipality engages multiple partners from across the community to lead and support implementation.
- Open communications, both across the organization and with the wider community.
- Ongoing monitoring, evaluation, and reporting.

Proposed Governance Model

To ensure effective implementation of the plan according to identified metrics and schedules, a thorough governance and oversight structure should be established. The proposed governance model for implementing the CCAP is a 'Community-led and municipally supported model'. This model seeks to enable community members in Port Hope to take action on climate change with the support and guidance of the Municipality. The proposed governance model and lines of communication are outlined in the organizational diagram below (Figure 16). Solid lines indicate direct relationships, while dotted lines represent communication pathways. Details on roles and responsibilities of each actor, in the governance model are outlined in Table 3 below.

In this model local community groups, leaders, businesses, institutions and industry will lead implementation of the actions, while the Environmental Advisory Committee (EAC) along with the Municipal staff lead will have broader oversight of the implementation of the actions, as well as progress reporting, and be responsible for communication with council, other municipal staff and the wider community. Actions where the Municipality will need to take on more of a leadership role will be where updates to bylaws and policies are needed to support community implementation, as well as in the development of educational campaigns and supporting resources.

Throughout the stakeholder engagement process many community leaders were engaged including individuals, businesses, community groups and industry. In order to successfully implement this plan sustained engagement with these leaders will be required. There are already many ongoing initiatives in Port Hope that support circular economy, local food, energy efficiency, nature-based solutions, sustainable agriculture and more. A key finding from the community engagements was that many residents are not aware of some of the great initiatives already taking place in the community. Creating awareness of these initiatives and sharing knowledge between them will be crucial to gathering and maintaining momentum. To this end it is recommended that the community groups and leaders engaged throughout this plan be formally invited to establish a Community Climate Action Implementation Working Group (CCAIWG). Community groups and leaders can be asked to sign up to lead implementation of specific actions in this plan. It is recommended that the Working Group be broken out into smaller sub-groups to focus efforts on specific topics or target areas but should always report back on progress at larger group meetings. Proposed sub-groups are provided in the diagram below (Figure 14). The Working Group should meet regularly or semi-regularly, as seen fit, to share updates on ongoing projects and initiatives in Port Hope, identify opportunities for collaboration, and identify needs for additional support and resources.

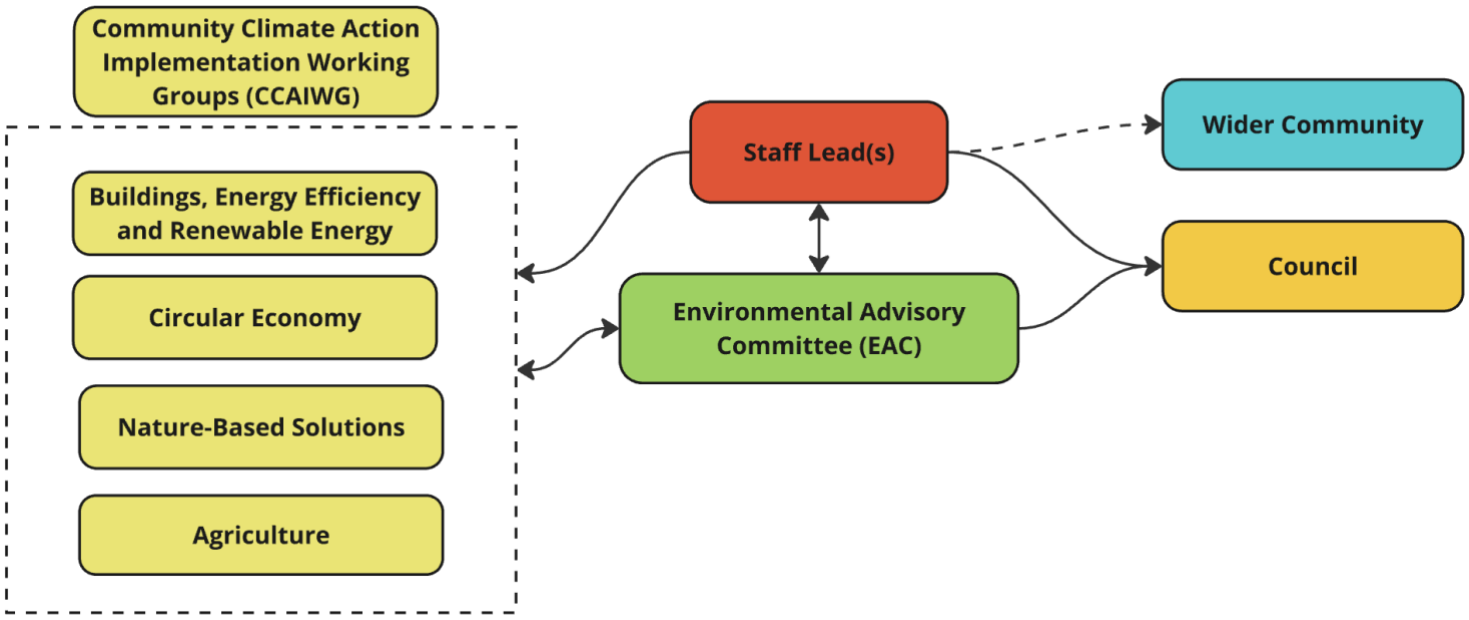

Figure 16: Proposed Implementation Governance Model

Table 3: Governance Model Roles and Responsibilities

Implementation Body	Description	Implementation Role	Reporting & Communications
Municipality of Port Hope Staff Lead(s)	Existing staff position that supports implementation of the CCAP. Other support staff may be brought on in the future.	• Along with the EAC, responsible for the overall direction and coordination of implementation to ensure alignment with reduction targets. • Coordinates and provides support to the CCAIWG including developing terms of reference. • Liaises between EAC and CCAIWGs to ensure coordination and alignment of efforts. • Seeks out financing opportunities – both grants and private funding – to support plan implementation via the Action Tables. • Leads plan renewal process, including regular monitoring and evaluation. • Coordinates the alignment of new policies and programs with the goals of this Plan.	• Provides regular updates to Council • Works with the Municipal Communications team to promote the Plan, celebrate success and collect input from the public on programs. • Facilitates regular communication with and between the EAC and CCAIWGs ensuring progress is being made, and efforts of respective groups are in alignment.
Environmental Advisory Committee	Municipal advisory committee consisting of volunteer community members	• Along with the Staff Lead(s) responsible for the overall direction and coordination of implementation to ensure alignment with reduction targets. • Provide general oversight, support and	• Maintains communication with CCAIWGs • Provide advice and recommendations to council

Implementation Body	Description	Implementation Role	Reporting & Communications
		direction for the implementation of the actions in the Plan and the CCAIWGs • Work with the CCAIWGs to prioritize actions • Monitors progress of climate action implementation	
Community Climate Action Working Groups • **Buildings, Energy Efficiency and Renewable Energy** • **Circular Economy** • **Nature-based Solutions** • **Agriculture** • **Transportation**	A series of five working groups to be formed consisting of both internal (staff) and external (stakeholder) members. Groups will establish their meeting schedule and approach – to be coordinated by Staff Lead(s). The formation of Working Groups may need to be phased, depending on community member interest and available resources	• Leads the implementation of community actions • Sets priorities for action; assesses funding needs and potential funding sources. • Reports on progress of community actions implementation • Adapts the focus of actions over time to meet current needs, challenges and opportunities.	• Liaises with stakeholders and community members about plan implementation and actions. • Reports on progress at regular meetings. • Coordinated by Staff Lead(s). Groups should appoint a Chair. • To encourage alignment between groups, Chair(s) may participate in multiple working groups • Departmental staff could sit on working groups to ensure alignment.
Municipal Council	Consists of Port Hope Council members	• Provide oversight and approvals for municipally led actions. • Approves funding for municipally led actions, as appropriate.	• Receives updates from Staff Lead(s) on implementation. • Receives and considers advice and recommendations from EAC.
Wider Community	Consists of Port Hope residents, institutions, and businesses.	• Fully participate in all actions and reduction strategies to the extent possible.	• Staff Lead(s) to provide annual updates to the wider community on implementation

Implementation Body	Description	Implementation Role	Reporting & Communications
		• Hold the Municipality accountable to commitments within the Plan. • Provide feedback to the Municipality during engagement activities, as appropriate.	status, including ways they can remain involved. • Ongoing engagement and communications.

Monitoring and Review

In addition to the regular or semi-regular working group meetings, the EAC should meet regularly to discuss and report on implementation activities including development of annual workplans and reporting on year-end progress, which should include quantification of GHG and energy savings as a result of implementing individual projects where feasible, and any other important developments related to the improvement of the community. Suggested indicators and metrics to help monitor progress on each action are provided in the Implementation Matrix below.

In addition to assessing the degree to which actions in the CCAP have been implemented on an ongoing basis, it is suggested that this plan be formally reviewed every five years. The review should assess progress towards the vision, targets, and objectives of the plan, and involve an update to the actions and the baseline inventory according to evolving development and priorities. Updating the baseline inventory will allow Port Hope to compare and assess its performance relative to the original baseline and measure progress towards GHG reduction targets—ultimately, allowing us to see whether our strategies are working or not. Updating the inventory also provides an opportunity to assess and incorporate improvements in data availability and methodologies that have occurred over the years. While community baseline inventories are most commonly updated on a two-or three-year basis, corporate inventories can be updated on an annual basis due to easier access to data. Establishing internal processes to update the corporate inventory on an annual basis also helps to further interdepartmental cohesion on climate action.

Having already achieved the first three PCP Milestones through the development of this CCAP, it is recommended that Port Hope continue through the Milestone Framework to Milestone 4: Implement the Local Action and Plan, and Milestone 5: Monitor Progress and Reporting Results as they undertake their monitoring and review activities. This will provide

access to further guidance, resources, and third-party review. Monitoring and reviewing are essential components of the plan as they put in place processes to assess if the actions in the plan are producing the desired outcomes. It also ensures the longevity of the plan through assessment of best practices and continuous learning from challenges and barriers encountered along the way to provide direction for future GHG mitigation actions.

Monitoring and reviewing create a basis for ongoing community support for the plan by highlighting achievements and allowing Port Hope to build upon the networks created during the plan development process. Establishing a monitoring framework also allows Port Hope to assess the impact of changing government legislation, regulations, and technological advances on the plan and help determine if adjustments are needed over the planning horizon.

Funding and Financing

Securing funding and financing for the actions in this Plan are key to successful implementation. The actions outlined in the CCAP range widely in cost and some will require financial investment from the community. However, the actions in this Plan provide significant societal and economic benefits, including improved public health, new economic opportunities and energy savings that can provide returns on investment. The CCAP also represents an investment in the prosperity and well-being of current and future generations.

Fully realizing The CCAP GHG targets and vision will not be achievable without additional funding and resources as well as more funding opportunities and policy support from the Provincial and Federal government bodies. However, several actions in this Plan are already in progress and require little to no external funding. Where additional funding and resources are needed, there are a range of avenues available. The Municipality can administer financial support and incentives to local homeowners and businesses through mechanisms such as Community Improvement Plans (CIPs), Local Improvement Charges (LICs) or micro-grants. The Staff Lead, EAC and CCAIWGs will also need to stay abreast of the ever-changing landscape of available funding programs such as those offered through the Federation of Canadian Municipalities (FCM) Green Municipal Fund. Municipal leaders can also work to attract private capital and investment in Port Hope. Furthermore, as the implementation of the actions in this plan position Port Hope as a sustainable place to live and work, further private capital may also be attracted.

Securing long-term financing for local climate action is a long-standing key challenge for communities across Canada, and there is a need to establish sustainable financing models that do not rely on external grants. Initiatives such as green revolving funds have been implemented in other municipalities in Ontario such as Caledon, and time-limited seed funding to support plan implementation and develop self-sustaining finance models have been used in Brampton, Oakville and Guelph.

ICLEI Local Governments for Sustainability and FCM have identified six financial tools (below) that can help move local climate action forward identified some typical financial tools to help move local climate action forward (Table 4). Some of these include stable, scalable options that are intended as a starting point to help overcome the uncertainty of grants and incentives. It is recommended that all prospective participants investigate these tools and any other suitable options as part of implementing the CCAP.

Table 4: Overview of financing tools

Financial Tool	What is it?	How does it support local climate action?
Group purchasing	• Purchasing large quantities of a good or service to receive a discount by a municipality or group of municipalities • It could be used on a variety of technologies such as solar panels or electric vehicles	• Municipality negotiates a discounted price and passes on savings to consumers • Reduces upfront and transaction costs • Increases acceptance of new technologies
Community-owned renewable power	• Renewable energy project owned by a group of community members • A cooperative or other entity manages procurement and maintenance	• Provides residents with access to clean energy in a more affordable way • Reduces dependence on carbon-intensive fuels
Local improvement charges (LICs)	• A low-interest loan for energy retrofits that is repaid on the property tax bill • The loan remains with the property, rather than the individual if the home is sold	• Homeowners and building owners can complete energy retrofits with little to no upfront cost • Potential to support local green jobs
Energy performance contracts	• A contract between building owners and energy service companies • Guarantees energy savings will cover the initial capital cost of a retrofit over the life of the contract	• Multi-unit residential, industrial, commercial and institutional building owners/managers can complete energy retrofits with reduced upfront costs and guaranteed savings
Green revolving funds	• Pools of funding that finance climate action projects • Savings are used to help finance additional projects in the future	• Only requires one-time funding to support a variety of projects over the long-term • It can be used for a variety of projects, from municipal infrastructure improvements to community-led activities

Engagement & Communications

In order for Port Hope to meet the targets and vision of this Plan, all community members must be active participants. There is a need for ongoing engagement and communications with residents, businesses, and institutions and most of the actions in this plan include a component on education and awareness. Communications and education should outline the "how" and "why" of local climate action, demonstrating everyone's role in making this Plan a reality. This could include communications that enhance peoples' understanding and awareness of causes of climate change, current and expected impacts, what climate mitigation is, actions that are being done or can be taken, and the associated benefits of climate mitigation. Communications should also outline different ways people can contribute and make an impact both small and large and how these actions provide wider health and local economic benefits. Communicating how small changes can add up to make a large impact can help empower people. For example, this can include communicating the impact of actions such as replacing one vehicle trip a week with cycling, walking or transit, buying from local businesses and farmers markets, or making small changes around the home to reduce energy use. For those able, larger impact actions such as home energy retrofits, heat pumps and electric vehicles should also be promoted.

While there is a role for municipal staff to play in engagement and communications, support will be required from local community organizations, non-profits, schools, and businesses. As outlined in many of the actions in this Plan, working with community leaders and groups to provide access to green technology demonstrations such as for heat pumps and EVs will be key. Engaging the community together at local events is also a great way to build awareness while strengthening community connection. One of the key next steps will be to develop a communications and engagement plan to support plan implementation. The Municipality will also continue to work with Indigenous groups, youth, and key community partners to determine how they would like to be involved and supported in implementing the Plan.

Table 5: Implementation Table

ID #	Strategy	Potential Implementation Team(s)	Timeframe	Relative Cost Characterization	Funding/Financing Opportunities	Suggested Monitoring Metrics
1	Implement Energy Efficient Retrofits	Municipality; home owners; institutions; businesses; condo boards; developers; local contractors; local sustainability organizations; community groups; homeowner associations; realtors	Short-term	Medium to high	Ontario Home Renovation Savings Program Save On Energy Affordability Program Save On Energy Commercial Programs and Incentives Save On Energy Home EnergySaver Program Save ON Energy Small Business Program Save On Energy Energy Performance Program Canada Greener Homes Loan Canada Oil to Heat Pump Affordability Program CMHC Greener Affordable Housing Enbridge Commercial Retrofit Program Enbridge Home Efficiency Rebate Enbridge Home Winterproofing Program Enbridge Smart Thermostat Rebate Green Municipal Fund GHG Reduction Pathway Feasibility Green Municipal Fund GHG Reduction pathway retrofit Green Municipal Fund GHG Impact Retrofit Green Municipal Fund Retrofit or New Construction of Sustainable Affordable Housing	• Energy reductions • GHG reductions • Number of retrofits completed
2	Develop Energy Efficient New Buildings	Municipality; developers; contractors; homeowners; builder associations	Short- and medium - term	Medium	Green Municipal Fund: Capital project: New construction of energy-efficient facilities	• Number or percentage of new buildings meeting energy efficiency standards • Energy intensity per square meter
3	Promote Renewable Energy	Municipality; home owners; institutions; industry; businesses;	Long-term	Medium to high	Ontario Home Renovation Savings Program Net-metering	• Percentage of local energy from renewable sources

ID #	Strategy	Potential Implementation Team(s)	Timeframe	Relative Cost Characterization	Funding/Financing Opportunities	Suggested Monitoring Metrics
		developers, contractors; renewable energy technology suppliers; other municipal governments				• Installed capacity (MW) • GHGs reductions
4	Decarbonize Industrial Buildings	Municipality; Port Hope industrial sector; utilities	Short-term	Medium to high	Save On Energy Existing Building Commissioning Program Save On Energy Energy Performance Program Save On Energy Industrial Energy Efficiency Program	• Energy reductions • GHG reductions • Number of industrial buildings retrofitted • Number of industrial buildings meeting energy efficient standards
5	Improve Active Transportation	Municipality; Pineridge Hiking Club; Critical Mass; residents; schools; community groups; local environmental organizations; electric bicycle suppliers	Medium-term	Medium	Housing, Infrastructure and Communities Canada – Active Transportation Fund	• Length or percentage increase in sidewalks, bike lanes, and trails
6	Increase Uptake for Public Transit and Ride Share	Municipality; Neighbouring municipalities; Northumberland County; ride share providers	Ongoing and short-term	Medium to high	Ontario Transit Investment Fund	• Ridership numbers
7	Support Low Emission	Municipality; Northumberland EV	Ongoing and short-term	Medium to high	Federal Incentive for Zero Emission Vehicles (iZEV) Zero Emission Vehicle Infrastructure Program	• Numbers of low emission vehicles registered

ID #	Strategy	Potential Implementation Team(s)	Timeframe	Relative Cost Characterization	Funding/Financing Opportunities	Suggested Monitoring Metrics
	Vehicle Adoption	Society; residents; vehicle and equipment suppliers; auto dealerships; rental agencies			Ontario Rural Connectivity Fund (2025 intake)	• Number of charging stations installed
8	Implement Transportation Demand Management	Municipality; businesses; industry; residents; community groups; local NGOs	Ongoing and short-term	Low		• Ridership numbers
9	Develop Higher Density, Mixed-Use Development and Complete Communities	Municipality; developers; Ganaraska Region Conservation Authority; local environmental organizations	Ongoing	Low		• Increased density • Walkability scores
10	Protect Farmland from Urban Development	Municipality; Northumberland County; Northumberland Federation of Agriculture; Northumberland Farmers Union; Provincial government; Ganaraska Region Conservation Authority; local farmers; local	Immediate-term	Low		• Acres of farmland protected

ID #	Strategy	Potential Implementation Team(s)	Timeframe	Relative Cost Characterization	Funding/Financing Opportunities	Suggested Monitoring Metrics
		environmental groups; developers; educational institutions;				
11	Promote Learning & Awareness about Sustainable Farming	Municipality; local farmers; Port Hope Agricultural Heritage Society; Northumberland Federation of Agriculture; Northumberland Famers Union; Ganaraska Region Conservation Authority; local schools and universities; community training and development centre; Port Hope Fall Fair; Northumberland Food Policy Council: IncrEdible Edible Festival; Burnham Family Farm Market; Northumberland's 55 Farm Fresh destinations	Short-term	Low	Sustainable Agricultural Partnership	• Number of educational workshops held • Number of workshop attendees • Engagement levels

ID #	Strategy	Potential Implementation Team(s)	Timeframe	Relative Cost Characterization	Funding/Financing Opportunities	Suggested Monitoring Metrics
12	Support Local Food Growers	Municipality; community representatives; local farmers; agricultural technology suppliers; residents; community health centres (community garden); Greenwood Coalition community garden initiative; Port Hope High School Environmental Club; Cultivate Festival	Immediate-term	Low	Agricultural Clean Technology Program	• Numbers of local farms supported • Market sales for local farmers markets
13	Protect Port Hope's Natural Spaces	Municipality, Parks and Recreation Committee; GRCA, Pine Ridge Hiking Club; landowners/ farmers; residents; developers/ builders	Immediate-term	Low to medium	Green Municipal Fund – Tree Planting Tree Canada Community Tree Grants	• Acres of protected natural spaces • Number of trees planted • Biodiversity health indicators
14	Increase Awareness of and Connection to Natural Spaces	Municipality, Parks and Recreation Committee; GRCA, Pine Ridge Hiking Club; landowners/ farmers; residents;	Medium-term	Low to medium		• Participation rates in nature programs • Number of educational workshops held • Number of workshop attendees • Engagement levels

ID #	Strategy	Potential Implementation Team(s)	Timeframe	Relative Cost Characterization	Funding/Financing Opportunities	Suggested Monitoring Metrics
15	Support the Development of Circular Economy	Municipality; local businesses; residents, farmers; local community groups; local environmental organizations	Short-term	Low	Industrial Research Assistance Program	• Waste reduction rate • Number of circular economy intiaitives (e.g., repair cafes, tool libraries, reuse hubs, workshops etc.)
16	Increase Waste Diversion	Municipality; waste management providers; local businesses; residents	Medium-term	Low	Food Waste Reduction Challenge	• Waste diversion rate • Recycling rates
17	Implement Water-Efficient Strategies	Municipality; local business; residents; home owners; water utility providers	Short-term	Low	Clean Water and Wastewater fund	• Water consumption reduction • Water efficiency program participation rates

8. Conclusion

Ongoing collaboration across Port Hope—including strengthened partnerships and leadership within the community, across Northumberland County, and between neighbouring municipalities—will be essential to sustaining the momentum needed to implement this plan. Carrying these strategies forward requires strong commitment from local stakeholders while also balancing a willingness to adapt to changing needs and conditions. The success of some strategies such as supporting low-emission vehicle adoption and promoting renewable energy will depend on continued technological advancements, cost reductions, and ongoing market monitoring. Additionally, support from federal and provincial governments will be crucial in realizing 2050 net-zero targets. By adopting this plan, Port Hope is positioning itself as a leader in local community-driven improvement, reinforcing our commitment to a sustainable and resilient future while signaling to higher levels of government the urgency of further support and action. This marks an important step along our ambitious and transformative journey toward a safer, healthier, and more prosperous Port Hope for all.