Newmarket

Town of Newmarket

Community Energy Plan Update

April 2026

Prepared by
Sustainability Solutions Group

Image at the cover and sub-cover:
Main Street, Newmarket. Photo by Town of Newmarket.

Land Acknowledgement

We acknowledge that the Town of Newmarket is located on the traditional territories of the Wendat, Haudenosaunee, and the Anishinaabe peoples and the treaty land of the Williams Treaties First Nations and other Indigenous Peoples whose presence here continues to this day. We thank them for sharing this land with us.

We also acknowledge the Chippewas of Georgina Island First Nation as our close neighbours and friends, and we work to ensure a cooperative and respectful relationship.

Environmental Park, Newmarket. Photo by Town of Newmarket.

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Technical Working Group

- Building Industry and Land Development Association
- Climate Action Newmarket Aurora
- Independent Electricity System Operator
- Lake Simcoe Region Conservation Authority
- Marrianneville Developments Ltd.
- NT Power
- Oxford Properties
- Southlake Regional Hospital
- The Atmospheric Fund
- The Regional Municipality of York
- The Rose Corporation
- Town of Aurora
- Windfall Ecology Centre

Contributors

Project Team:

Kate Thomson, Senior Climate and Environment Specialist,
Town of Newmarket.

Craig Schritt, Manager of Climate, Environment and Sustainability,
Town of Newmarket.

Araam Khorshidi, Climate and Environment Technologist,
Town of Newmarket.

Project Consultants

Carla Gallardo Canabes, Project Lead, SSG

Yuill Herbert, Principal-in-Charge, SSG

Camilla Melrose, Senior Consultant, SSG

Amber Nichol, Senior Modeller, SSG

Nadia Jethoo, Consultant, SSG

Naomi Devine, Engagement Lead, SSG

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Glossary

Climate change adaptation: A wide range of measures that help reduce vulnerability to the current or expected impacts of climate change like weather extremes and hazards, sea-level rise, biodiversity loss, or food and water insecurity.[1]

Climate change mitigation: Any action taken by governments, businesses, or people to reduce or prevent greenhouse gases, or to enhance carbon sinks that remove them from the atmosphere. These gases trap heat from the sun in our planet's atmosphere, keeping it warm. Mitigation efforts include transitioning to renewable energy sources, enhancing energy efficiency, adopting regenerative agricultural practices, and protecting and restoring forests and critical ecosystems.[2]

Climate risk: The potential for adverse consequences for human or ecological systems, recognizing the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, livelihoods, health and well-being, economic, social, and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems, and species.[3]

Community Energy Plan: An initiative developed by the Town of Newmarket to reduce the community's net environmental impact. This is done by introducing sustainable practices throughout a multitude of sectors including transportation, residential/non-residential, and energy.[4]

Corporate Climate Action Plan: Also referred to as a climate transition plan, a corporate climate action plan (CAP) can be seen as a company's road map for how it will get to net-zero emissions. More specifically, a corporate CAP is a time-bound strategic plan outlining how an organization will alter its current business model, strategy, and actions to align with a pathway for achieving net-zero emissions from economic activity consistent with keeping global warming to below 1.5°C.

Net-zero emissions: A state in which the greenhouse gases (GHGs) going into the atmosphere are balanced by the removal of GHGs out of the atmosphere.[5]

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1 UNDP Climate Promise. "What Is Climate Change Adaptation and Why Is It Crucial?," December 18, 2023. https://climatepromise.undp.org/news-and-stories/what-climate-change-adaptation-and-why-it-crucial

2 UNDP Climate Promise. "What Is Climate Change Adaptation and Why Is It Crucial?," December 18, 2023. https://climatepromise.undp.org/news-and-stories/what-climate-change-adaptation-and-why-it-crucial

3 Andy Reisinger et al., The Concept of Risk in the IPCC Sixth Assessment Report: A Summary of Cross-Working Group Discussions: Guidance for IPCC Authors (Geneva: Intergovernmental Panel on Climate Change, 15 February 2021), https://www.ipcc.ch/site/assets/uploads/2021/02/Risk-guidance-FINAL_15Feb2021.pdf

4 Town of Newmarket, Community Energy Plan (Rebased July 31, 2019) (Newmarket, ON: Town of Newmarket, 2019), https://www.newmarket.ca/TownGovernment/PublishingImages/Pages/Strategies,%20Plans%20and%20Publications/Plans/Community-Energy-Plan/Community%20Energy%20Plan%20(Updated%2007.31.2019).pdf

5 Net Zero Climate. "What Is Net Zero? - Net Zero Climate," September 2, 2025. https://netzeroclimate.org/what-is-net-zero-2/.

Physical risks: Risks related to the physical impacts of climate change.[6]

Science-based targets (SBTs): Measurable and actionable environmental targets that allow cities to align their actions with societal sustainability goals and the biophysical limits that define the safety and stability of earth systems.[7]

Transition risks: Risks related to the transition to a lower-carbon economy.[8]

6 US EPA. "Climate Risks and Opportunities Defined | US EPA," February 10, 2026. https://www.epa.gov/climateleadership/climate-risks-and-opportunities-defined#physical

7 Science Based Targets Network, Science-Based Climate Targets: A Guide for Cities (2021), https://sciencebasedtargetsnetwork.org/wp-content/uploads/2021/04/SBTs-for-cities-guide.pdf.

8 US EPA. "Climate Risks and Opportunities Defined | US EPA," February 10, 2026. https://www.epa.gov/climateleadership/climate-risks-and-opportunities-defined#physical

List of Acronyms

BAP	Business-as-Planned
BAU	Business-as-Usual
CEP	Community Energy Plan
EV	Electric vehicle
FCM	Federation of Canadian Municipalities
GHG	Greenhouse gas
GPC	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories
HDV	Heavy-duty vehicle
IAP2	International Association for Public Participation
IESO	Independent Electricity System Operator
IPCC	Intergovernmental Panel on Climate Change
LC	Low-Carbon
LDV	Light-duty vehicle
MAC	Marginal abatement cost
MHDV	Medium- and heavy-duty vehicle
NEER	Newmarket Energy Efficiency Retrofit
NPV	Net present value
PACE	Property Assessed Clean Energy
PV	Photovoltaic
SBT	Science-based target
SCC	Social cost of carbon
TWG	Technical Working Group
ZEV	Zero-emissions vehicle

Units

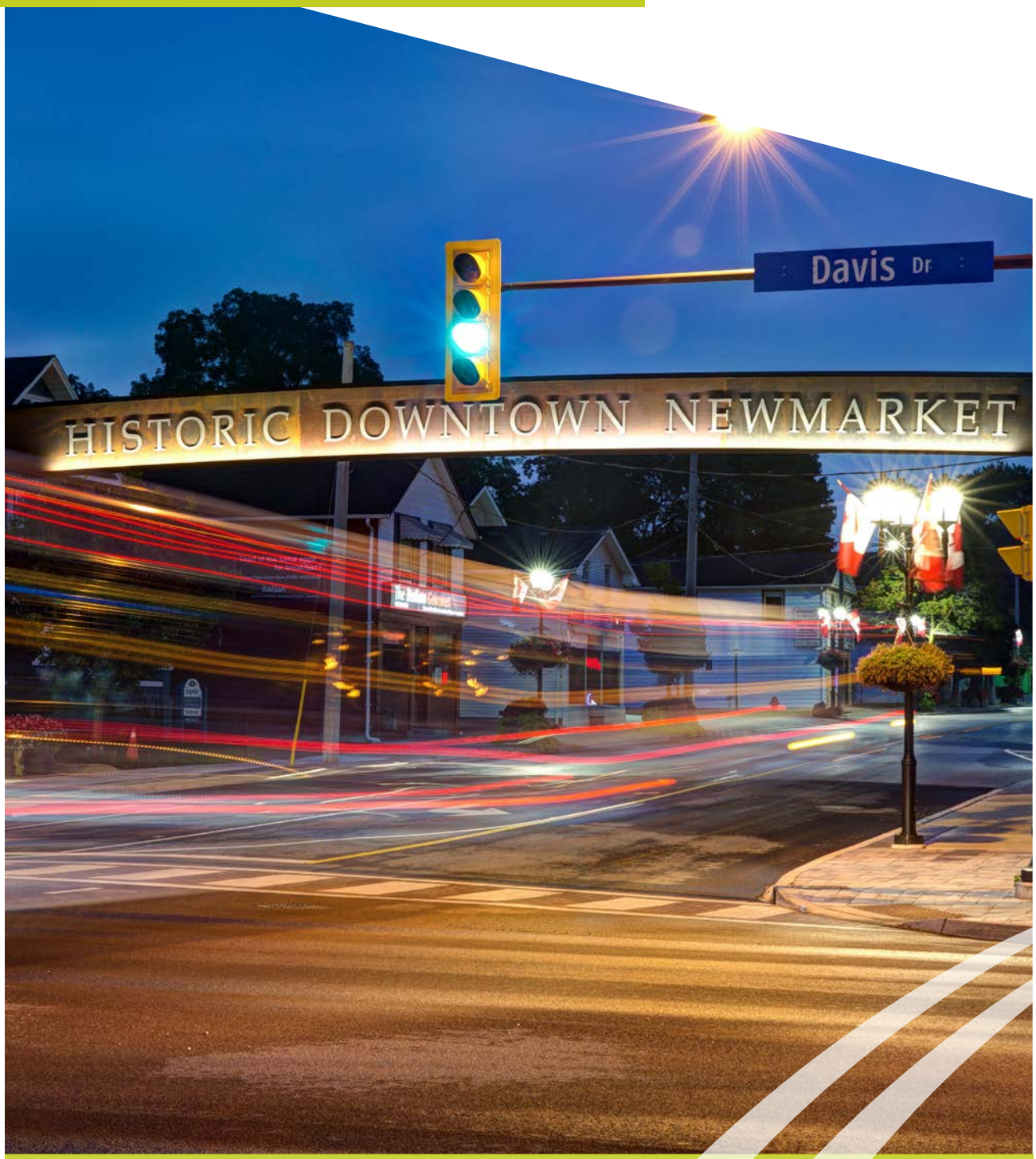
m3	Cubic metre	
tCO_2e	Metric tonnes of carbon dioxide equivalent	
$ktCO_2e$	Kilotonnes of carbon dioxide equivalent	1 $ktCO_2e$ = 1,000 tCO_2e
$MtCO_2e$	Megatonnes of carbon dioxide equivalent	1 $MtCO_2e$ = 1,000,000
GJ	gigajoules	
TJ	terajoules	1 TJ = 1,000GJ
PJ	petajoules	1 PJ = 1,000,000GJ
kWh	kilowatt hour	1 kWh = 0.0036 GJ
kW	kilowatt	
MW	megawatt	1 MW = 1,000,000

To compare fuels on an equivalent basis, all energy is reported as units of energy content primarily as petajoules (PJ) or sometimes as gigajoules (GJ). Emissions are characterized as kilotonnes of carbon dioxide equivalent ($ktCO_2e$). These measures can be characterized as follows:[9,10]

- An average house uses about 100 GJ of energy in a year. In Ontario, the average household uses approximately 90 GJ in a year.
- 100 liters of gasoline provides about 3.5 GJ.
- Burning 50,000 tonnes of wood produces 1 PJ.
- A typical passenger vehicle emits about 4.7 tCO_2e per year.

9 Data provided by the United States Environmental Protection Agency.
10 Statistics Canada, "Households and the Environment Survey: Energy Use, 2021." The Daily, March 19, 2024, https://www150.statcan.gc.ca/n1/daily-quotidien/240319/dq240319d-eng.htm.

Executive Summary



Downtown Newmarket. Photo by Town of Newmarket.

The Town of Newmarket has been taking action to address climate change. It was one of the first municipalities in the Ontario province to adopt a Community Energy Plan (CEP) in 2016. In 2020, the Town declared a climate emergency, and in 2025 Town Council approved a Corporate Climate Change Policy to guide climate action.

The 2016 CEP seeks to reduce, relative to the year 2017, per capita primary energy use and per capita greenhouse gas (GHG) emissions by 50% by 2041. However, with the recent approval of Newmarket's Corporate Climate Change Policy, the Town will adopt a science-based emissions target, aiming to reach net-zero emissions by 2050.

As per its Climate Change Policy, Newmarket aspires to become a progressive leader in climate change action, integrating mitigation and adaptation into everything it does, ensuring Newmarket remains a resilient, safe, healthy, and equitable community for current and future generations.

To support the update of the CEP, this document assesses pathways toward a net-zero future by understanding energy use[11] and analyzing GHG emissions under three scenarios that we modelled:

- **Business-as-Usual (BAU):** A reference scenario that shows what would happen if no additional climate actions are taken other than practices and technologies in place today.
- **Business-as-Planned (BAP):** A reference scenario that considers current climate actions and shows how existing and approved plans, legislations, and targets would affect energy use and emissions, assuming no additional climate interventions are taken. This scenario focuses on improving energy efficiency in existing and new buildings and the industrial sector, electrifying personal and municipal vehicles, and switching fossil fuels to electricity.
- **Low-Carbon (LC):** A scenario with actions that dramatically decrease GHG emissions and improve energy use across all sectors, with a target of achieving net-zero emissions by 2050. This scenario includes deep energy efficiency measures in all sectors, such as retrofitting buildings, increasing sustainable transportation modes, electrifying vehicles, and switching fossil fuels to renewables or low-carbon electricity.

An important part of this work involved engagement with the community to get their feedback on opportunities for and barriers to climate action within their sectors, and to develop a shared understanding of their role in the updated CEP's implementation. In order to boost climate actions that are a priority for the community—like retrofitting and electrifying buildings, increasing options for sustainable mobility, and expanding renewable energy generation—systemic institutional support is key. Beyond that, partnerships are viewed as a way for the Town to mobilize initiatives and make them possible. Lastly, equity is important for the community when considering climate actions to ensure that low-income households, renters, youth, and seniors can equitably participate in and benefit.

11 For a detailed report on energy use, please refer to the Energy Mapping report in Appendix G.

Currently, Newmarket emits around 460 kilotonnes of carbon dioxide equivalent ($ktCO_2e$) per year, which is equivalent to 5.0 metric tonnes of carbon dioxide equivalent (tCO_2e) per capita. Implementing climate actions that are currently underway (BAU Scenario) decrease Newmarket's emissions by approximately 22% from 2021 to 2050, reaching 3.0 tCO_2e per capita by 2050. Implementing the planned climate actions (BAP Scenario), focusing on electrifying personal vehicles and switching fossil fuels to low-carbon electricity, Newmarket's emissions would be reduced by 40% from 2021 to 2050, equivalent to 2.3 tCO_2e per capita.

By implementing deep energy efficiency measures and switching to electricity and renewables across all sectors (LC Scenario), Newmarket would reduce its emissions by 88% from 2021 to 2050, reaching a per capita emissions level of 0.5 tCO_2e. In that same period, energy use decreases as well, from 10.4 to 4.0 million gigajoules (GJ)—a 61% decrease in total energy demand. Residual emissions by 2050 mainly come from natural gas in some industrial and commercial sources, the use of diesel in heavy-duty vehicles and the biodegradation of organic waste deposited in landfills.

A low-carbon scenario has financial implications that can bring net benefits to the Town of Newmarket, making a business case for climate action. Implementing the LC Scenario requires a total investment of nearly $2 billion for the 2026–2050 period. This averages approximately $83 million annually,[12] which is around 1% of the York region's gross domestic product in 2023. On the other hand, savings in energy expenses and avoided operations and maintenance costs are $1.36 billion for the 2026–2050 period. The avoided damages from climate impacts, known as the Social Cost of Carbon, provides an additional $1.13 billion in savings. These benefits from implementing the LC Scenario have an impact on households: Currently, households spend $7,940 on energy consumption (natural gas, electricity, gasoline, and diesel); implementing low-carbon actions would decrease these energy expenditures by 81%, to $1,530 by 2050.

Actions to reduce GHG emissions, and improve energy efficiency across Newmarket fall into five priority areas:

1. Efficient Buildings
2. Sustainable and Inclusive Transportation
3. Clean Energy for All
4. Sustainable Waste Management
5. Leadership and Communication

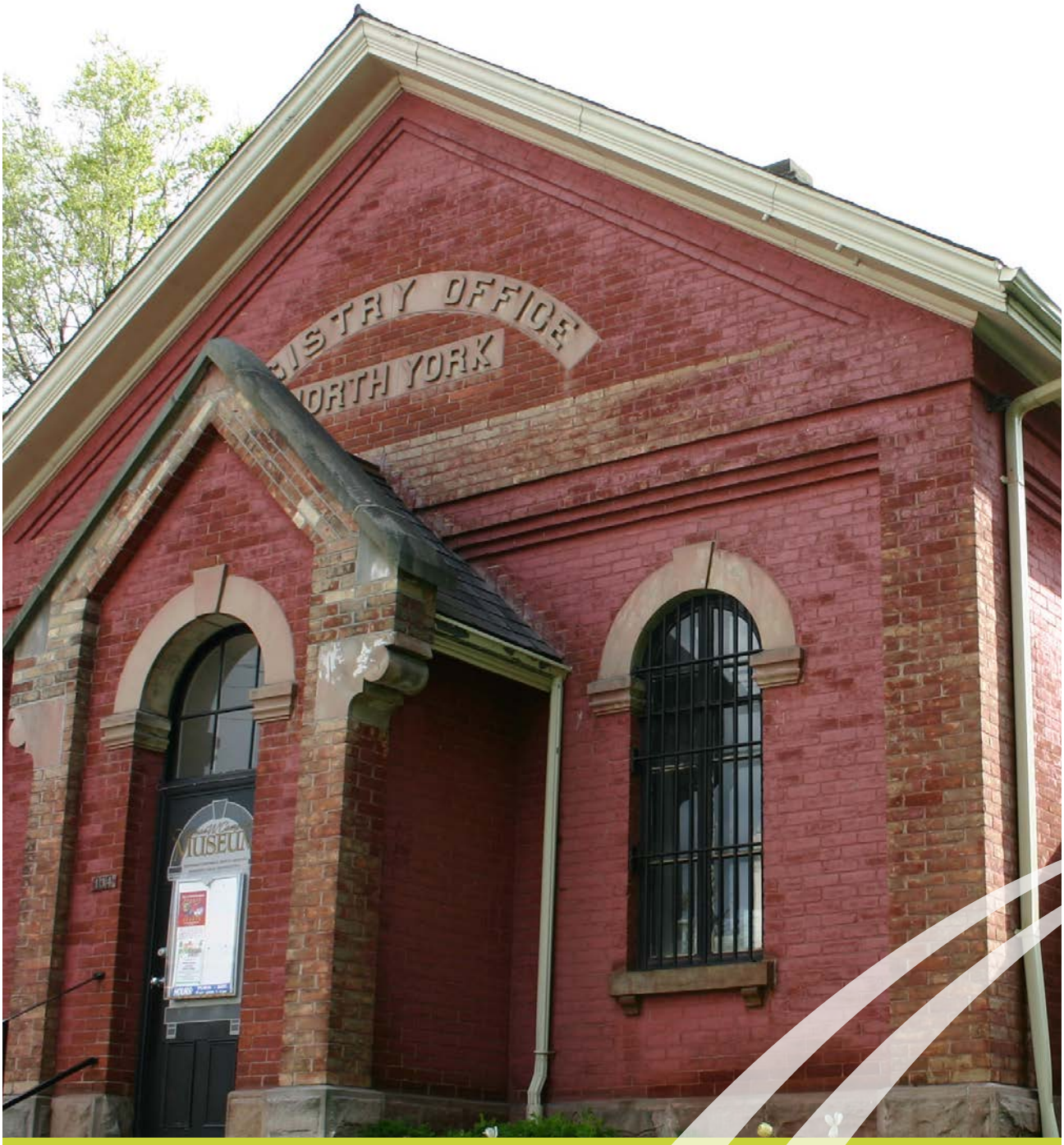
The timing and level of ambition of the implementation of the programs, initiatives, and activities within the priority areas are guided by GHG emissions targets for 2031, 2041, and 2050. Overall, Newmarket is aiming to achieve an 85% reduction in GHG emissions by 2050, based on 2021 levels, with interim targets of a 12% reduction by 2031, and a 65% reduction by 2041.

12 Undiscounted

The two most important sectors for immediate GHG reductions are transportation, and residential buildings. Reducing emissions in both sectors relies on moving away from fossil fuels for vehicles, and for heating in homes, and replacing these fuels with low-emissions electricity.

Aiming to reach net-zero emissions by 2050 in Newmarket requires continued improvements to technology and substantial investment, but is financially viable. Net benefits are generated through savings in energy expenditures, operations and maintenance, and avoided damages (social cost of carbon). In section 6, we provide an implementation framework that identifies timeline, co-benefits, resources, and partners required for implementation of the CEP.

1 | Introduction



Museum, Newmarket. Photo by Town of Newmarket.

1.1 The Climate Emergency

Climate change is the greatest long-term global challenge that human society faces. It refers to long-term changes in the Earth's climate, mainly caused by human activities—like burning fossil fuels (coal, oil, gas) and large-scale deforestation—that release greenhouse gases (GHGs) like carbon dioxide and methane. These gases trap heat in the atmosphere, intensifying the Earth's natural greenhouse effect and therefore raising global temperatures. This process has resulted in a climate emergency because the pace and scale of this change are now overwhelming the ability of natural systems and human societies to adapt to the change.

In December 2015, the Paris Agreement was adopted at the UN Climate Change Conference (COP21) by Canada, alongside 194 other countries. Canada ratified the agreement in 2016, committing to reduce national emissions by 40%–45% below 2005 levels by 2030, and to net-zero by 2050. This legally binding international treaty on climate change set a goal to limit global warming to well below a 2°C increase, and preferably to a 1.5°C increase, above pre-industrial levels.[13] However, current global GHG emissions are not on a trajectory to meet these goals. Despite a temporary decline in global emissions in 2020 due to the COVID-19 pandemic, the world is heading for 3°C or more of warming.[14] This degree of warming threatens human health, economic well-being, and the survival of the natural systems that humans and eight million other plant and animal species depend upon.[15]

The Town of Newmarket declared a climate emergency in 2020, deepening its commitment to address climate change. The Town aspires to become a progressive leader in climate change action, integrating mitigation and adaptation into everything it does, ensuring Newmarket remains a resilient, safe, healthy, and equitable community for current and future generations.

1.2 The Town of Newmarket

Newmarket is a small community located north of Toronto, within the Regional Municipality of York. Newmarket is a growing town with a current 4.4% growth increase between 2016 and 2021. As of 2021, the population was approximately 91,000 people; it is expected to rise to over 118,800 by 2050.[16] This anticipated population growth will result in an increase in housing, employment, and personal vehicles within Newmarket (Figure 1).

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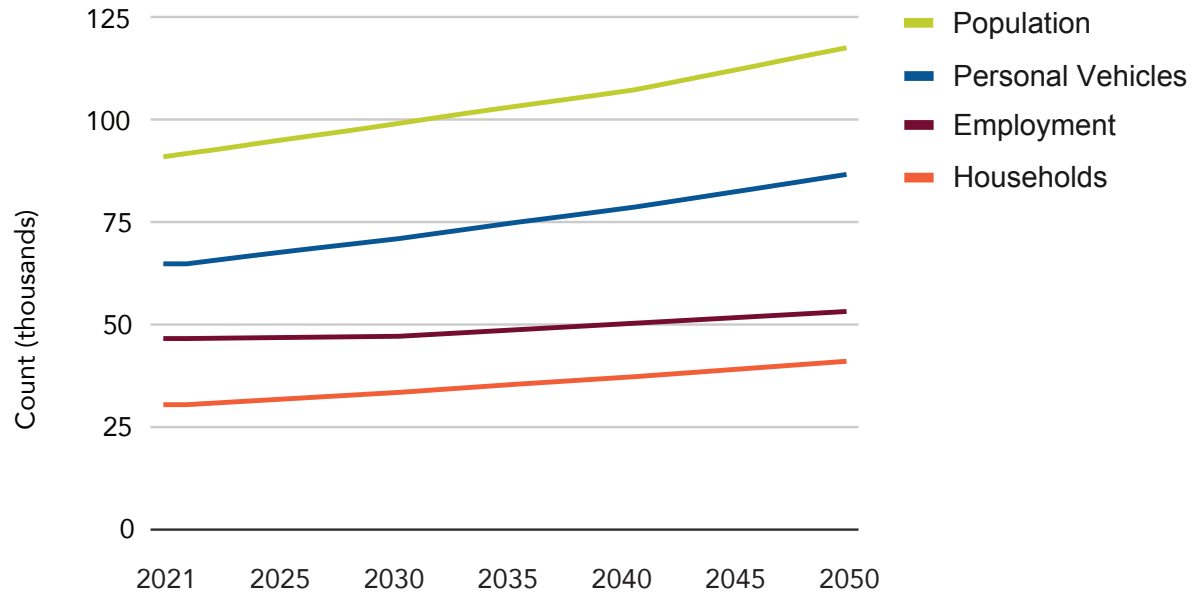
13 "The Paris Agreement," United Nations Framework Convention on Climate Change (UNFCCC), accessed February 17, 2026, https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement.

14 "New UNEP Synthesis Provides Blueprint to Urgently Solve Planetary Emergencies and Secure Humanity's Future," UNFCCC, February 18, 2021, https://unfccc.int/news/new-unep-synthesis-provides-blueprint-to-urgently-solve-planetary-emergencies.

15 "New UNEP Synthesis Provides Blueprint," UNFCCC.

16 Population estimates are from the 2021 Statistics Canada Census, with a correction made for census undercount to capture populations missed by the census methodology.

Growth trends in Newmarket, 2021–2050.



Climate change will make Newmarket hotter, wetter, and wilder.[17] The Town will experience more very hot days, and correspondingly, more hot nights. The number of extremely cold days will decrease, and the first frost day will be pushed later into the year as the century progresses. Total annual precipitation will increase 23% from the historic mean, with accompanying major precipitation events and serious storms. The annual mean temperature will nearly double by 2100 from 7.9°C to 12.8°C. No single entity can address climate change independently, but by working together with all levels of government, NGOs, businesses, and the community, meaningful change can be made.

17 "Region LAKE SIMCOE," Climate Atlas of Canada," accessed February 17, 2026, https://climateatlas.ca/data/grid/296/plus30_2030_85/line.

1.3 Climate Action

The Town of Newmarket was one of the first municipalities within Ontario to adopt a Community Energy Plan (CEP). The CEP sets clear targets for reducing GHG emissions and identifies specific actions to achieve these goals. By introducing sustainable practices across sectors such as transportation, residential and non-residential buildings, and energy systems, the CEP helps lower the Town's carbon footprint and decrease reliance on fossil fuels, which are major contributors to climate change.[18]

In addition to combating climate change, the CEP supports the local economy through creating jobs in the energy sector, improving energy efficiency, and enhancing energy security. The plan also examines how population growth, employment, and land use impact energy needs, with a focus on fostering a sustainable community.[19]

The Town's declaration of a climate emergency in 2020 deepened its commitment to reduce GHG emissions and protect the environment, community, and economy from climate change impacts.[20] Most recently, the Town approved Newmarket's Corporate Climate Change Policy, which will guide climate action at a corporate level and within the community.[21]

The CEP outlines the Town's commitment to climate action. It explores energy and GHG emissions in Newmarket when adopting a science-based target (SBT), which would aim to reach net-zero emissions by 2050. The remainder of this subsection summarizes current targets at different levels of government for Newmarket, then shows the proposed targets under a science-based approach.

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18 "2022-2026 Newmarket Council Priorities," Town of Newmarket, accessed December 11, 2025, https://councilpriorities.newmarket.ca/.

19 "2022-2026 Newmarket Council Priorities," Town of Newmarket.

20 "Town of Newmarket Council Agenda - January 20, 2020," January 20, 2020, https://pub-newmarket.escribemeetings.com/Meeting.aspx?Id=8234896d-b35a-4a17-8949-bcb550426338&Agenda=Agenda&lang=English.

21 "Corporate Policy - Climate Change Policy # CES.1-01," Town of Newmarket, accessed February 17, 2026, https://pub-newmarket.escribemeetings.com/filestream.ashx?DocumentId=53745.

Current Targets

In 2016, the CEP was created, using a 2013 energy baseline, and approved by Council. It was rebased in 2019[22] to reflect a 2017 energy baseline, with no changes made to the plan's strategic actions. The CEP targets were set to

1. Reduce per capita primary energy use by 50% from the 2017 baseline by 2041.
2. Reduce per capita GHG emissions by 50% from the 2017 baseline by 2041.

Table 1 outlines the current GHG reduction targets for each level of government that influences Newmarket's plan, as well as current CEP targets.

Table 1. Summary of GHG targets for government agencies.

Government Agency	Base Year (value)	Milestone 1	Milestone 2	Milestone 3
Science-Based Targets (Global)[23]	2010	NA	43%–45% below 2010 levels by 2030	Net-Zero by 2050
Government of Canada[24]	2005 (759 $MtCO_2e$)	40%–45% below 2005 levels by 2030	45%–50% below 2005 levels by 2035	Net-zero by 2050
Province of Ontario[25]	1990 (177 $MtCO_2e$)	15% below 1990 levels by 2020	37% below 1990 levels by 2030	80% below 1990 levels by 2050
York Region[26]	2020 (6.9 $MtCO_2e$)	Aligned with Ontario	Aligned with Ontario	Net-zero by 2050
2019 Newmarket	2017 (0.47 $MtCO_2e$)	NA	50% below 2017 levels by 2041	NA

22 Town of Newmarket Community Energy Plan.:Rebased. 31 July 2019 (Town of Newmarket, July 2019), https://www.newmarket.ca/.

23 "The Paris Agreement," UNFCCC.

24 Service Canada, "Canada's 2035 emissions reduction target," modified December 12, 2024, https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/2035-emissions-reduction-target.

25 Ontario's Climate Change Strategy (Province of Ontario, 2015), https://docs.ontario.ca/documents/4928/climate-change-strategy-en.

26 York Region has adopted a long-term goal of becoming a net-zero region by 2050. Publicly, the Region uses provincial and federal targets for its interim 2030 goals, rather than a single distinct and specific "York Region" community-wide 2030 percentage target. At this time, York Region's interim goals are represented by Ontario's interim goals given the direct influence of the provincial agency on regional municipalities. Source: Climate Change Action Plan (York Region, Sept 2022), https://www.york.ca/york-region/plans-reports-and-strategies/.

Proposed Targets

Newmarket continues to advance actions aimed at improving energy use and reducing carbon emissions with programs such as the Newmarket Energy Efficiency Retrofit (NEER) Program[27] and the Green Fleet Strategy,[28] and with its current 94% annual waste diversion rate.

We modelled a Low-Carbon (LC) Scenario with concrete actions that reduce GHG emissions (see Section 3). We used that information to propose overall and sector-based emissions reduction targets for Newmarket, using 2021 as a baseline year (see Table 2). These proposed targets consider state-of-the-art low-carbon technologies and their projected impact on emissions. Therefore, the proposed targets consider that there will be residual emissions by 2050. These residual emissions could be addressed by electrifying heavy-duty vehicles (HDVs), increasing efforts to electrify industry, generating more renewable energy, and purchasing carbon offsets. Future updates to the Town's CEP should revisit these residual sources of GHG emissions and consider technological advances and new methodologies to achieve net-zero by 2050.

Table 2. Newmarket's LC Scenario emissions targets per sector, 2031, 2041, and 2050.

Sector	Milestone 1: 2031	Milestone 2: 2041	Milestone 3: 2050
Overall	12% reduction from 2021	65% reduction from 2021	85% reduction from 2021
Buildings	6% reduction from 2021	80% reduction from 2021	91% reduction from 2021
Transportation	39% reduction from 2021	59% reduction from 2021	93% reduction from 2021
Waste	Maintain diversion rates	Maintain diversion rates	Maintain diversion rates
Industrial	NA	NA	46% reduction from 2021
Municipal	NA	70% reduction from 2021	90% reduction from 2021

27 A pilot program offering incentives for residents to install heat pumps with local improvement charge financing options. Source: "Newmarket Energy Efficiency Retrofit (NEER) - Business Case," Town of Newmarket, accessed February 17, 2026, https://www.newmarket.ca/TownGovernment/Pages/Strategies%2c%20Plans%20and%20Publications/Plans/Community%20Energy%20Plan/Newmarket-Energy-Efficiency-Retrofit-Plan.aspx.

28 Town of Newmarket, Green Fleet Strategy. October 2024. https://pub-newmarket.escribemeetings.com/filestream.ashx?DocumentId=54404

1.4 The Role of The Town

Local governments play multiple roles in advancing and enabling emissions reduction efforts, including as:

- **Mobilizers:** Local governments can unite residents, municipalities, and other organizations around shared goals. For example, they can lead community engagement or coordinate bulk renewable energy purchases.
- **Innovators:** Local governments can directly or indirectly spur innovation through targeted investments, partnerships, and/or policies that advance clean energy and low-carbon solutions, reducing risk for investors and community members. For example, they can expand zero-emissions vehicle (ZEV) charging and fuel infrastructure to accelerate adoption.
- **Collaborators:** Local governments can strengthen the clean energy and resilience transition through partnerships with federal, provincial and regional agencies, transit authorities, utilities, businesses, and community organizations, working toward shared goals, coordinated policies, and joint investments.
- **Investors:** Local governments can leverage low-interest financing and public-private partnerships to fund energy efficiency initiatives, like building retrofits and renewable energy technologies. Separately or in addition, local governments can also enable third-party investment through local financing tools, such as improvement districts or retrofit programs.
- **Implementers:** Local governments can advance the renewable energy transition through policies, day-to-day operations, and incentives that support businesses and households. For example, local governments can update building standards to encourage high-efficiency or Passive House construction.[29]
- **Incubators:** Local governments can cultivate clean technology innovation by attracting and supporting businesses that advance the low-carbon economy, creating hubs or ecosystems that encourage collaboration and market growth. For example, they can develop green business parks or performance-based building incentives.

29 "Whitby Deep Retrofit Rebate | Town of Whitby Ontario," n.d. https://durhamgreenerhomes.ca/financial/rebates/whitby/.

2 | The Community's Voice

Community Centre and Lions Hall. Photo by Town of Newmarket.

Engagement for the CEP update was carried out in alignment with International Association for Public Participation (IAP2) principles[30] and shaped by early advice received during pre-engagement with interested and affected parties.

In January 2025, Sustainability Solutions Group (SSG) conducted a pre-engagement questionnaire with representatives from utilities, institutions, developers, and local organizations. Their feedback directly informed the Engagement Strategy (Appendix A) and emphasized accessibility, preparation materials, and opportunities for genuine problem-solving.

Engagement unfolded across multiple formats:

- **Technical Working Group (TWG) workshops** convening utilities, York Region, builders, environmental organizations, local institutions, transportation experts, and Town staff.
- Workshop 1 identified Newmarket's opportunities and barriers across buildings, energy, land use, transportation, and equity.
- Workshop 2 refined draft strategies using the Ecocycle framework[31] and surfaced institutional and implementation dynamics.
- Workshop 3 prioritized high-impact, feasible actions from the LC Scenario and mapped roles, responsibilities, and enabling conditions for implementation.
- Two community surveys, reaching more than 55 respondents.
- Responses to the **Interested and Affected Parties Survey** offered detailed insights into barriers, opportunities, and program needs across sectors within the community (see Appendix B).
- Responses to the **Community Questionnaire** provided residents' perspectives on what supports they need to adopt low-carbon technologies, shift mobility choices, and participate equitably in the energy transition (see Appendix C).

Collectively, these engagement techniques were designed not only to gather input but also to shape modelling priorities, surface system constraints, and inform the structure of implementation planning.

30 International Association for Public Participation, accessed February 17, 2026, https://www.iap2.org/mpage/Home.

31 The Ecocycle is a planning and sense-making framework that helps groups understand where strategies or initiatives sit in their lifecycle: from early experimentation, to maturity, to renewal, or to becoming stuck or outdated. In the TWG's Workshop 2, the Ecocycle was used to move beyond listing ideas and instead examine institutional dynamics: where momentum exists, where effort is being expended without results, and where redesign or letting go may be needed to create space for more effective climate actions.

2.1 What We Learned

Across all engagement streams, interested and affected parties consistently affirmed that climate action in Newmarket is not limited by motivation. Rather, it is shaped by the systems in which people make regular decisions: housing stock, infrastructure, utility processes, financial incentives, workforce capacity, and regulatory signals. Several of the insights that emerged have clear implications for the CEP—these are explained below and in more detail in the engagement summary report (Appendix D).

Building Retrofits and Electrification Are the Community's Highest Priority but Require Systemic Support

Participants across the workshops and surveys identified heat pumps, insulation, windows, air sealing, and rooftop solar as core components of a modern, comfortable, low-carbon home. These were also rated as the most impactful and feasible actions in the TWG's Workshop 3.

However, the barriers to implementing these actions are structural:

- High upfront costs
- Confusing information
- Complex contractor and permitting pathways
- Grid capacity uncertainty
- Limited supports for renters

This indicates the need for a coordinated municipal approach, including financing tools, vetted contractors, a centralized location for information, and renter/landlord programs.

Mobility Choices Are Constrained by Infrastructure, Not Interest

Residents expressed a strong desire for:

- More reliable and frequent transit
- Safer and connected cycling routes
- Walkable neighbourhoods
- Accessible electric vehicle (EV) charging

But they also emphasized that infrastructure determines what mode of transportation is feasible, especially in winter or for families. EV adoption interest is high but dependent on charger access, particularly in multi-unit homes. This reinforces the need for coordinated land use, transit partnerships, active transportation investment, and neighbourhood-level charging strategies.

Renewable Energy Is Widely Supported, but Feels Inaccessible Without Institutional Help

Across surveys, respondents indicated that solar adoption, both rooftop and community-scale, was a top priority. Yet, they cited grid constraints, unclear approval processes, financing challenges, and a lack of information as significant barriers. This positions renewable energy as a governance and partnership challenge, not simply a technological one.

Equity Considerations Appear Within Every Major Theme

Engagement feedback consistently highlighted the need to ensure that low-income households, renters, youth, and seniors can equitably participate in and benefit from climate actions. Renter representation in surveys was particularly low, revealing a demographic gap with direct implications for program design. Interested and affected parties emphasized the importance of:

- Protections against renovictions
- Supports tailored to households with limited capital
- Accessible multilingual communications
- Mobility investments in underserved neighbourhoods

Equity is therefore a condition of delivery, not a separate program area.

Partnerships Will Determine What Is Possible

The TWG's Workshop 3 reinforced that Newmarket's most impactful climate actions rely on systems beyond the Town's control. Electrification, renewable energy, EV charging, and transit improvements depend on:

- Newmarket Tay Power and Hydro One (grid planning, incentives, data-sharing)
- York Region (transit, mobility integration, regional coordination)
- Independent Electricity System Operator (IESO) (regional system capacity)

- Developers and builders (net-zero new builds, electrification readiness, industry training)
- Local institutions (demonstration projects, capacity building)
- Community organizations (education, outreach, equitable program delivery)

The CEP should therefore articulate clear inter-organizational roles, shared responsibilities, and governance mechanisms for implementation.

Interested and Affected Parties Want Clarity and Continuity from the Town.

Throughout the engagement process, participants emphasized that predictable standards, consistent timelines, and clear communication from the Town will reduce uncertainty and increase participation in climate programs. This is especially true for builders, homeowners, and businesses weighing long-term investments in energy upgrades or fleet changes.

Transparency, through ongoing reporting, updates, and visible municipal leadership, was seen as essential for maintaining trust and momentum.

2.2 Sustaining Engagement Through Implementation

Engagement findings underscore that Newmarket's climate ambition is strong, but successful implementation of the CEP will depend on continued collaboration, clear communication, and sustained relationships with key partners and the broader community. Climate action is not a one-time planning exercise; it is an ongoing process that requires trust, coordination, and shared ownership over time.

Continued engagement during implementation offers several important advantages. It helps maximize efficiency, reach, cost-effectiveness, and credibility by aligning municipal actions with partner initiatives and community capacity. It also reduces municipal risk by leveraging external expertise, funding, and delivery mechanisms, while enabling the Town to build long-term community capacity rather than carrying out implementation alone. Importantly, ongoing engagement reinforces the principle of shared responsibility and ensures that climate solutions remain inclusive, equitable, and accessible.

Engagement throughout the CEP process also demonstrated that residents, organizations, and sector partners want clarity, continuity, and visibility from the Town. Predictable standards, regular updates, and transparent reporting were consistently identified as conditions that increase confidence and participation. Maintaining open channels of communication during implementation will therefore be critical to sustaining momentum and trust.

This subsection outlines approaches, key partners and resources to be considered when continuing engagement for the implementation of the updated CEP.

Approaches for Continued Engagement

Based on what was learned through the engagement process, the following approaches are recommended to support ongoing involvement during the CEP implementation:

- Regular communications and reporting, including newsletters that summarize milestones, highlight progress, and signal upcoming initiatives or opportunities to participate
- Public-facing tools that make outcomes visible and understandable to the community, such as dashboards that track energy use, GHG emissions, and progress toward CEP targets
- Annual public reporting on CEP implementation to reinforce transparency, maintain accountability, and demonstrate how engagement input continues to shape action
- Community capacity-building opportunities that support community-led climate projects and empower local champions, such as training sessions, workshops, or micro-grant programs
- Targeted engagement with key sectors—including builders, landlords, businesses, and institutions—to support implementation of standards, programs, and pilots
- Formal collaboration mechanisms, such as partnership agreements, that support joint initiatives, pilot projects, and coordinated delivery with external partners

These approaches reflect a shift from consultation toward long-term collaboration, consistent with the engagement principles established at the outset of the CEP process.

Key Partners for Ongoing Engagement

Engagement findings highlight the importance of maintaining active relationships with partners whose roles are essential to implementation. We propose that the following partners are considered:

- Utilities and system operators, to coordinate electrification, grid planning, data-sharing, and incentive programs
- Community groups and non-profit organizations, to support outreach, education, and equitable program delivery

- Local schools and youth organizations, to build climate literacy, leadership, and long-term community capacity
- Conservation authorities, to advance nature-based solutions and climate resilience initiatives
- Local businesses and business associations, particularly in relation to building upgrades, fleet electrification, and workforce development
- Regional government and neighbouring municipalities, to support alignment on transit, land use, infrastructure, and shared climate priorities

Clarifying roles and expectations with these partners will be critical for translating CEP actions into on-the-ground outcomes.

Resources to Support Long-Term Engagement

A range of established tools, guides, and organizations can support the Town of Newmarket in maintaining effective engagement and building capacity over time. These include:

- Federation of Canadian Municipalities (FCM) programs and resources that support community energy planning, implementation funding, and peer learning
- ICLEI Canada tools and guidance, including climate communications and engagement frameworks for local governments
- Natural Resources Canada, particularly its resources related to energy efficiency, building retrofits, and community energy systems
- Canada Green Building Council, for guidance on high-performance buildings and industry engagement
- Climate Action Partnership networks that support collaboration and shared learning across jurisdictions
- National Centre for Truth and Reconciliation, to support respectful, informed engagement with Indigenous Nations and communities as part of climate initiatives

Together, these resources can help the Town sustain meaningful engagement, strengthen partnerships, and ensure that CEP implementation remains adaptive, inclusive, and effective over time.

Town Commitments for Engagement During Implementation

As the CEP moves from planning to implementation, the Town of Newmarket commits to the following engagement principles:

- Communicate clearly and regularly the progress, upcoming initiatives, and opportunities for involvement through public reporting and accessible communications.
- Show how input is used by demonstrating how community and partner feedback informs program design, priorities, and implementation decisions.
- Work in partnership with utilities, community organizations, businesses, institutions, and regional partners to co-deliver climate actions where shared responsibility is required.
- Support inclusive participation by seeking out diverse perspectives and reducing barriers to participation so that all residents can access and benefit from climate solutions.
- Maintain transparency and accountability through ongoing reporting on outcomes, challenges, and adjustments as the CEP is implemented.

These commitments reflect the Town's intention to move beyond one-time consultation toward sustained collaboration and shared ownership of climate action outcomes.

3 | A Low-Carbon Newmarket

Main Street, Newmarket. Photo by Town of Newmarket.

3.1 Technical Methodology

The modelling for this project was completed using three scenarios of what Newmarket's energy future could look like. Each scenario is a pathway that shows the trajectory of energy use and GHG emissions from a base year into the future, under a given set of conditions.

The methodology and results presented here do not and cannot fully account for all the factors that could shape the future of energy use and GHG emissions in Newmarket. The resulting scenarios are not predictions—they are plausible, evidence-based projections on how the future may evolve based on data and assumptions about the key drivers for energy use and emissions, and critical trends. They provide context on how different choices and changes affect the path forward.

The Baseline

The project began by completing a detailed GHG inventory for the year 2021 for Newmarket.[32] This became the baseline year, providing an initial energy and emissions profile from which different future scenarios could be extrapolated. The baseline year was combined with population projections, economic forecasts and individual behaviours to project emissions and energy use to 2050 in three different scenarios (detailed below).

The Scenarios

All of the scenarios modelled use a shared set of assumptions about population and economic growth, as well as the predicted climatic changes over the study period. Different assumptions for each scenario were layered on top of those shared assumptions, to produce three sets of future scenario results:

- The **Business-as-Usual (BAU)** Scenario answers the question, "What if we change nothing?" It illustrates Newmarket's energy consumption and emissions projected to 2050 if no changes are made to buildings, fuel types, and transportation modes during that period. Instead, the practices and technologies that are in place today remain as they are while the population grows and climate change impacts increase.
- The **Business-as-Planned (BAP)** Scenario answers the question "What happens if we do what we are planning on doing?" This scenario shows the impact of implementing all the plans, policies, and programs that are currently underway on energy use and GHG emissions.
- The **Low-Carbon (LC)** Scenario answers the question "How do we achieve our climate goals?" The assumptions in this scenario are designed to push beyond what is comfortable, and explore the level of ambition needed to achieve steep reductions in GHG emissions by 2050.

32 The base year of 2021 was selected as that is the most recent Statistics Canada census year. Census data is used as a fundamental part of the population, household, and employment projections.

Table 3 summarizes the description and label used throughout the report for each scenario.

Table 3. Descriptions of the three scenarios developed for Newmarket's CEP.

Label	Name	Description
BAU	Business-as-Usual	A scenario that extrapolates current demographic patterns into the future to illustrate energy use and GHG emissions (and sinks, if applicable) if no additional plans, policies, programs, and projects are implemented. This scenario answers the question, "What would happen if no further actions are taken?"
BAP	Business-as-Planned	A reference scenario that extrapolates current demographic patterns into the future while taking into account existing and approved plans, legislations, and targets that would affect energy use and emissions, and assuming no additional climate action interventions are taken. This scenario answers the question, "What would happen if only current actions, plans, and policies are implemented?"
LC	Low-Carbon	A scenario that selects and models actions to dramatically decrease GHG emissions and improve energy use across all sectors, with a target of achieving net-zero emissions by 2050. This scenario answers the question, "What would happen if all the actions, policies, and programs in this CEP are successfully implemented?"

The modelled assumptions for the BAU and BAP Scenarios are summarized in Table 4.

Table 4. BAU and BAP Scenario assumptions.

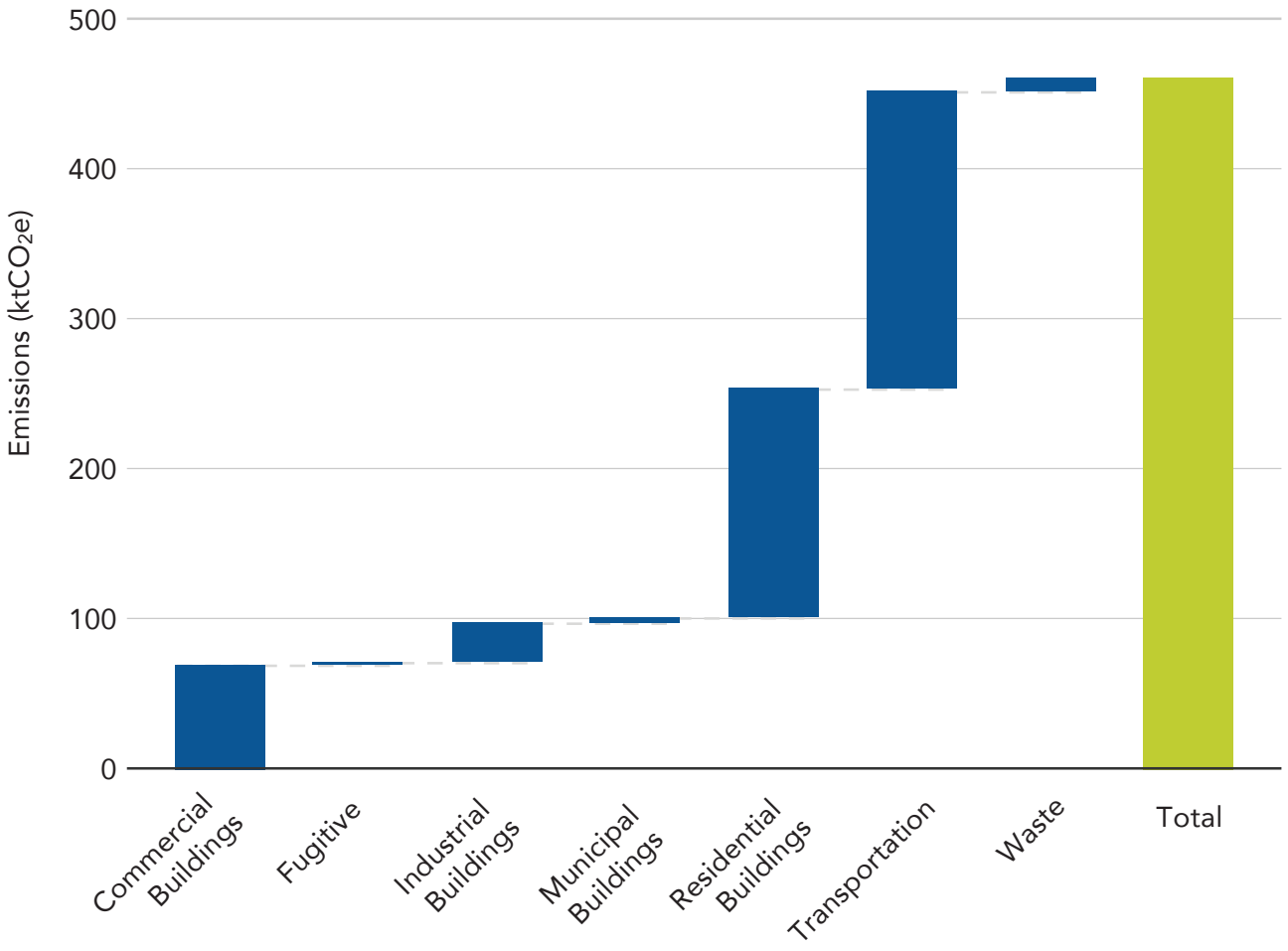
Item	BAU Assumptions	BAP Assumptions
Demographics	▪ Population: The number of people in Newmarket is 91,005 in 2021, 99,202 in 2031, and 118,802 by 2050. ▪ Employment: The number of jobs in 46,926 in 2021, 47,084 in 2031, and 53,150 by 2050.	
Building sector	New residential and non-residential buildings are 100% compliant with the 2012 Ontario Building Code, amendments, and anticipated updates.	Building Code updates occur in 2022 and 2032, each with a 10% efficiency gain on the previous version.
	For existing residential and non-residential buildings, current shares of energy-consuming stocks are maintained to 2050.	By 2026, 0.8% of heat systems for existing residential and non-residential buildings are cold climate heat pumps.
	No specific assumptions for industrial activities	Industrial building energy efficiency is improved by at least 1.5% per year to 2041, then holds constant to 2050 for space heating, space cooling, and water heating.
	No retrofits are done for residential and non-residential buildings.	
	For both new residential and non-residential buildings, the current share of energy consuming stocks out to 2050.	
Transportation sector	No specific assumptions for light-duty vehicles (LDVs)	▪ By 2026, 20% of all new LDV sales and the municipal fleet are ZEVs. ▪ By 2030, this rises to 60% of new LDV sales and the municipal fleet. ▪ By 2035, this rises to 100% of new LDV sales and the municipal fleet.

Item	BAU Assumptions	BAP Assumptions
Transportation sector	Transit fleet vehicle shares remain the same out to 2050.	▪ The transit fleet is 100% electric by 2050. ▪ 194 buses across York Region are electric by 2028.
	The current mode share holds constant over time.	
Waste and wastewater sector		Landfill gas capture at the landfill facility remains at the current rate (75%) out to 2050.
	▪ Current waste generation rates remain the same out to 2050. ▪ Current diversion rates remain the same out to 2050.	
Water	No specific assumptions for water consumption	By 2050, the residential water consumption target is 150 litres per capita per day.
Energy sector	Current estimate based on IESO	
Land use	The municipal boundary remains the same out to 2050.	
Climate projections	▪ The number of cooling degree days increase 137% between 1990 and 2050 (from 203 to 482 days). ▪ The number of heating degree days decrease 20% between 1990 and 2050 (from 4,429 to 3,544 days).	

3.2 Newmarket Today

In 2021, Newmarket's total GHG emissions were 460 kilotonnes of carbon dioxide equivalent ($ktCO_2e$), or 5.0 metric tonnes of carbon dioxide equivalent (tCO_2e) per capita. These per capita emissions are comparable to other municipalities in southern Ontario that, similarly to Newmarket, do not have a large industrial sector. Most of Newmarket's GHG emissions come from the combustion of fossil fuels for heating buildings and transportation (Figure 2).

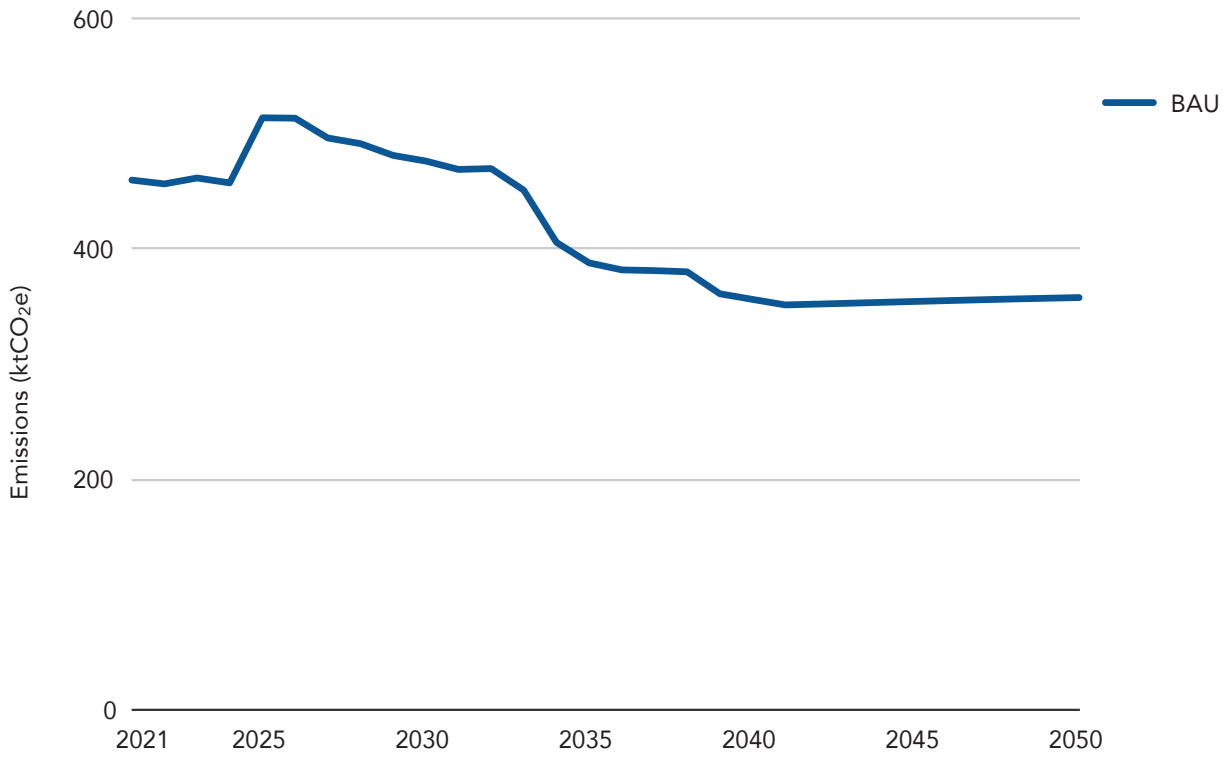
Figure 2. GHG emissions for Newmarket by sector, 2021.



3.3 Business-as-Usual Scenario

The BAU Scenario shows the impacts of implementing practices and technologies currently underway on energy use and GHG emissions. These impacts include a 22% decrease in GHG emissions, and a 40% decrease in emissions per capita (from 5.0 to 3.0 tCO_2e per person), from 2021 to 2050.

Figure 3. GHG emissions for Newmarket in the BAU Scenario, 2021–2050.



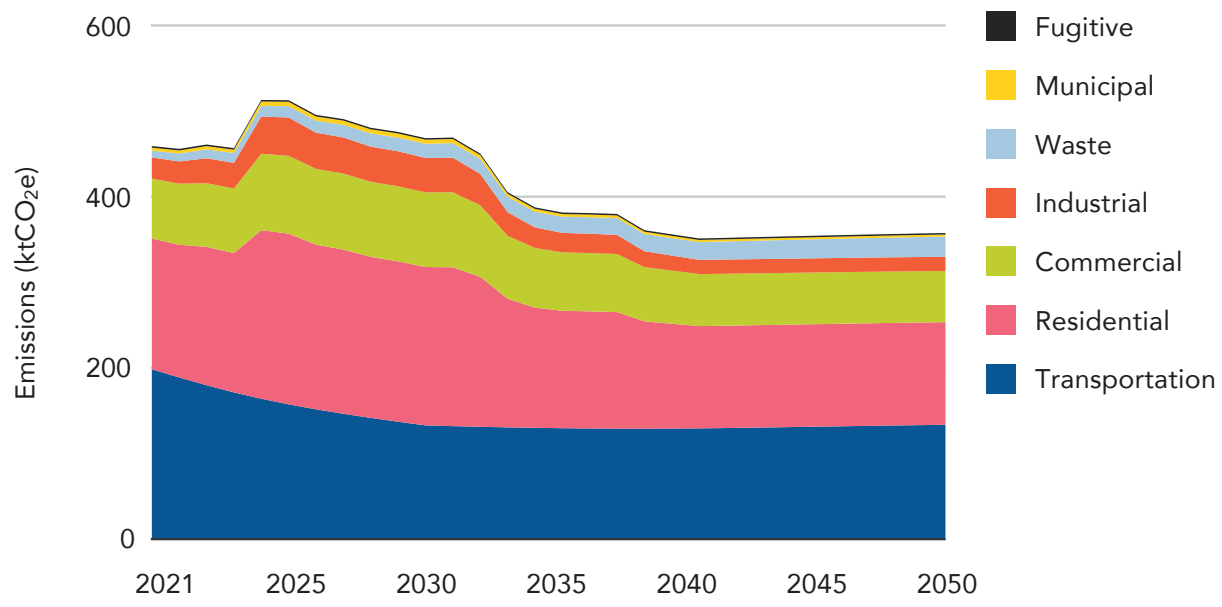
Emissions fluctuate over time because of changes to Ontario's electricity grid and the fuels being used to generate electricity. Over the next decade, emissions from grid electricity are projected to increase, before decreasing as work is completed on nuclear generation in the province. Nuclear generators will be taken offline for repairs, and replaced with natural gas generators as repairs are being completed. Once these upgrades are completed, the emissions associated with grid electricity will remain low, resulting in an overall decrease in emissions in the BAU Scenario.

Emissions from transportation decrease as a result of improved efficiencies in gasoline- and diesel-powered vehicles, and a slight increase in the electrification of personal vehicles.

As the climate warms, emissions from residential, commercial, and industrial buildings increase due to a higher demand for summer cooling accompanying hotter summers. However, this increase is partially offset by a reduced demand for winter heating due to milder winters.

Lastly, emissions from non-energy sources, including fugitive emissions from natural gas pipelines, and from the decomposition of organic material in landfills, increase slightly from 2021 to 2050. As natural gas consumption remains fairly stable over this period, most of these emissions can be attributed to organic waste already deposited in landfills, or that will be deposited in the coming years, that releases methane as it decomposes.

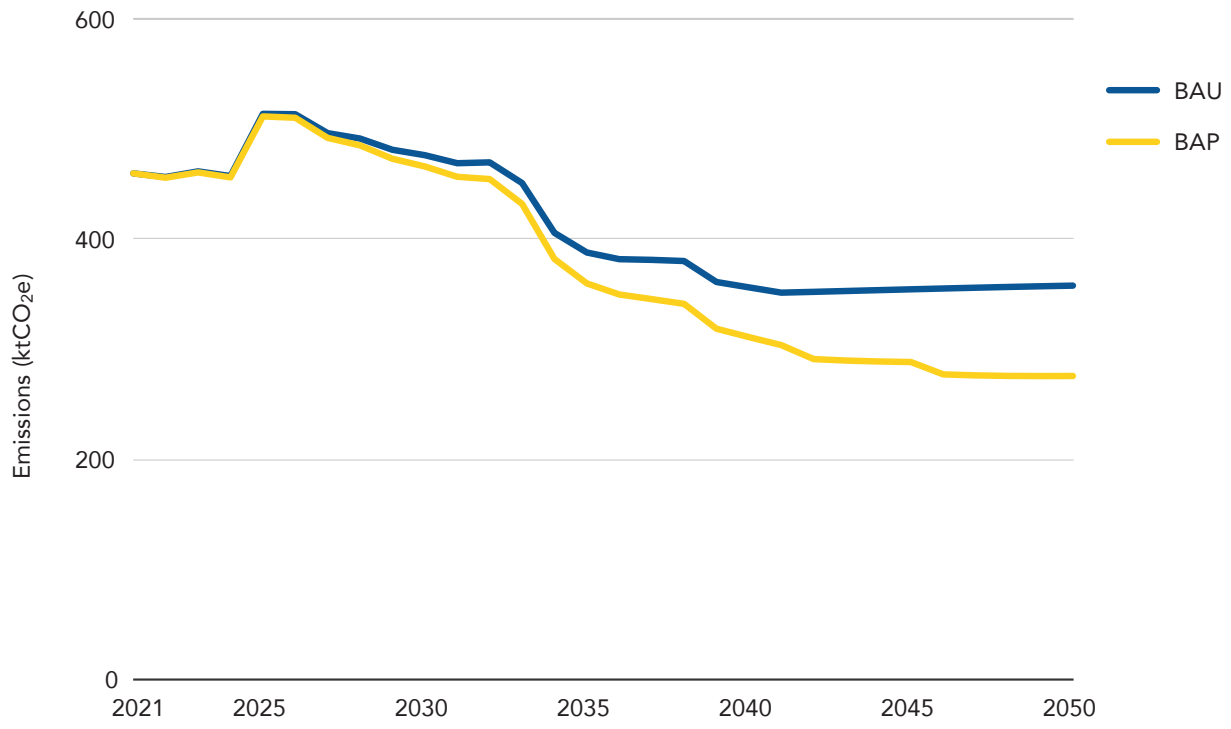
Figure 4. GHG emissions for Newmarket by sector in the BAU Scenario, 2021–2050.



3.4 Business-as-Planned Scenario

The BAP Scenario focuses on the electrification of personal vehicles, and the reduction in emissions is largely due to the switch from fossil fuels to low-carbon electricity. From 2021 to 2050, emissions decrease by 40%, from 460 to 276 $ktCO_2e$ (Figure 5). During that same period, per capita emissions decrease by 54%, from 5.0 to 2.3 tCO_2e per person.

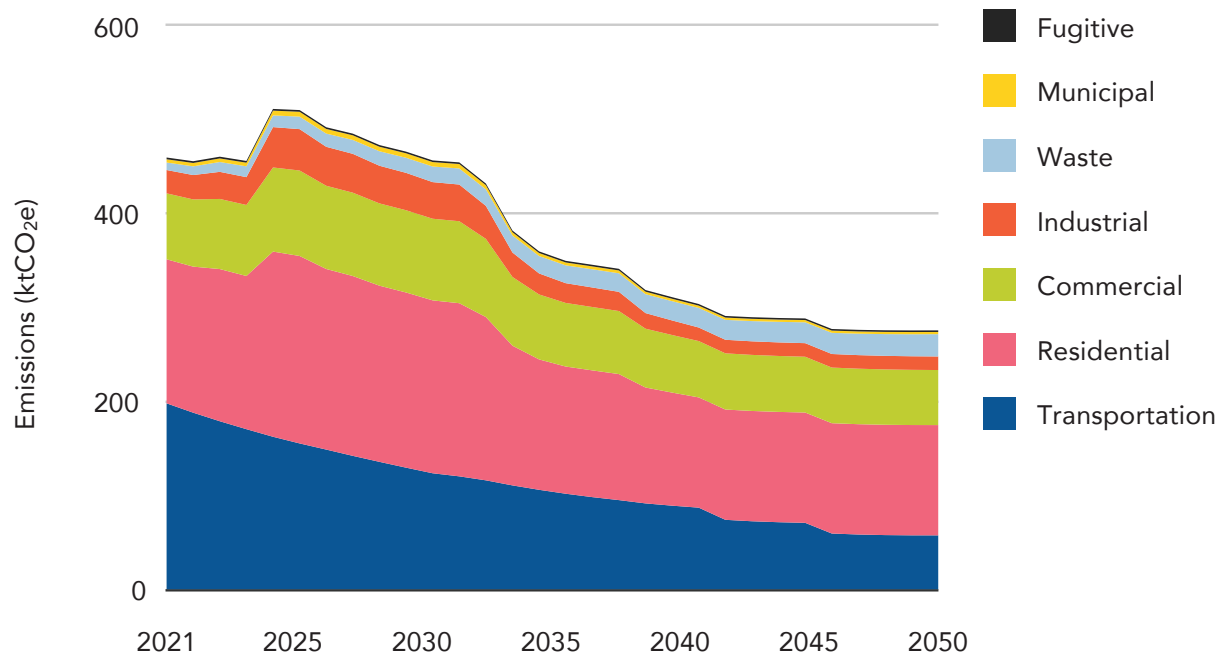
Figure 5. GHG emissions for Newmarket for the BAU and BAP Scenarios, 2021–2050.



Transportation accounts for the largest portion (43%) of total emissions in 2021 and sees the largest change in the BAP Scenario, decreasing 33% by 2050. Residential emissions account for 33% of emissions in 2021, and decrease 23% by 2050. Industrial emissions decrease by 42% by 2050, but account for only 5% of total emissions in 2021.

The bulk of emissions reductions in the BAP Scenario result from the electrification of personal vehicles and improvements to the electricity grid as repairs are completed to generation infrastructure.

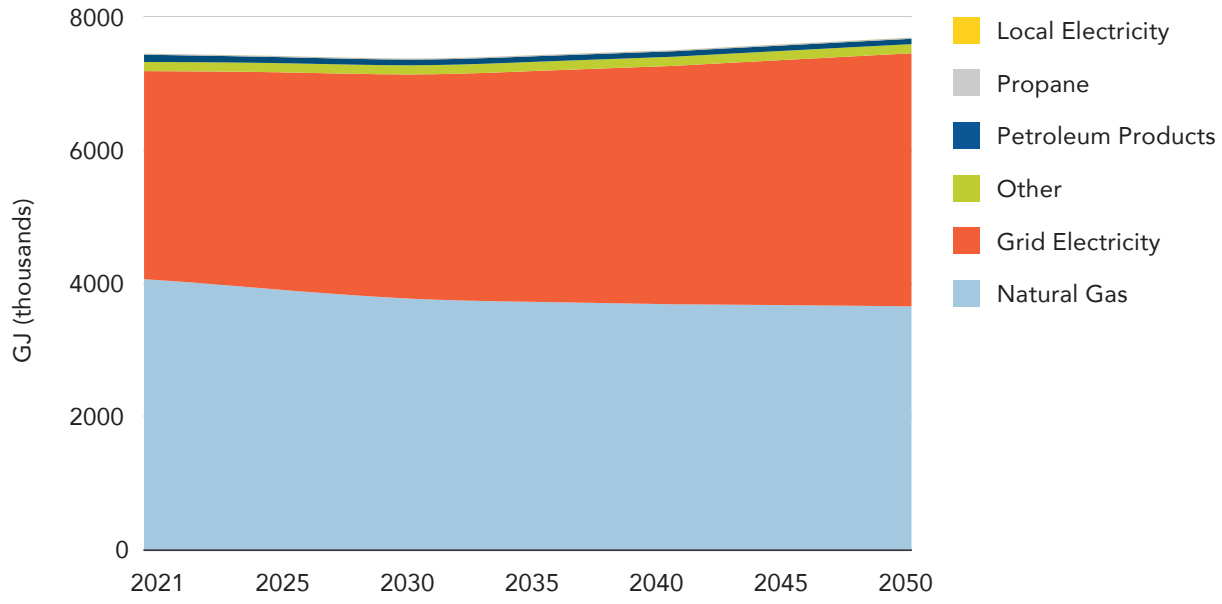
Figure 6. GHG emissions for Newmarket by sector in the BAP Scenario, 2021–2050.



Energy Use Across Newmarket

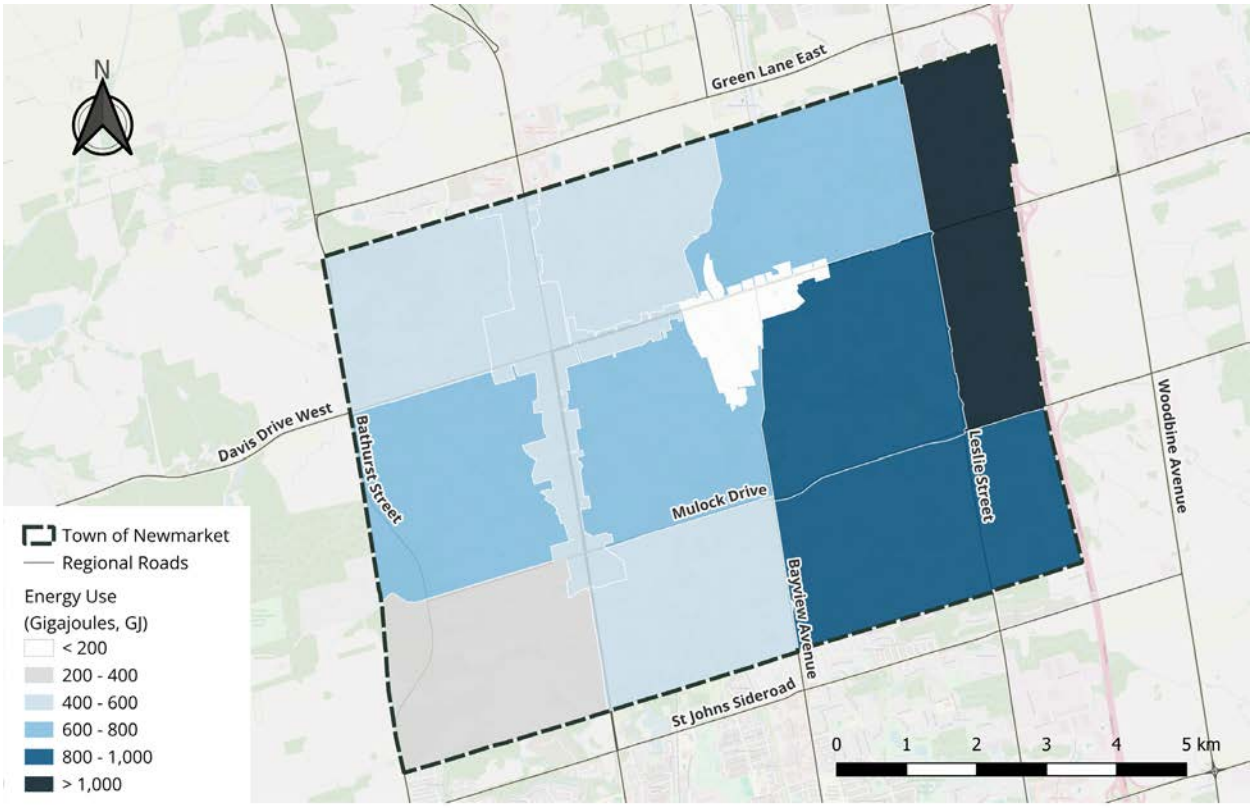
Although emissions reduce over time in Newmarket, total energy use increases gradually. Most of the energy consumed is grid electricity, followed by natural gas (Figure 7).

Figure 7. Total energy use for Newmarket by source in the BAP Scenario, 2021–2050.



Among all zones in Newmarket, the industrial zone has the highest energy use. However, most energy in Newmarket is consumed by residents (58%), followed by commercial (25%), industrial (15%), and municipal users (2%). Residential energy use is primarily related to space heating, followed by space cooling and water heating (Figure 8).

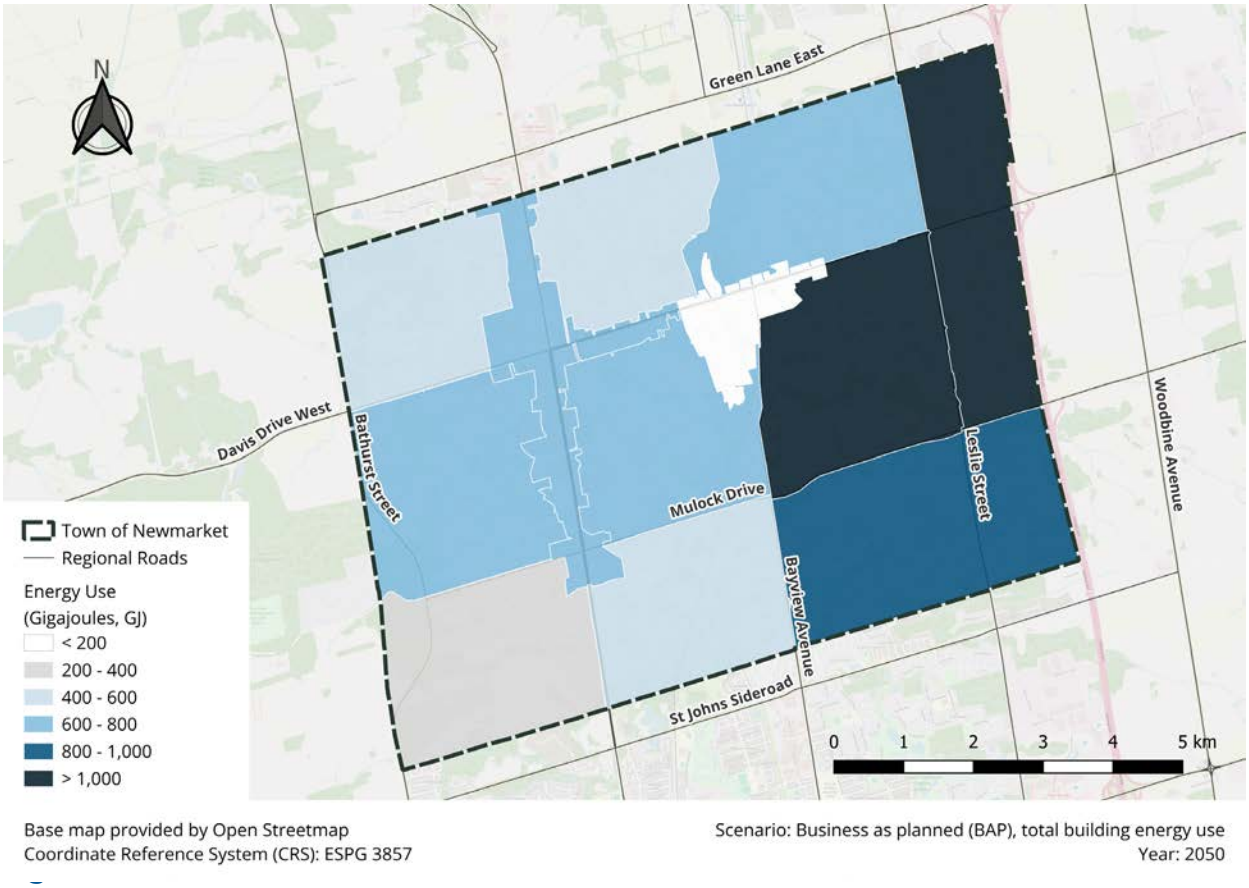
Figure 8. Total energy use (GJ) for Newmarket by zone in the BAP Scenario, 2021.



Source: BAP modelled results from SSG's ScenaCommunities model using data provided by the Town of Newmarket.

Although energy use increases over time, current and planned energy efficiency interventions in Newmarket help manage energy use as the Town grows. Several zones significantly increase in their energy use, but this trend is primarily due to population growth in these areas (Figure 9).

Figure 9. Total energy use (GJ) for Newmarket by zone in the BAP Scenario, 2050.



Source: BAP modelled results from SSG's ScenaCommunities model using data provided by the Town of Newmarket.

4 | A Pathway to Net Zero

Solar panels, Newmarket. Photo by Town of Newmarket.

The LC Scenario pushes further than what is currently planned, with deep energy efficiency measures across all sectors working to entirely eliminate fossil fuels as an energy source in the future. Assumptions for each sector are described in Table 5.

Table 5. LC Scenario assumptions.

Sector	LC Assumption	Description
Buildings	Residential retrofits: 80% of existing homes by 2041	By 2041, 30%–50% efficiency gains are made, depending on the age/type of the building.
		A few hundred retrofits are done per year initially, increasing to 1,000–1,500 per year as the program matures.
		By 2041, 15% electricity gains are made in all buildings.
		By 2050, 100% of existing homes are retrofitted.
	Non-residential retrofits: 80% of existing built area	By 2050, 30%–50% efficiency gains are made.
		50,000 m^2 of retrofit activity per year.
		Industrial building energy efficiency is improved by at least 1.5% per year to 2041, then held constant to 2050 for space heating, space cooling, and water heating.
	Natural gas fuel switch for future heating and cooling	By 2031, all new residential and non-residential buildings switch to cold climate heat pumps for space conditioning and water heating.
		By 2041, approximately 80% of existing and new homes have heat pumps.
	Net-zero buildings	By 2030, all new residential and non-residential construction are net-zero ready.

Sector	LC Assumption	Description
Transportation	ZEVs[33]	▪ By 2030, 35% of commercial medium and heavy-duty vehicle (MHDV) sales and the municipal fleet are ZEVs. ▪ By 2040, 100% of commercial MHDV sales and the municipal fleet are ZEVs.
	Work from home	By 2050, 25% of the population works from home, which results in 25% fewer trips from home to work (all mode types) and a 10% increase in dwelling energy use.
	Electrify regional public transit	By 2032, the Metrolinx service (Go Train, Barrie Line) is 100% electric.
	Mode shift for active transportation	By 2050, 50% of trips less than 5 km are taken by active transportation.
Energy	Renewable energy generation	By 2041, up to 50MW of solar photovoltaics (PVs) (roughly 200,000–300,000 m^2) are installed.
Waste	Waste generation	▪ By 2031, annual organic waste is reduced to 71 kg per resident. ▪ By 2031, annual general waste is reduced to 66 kg per resident.

Under the LC Scenario, from 2021 to 2050, emissions drop by 88% (from 460 to 55 $ktCO_2e$) (Figure 10). In this same period, per capita GHG emissions decrease by 90% (from 5.0 to 0.5 tCO_2e per person). The LC scenario identifies residual emissions at 2050. These residual emissions could be addressed by electrifying heavy duty vehicles, increasing efforts to electrify industry, generating more renewable energy and purchasing carbon offsets. Future CEP updates should revisit these residual sources of GHG emissions and consider technological advancements and new methodologies to achieve net-zero by 2050.

33 ZEV is electric in the model.

Each of the modelled actions work together to improve energy efficiency and reduce overall GHGs. Actions to reduce total energy demand—like conducting building retrofits or increasing active transportation mode share—are modelled before actions to improve equipment or switch to equipment or infrastructure that uses a lower-carbon fuel (Figure 11). Completing the actions in this order ensures that systems work together for maximum efficiency, and that unnecessary expenses on redundant infrastructure are reduced.

Figure 10. GHG emissions for Newmarket by scenario, 2021–2050.

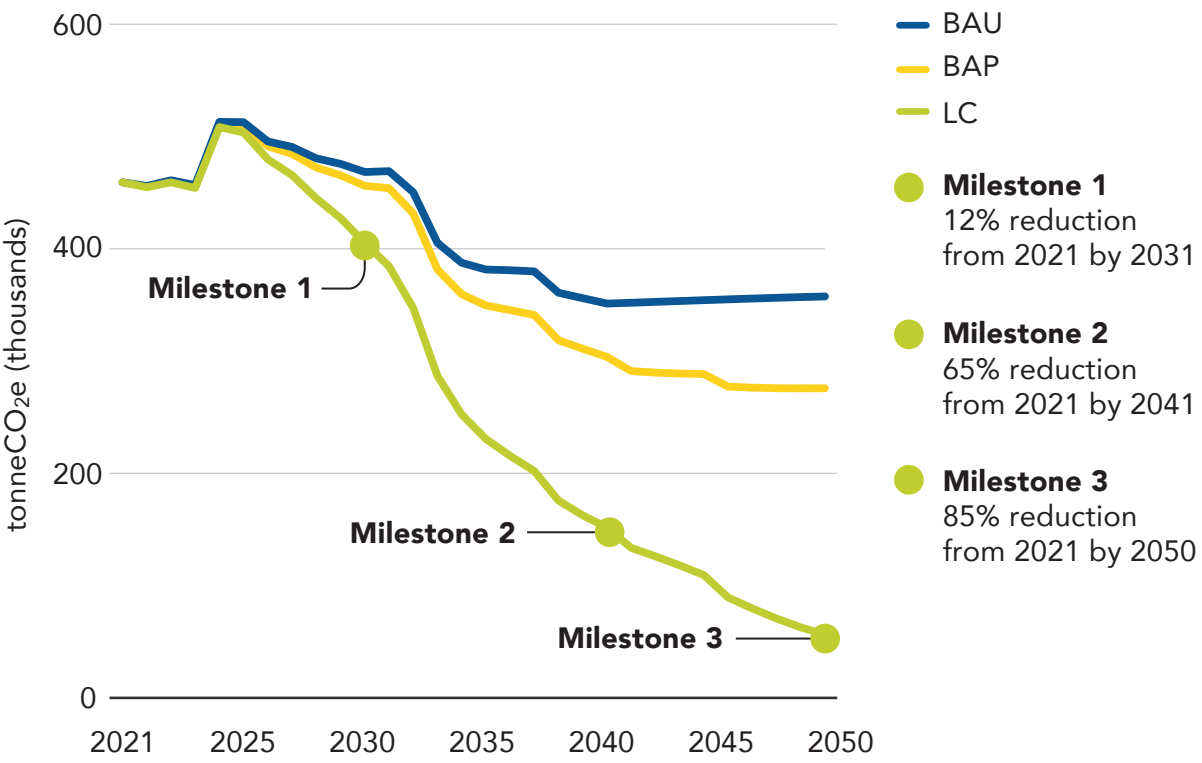
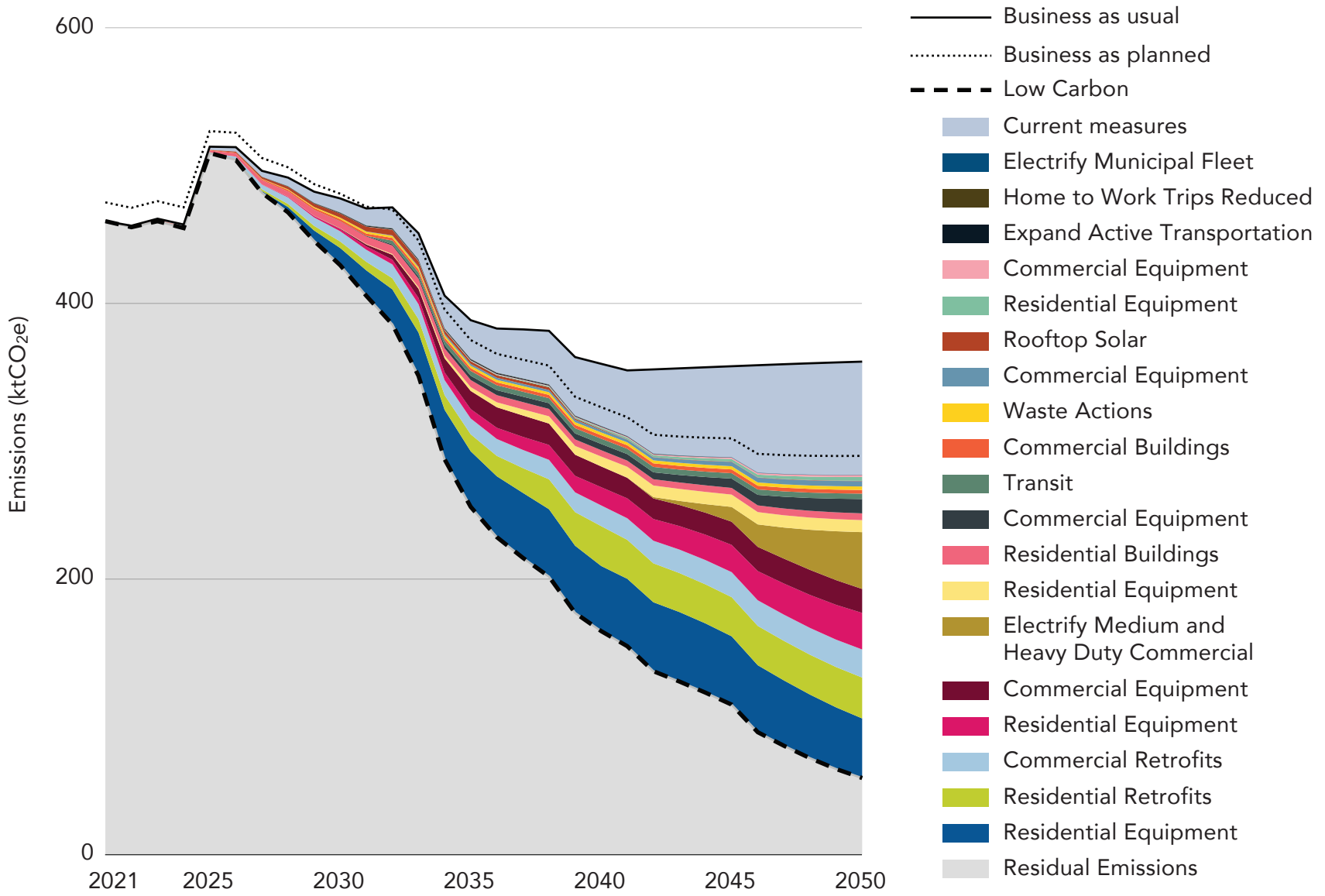
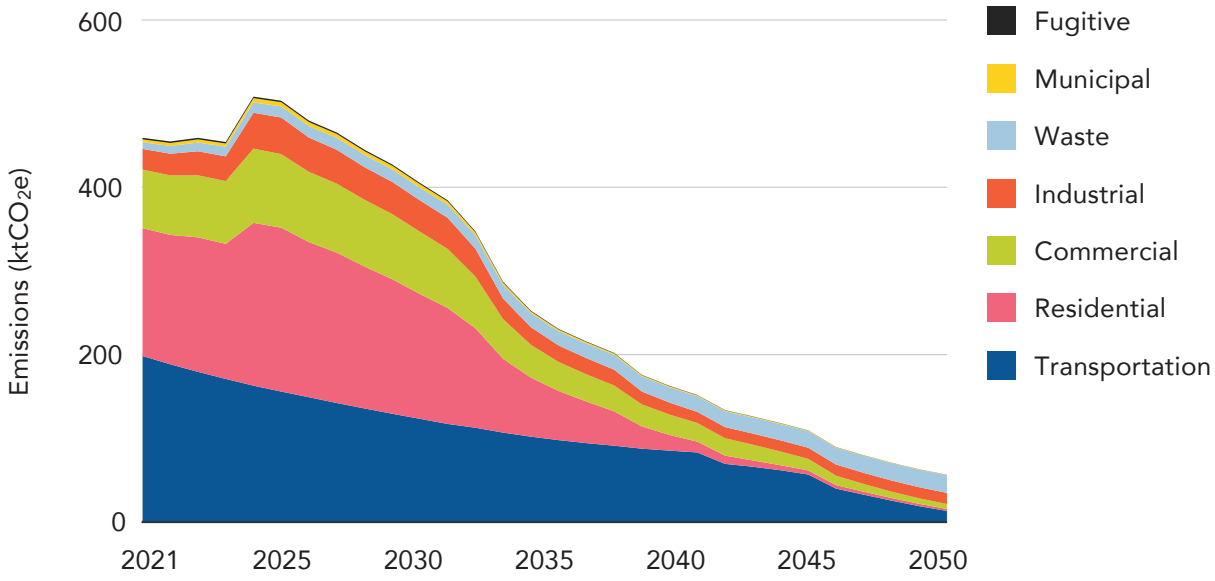


Figure 11. GHG emissions for Newmarket by action in the LC Scenario, 2021–2050.



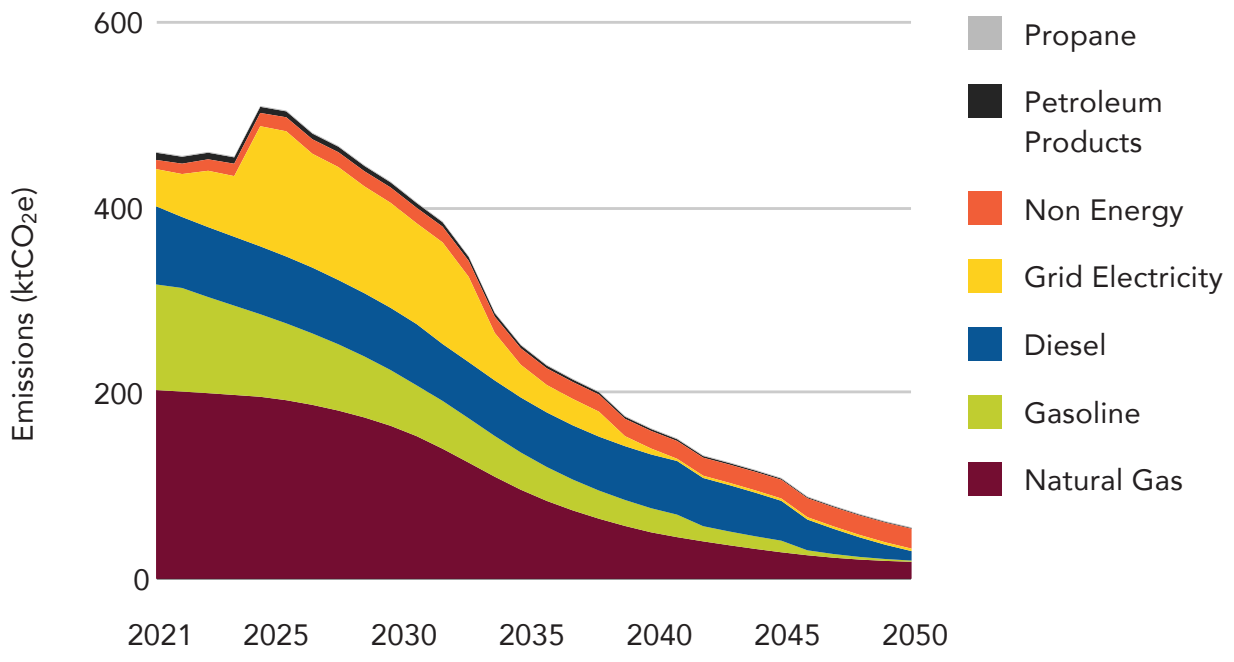
In the LC Scenario, emissions begin to drop as early as 2025 (Figure 12), with a steep decline into 2030 through to 2035, and then moderate decreases through to 2050. Major emissions reduction contributions are linked to changes to heating and cooling systems for residential and commercial buildings. Emissions from electricity also significantly decrease, where renewable energy sources have a higher share of energy generation over time. Additional emissions reductions are related to improved transportation through more efficient vehicles, improved transit options, and an increased share of hybrid and electric vehicles.

Figure 12. GHG emissions for Newmarket by sector in the LC Scenario, 2021–2050.



Natural gas remains a prominent fuel source for some industrial and commercial purposes, with residual consumption in residential buildings (Figure 13). HDVs not yet converted to low-carbon fuels still rely on diesel in 2050. Organic waste deposited in landfills continues to decompose, releasing methane into the atmosphere.

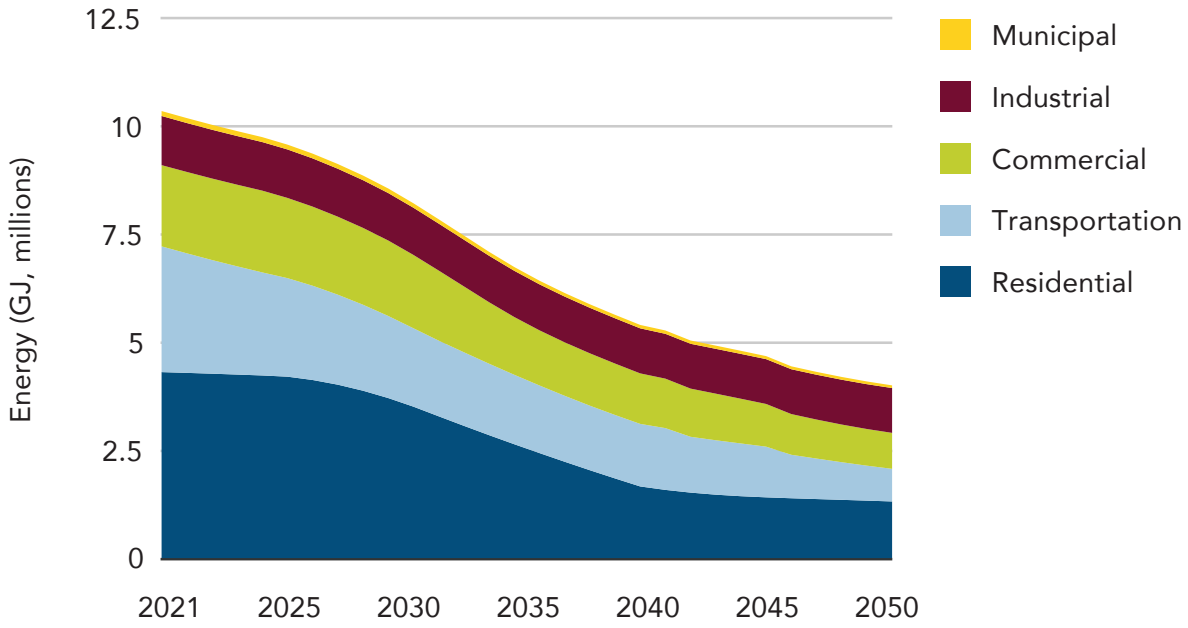
Figure 13. GHG emissions for Newmarket by fuel type in the LC Scenario, 2021–2050.



Energy Use in the LC Scenario

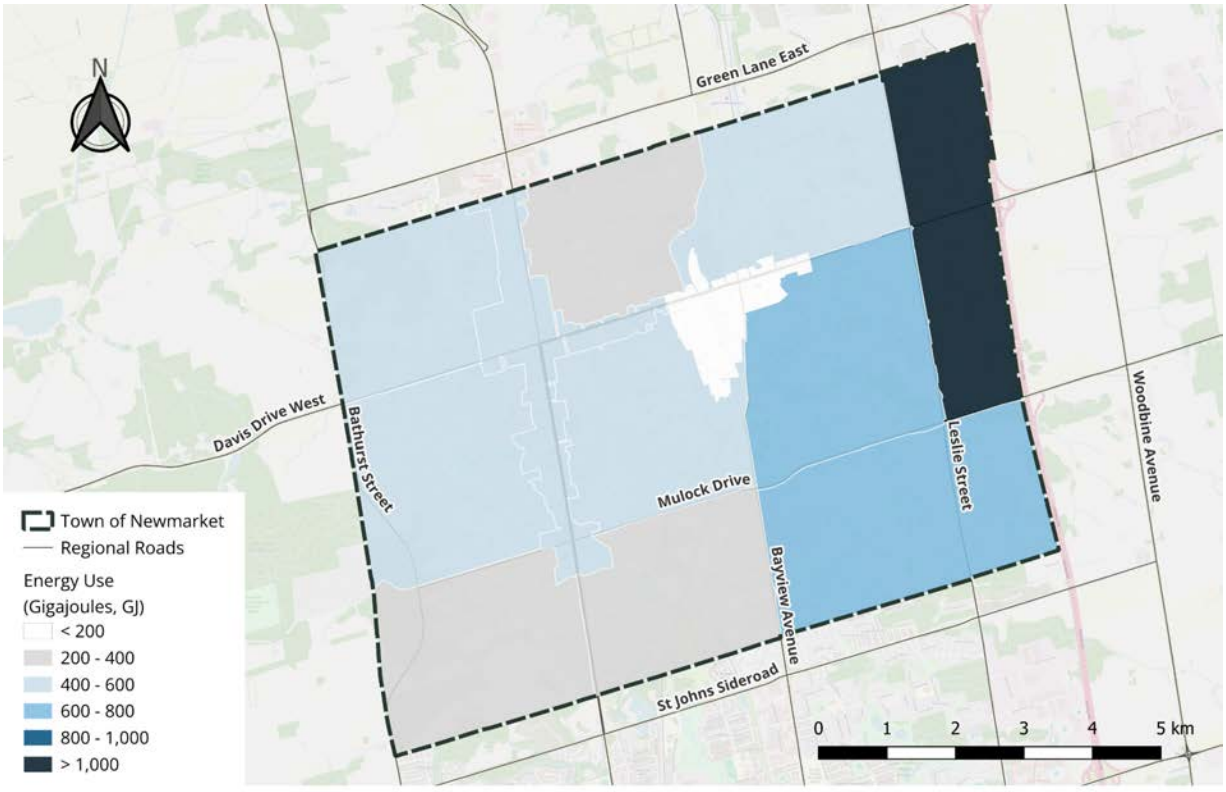
Energy use also decreases over time, from 10.4 million GJ in 2021, to 4.0 million GJ in 2050 (Figure 14). This is a 61% decrease in total energy demand, resulting from improvements to new and existing buildings, converting to efficient EVs, and switching to high-efficiency electric heat pumps for space heating and cooling and water heating. Reducing the total energy demand helps mitigate demand increases on the electrical grid, while also reducing costs associated with heating and cooling buildings and fueling vehicles.

Figure 14. Energy demand for Newmarket by sector in the LC Scenario, 2021–2050.



By 2050, all zones except the industrial zone shift from a higher energy use threshold to a lower one, a significant improvement across the Town (Figure 15). This is due to improved efficiency and lower overall energy use from residential, commercial, and transportation users, with transportation leading the reductions. Changes for these users are noticeable as early as 2030. Industrial and municipal users also decrease over time but more subtly compared to other users.

Figure 15. Energy consumption map for Newmarket in the LC Scenario, 2050.



Base map provided by Open Streetmap
Coordinate Reference System (CRS): ESPG 3857

Scenario: Low carbon scenario (LC), total building energy use
Year: 2050

4.1 Sector-Level Action

Efficient Buildings

Building sector emissions (stationary emissions sources) account for 250 $ktCO_2e$, or roughly half (53%) of the Town's total emissions. Residential buildings are responsible for 61% of building emissions, which is expected given Newmarket's predominantly residential land use.

Emissions from all building types are projected to decrease between 2021 and 2050. This is a result of improved building codes for new construction, reduced demand for space heating, and improvements to Ontario's electricity grid that reduce emissions associated with electricity generation. The emissions reductions are distributed evenly across all types of buildings in the LC Scenario. Residual emissions come primarily from natural gas used for space and water heating.

Figure 16. Building GHG emissions by building type in the LC Scenario, 2021–2050.

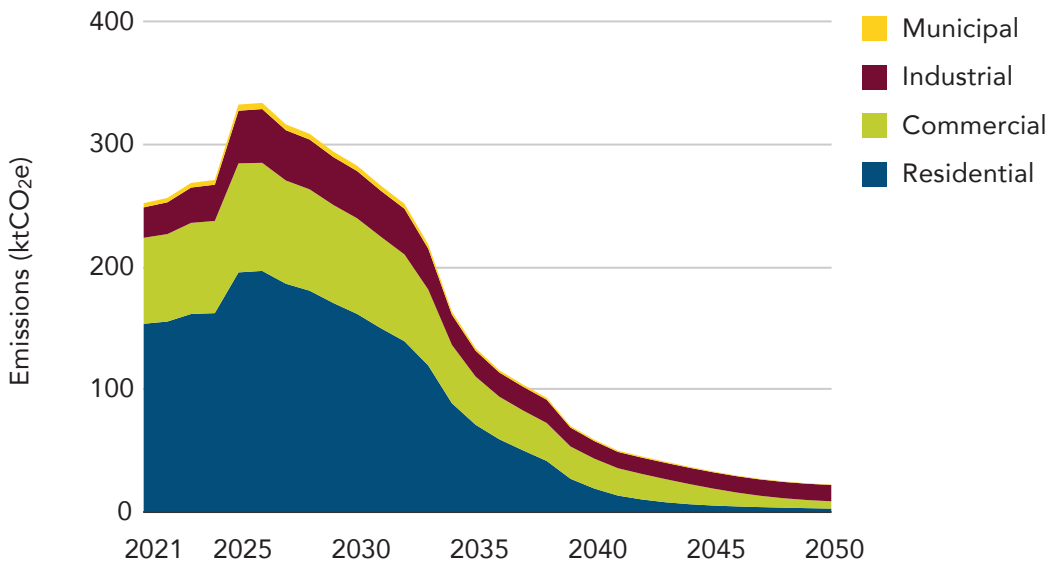
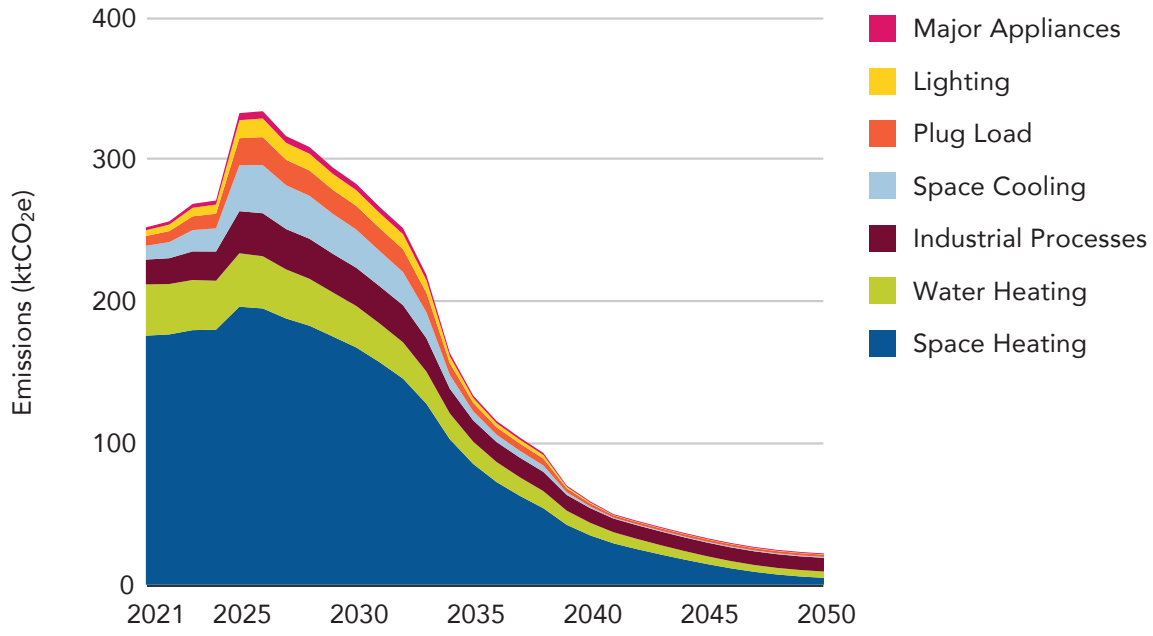


Figure 17. Building GHG emissions demand by end use in the LC Scenario, 2021–2050.



Transportation

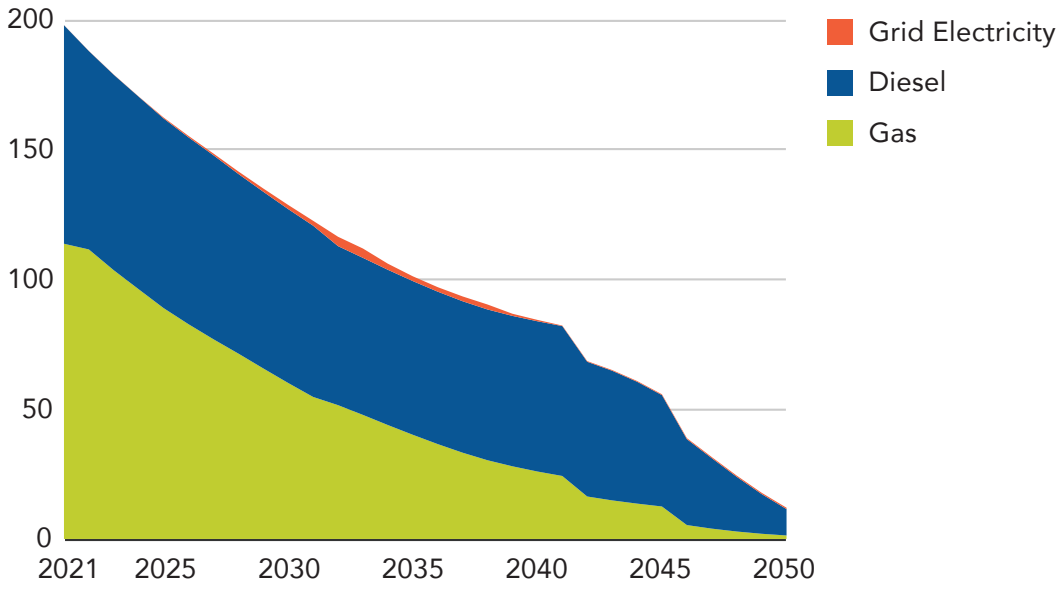
In 2021, transportation emissions are 198,000 tCO_2e, which is about 43% of the total baseline emissions for Newmarket.

Transportation emissions decrease by 71% between 2021 and 2050—accounting for most of the reductions in the BAP Scenario—due to the electrification of personal and commercial vehicles. Most of the remaining transportation emissions come from HDVs (trucks), with diesel being the fuel type that contributes most to these emissions.

Deeper transportation emissions reductions in the LC Scenario are the result of converting MHDVs to low-emissions options, like electric or hydrogen fueled options, and encouraging residents to make fewer trips with their personal vehicles by using transit and active transportation more frequently. These actions reduce transportation emissions by 94% relative to the 2021 baseline.

Because the bulk of the shift from fossil fuels to electricity or low-emissions fuels for MHDVs is projected to occur after the improvements to the Ontario electricity grid, emissions associated with this switch stay low even with the increased demand for grid electricity.

Figure 18. Transportation GHG emissions demand by fuel type in the LC Scenario, 2021–2050.



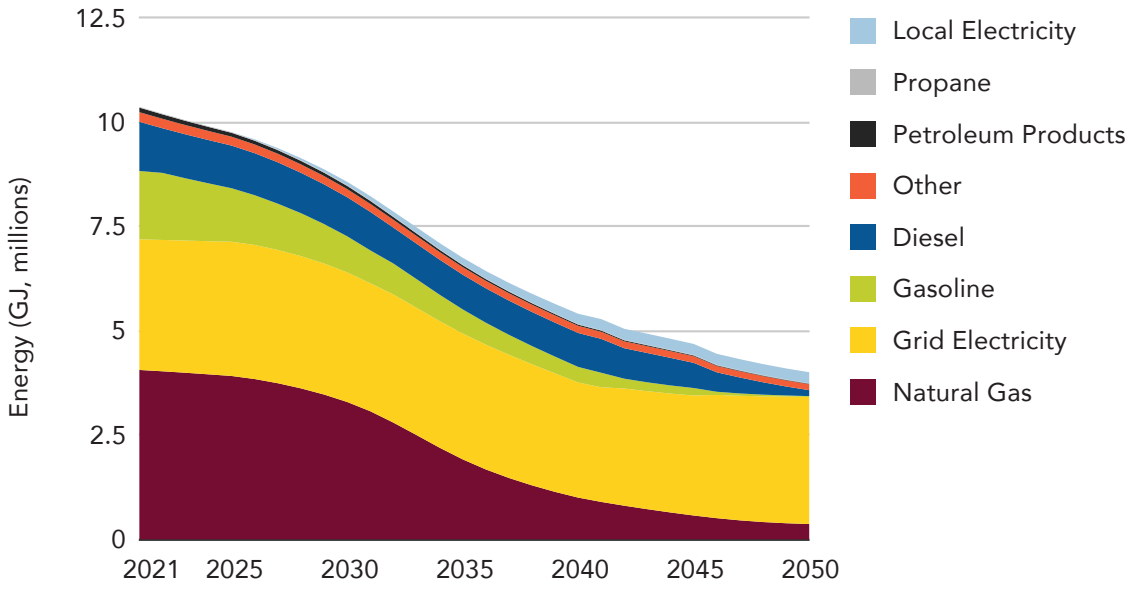
Energy

In 2021, natural gas accounts for 41% of the total energy consumed in Newmarket. Grid electricity, with fluctuating but ultimately low GHG emissions, accounts for a further 31% of the energy consumed. By 2050, total energy consumption decreases by 62% in the LC Scenario, with the greatest changes in fossil fuels, including natural gas, gasoline, and diesel.

Moving to more efficient electrical systems allows for buildings to be heated and cooled, and transportation to continue, but with less total energy consumed. Electrical systems use less total energy than their fossil fuel counterparts, because the conversion of electricity to heat or energy is more efficient than with fossil fuels.

Local electricity is modelled as being generated through solar, but the implementation of this action could include a mix of other renewable energy sources, including wind generation.

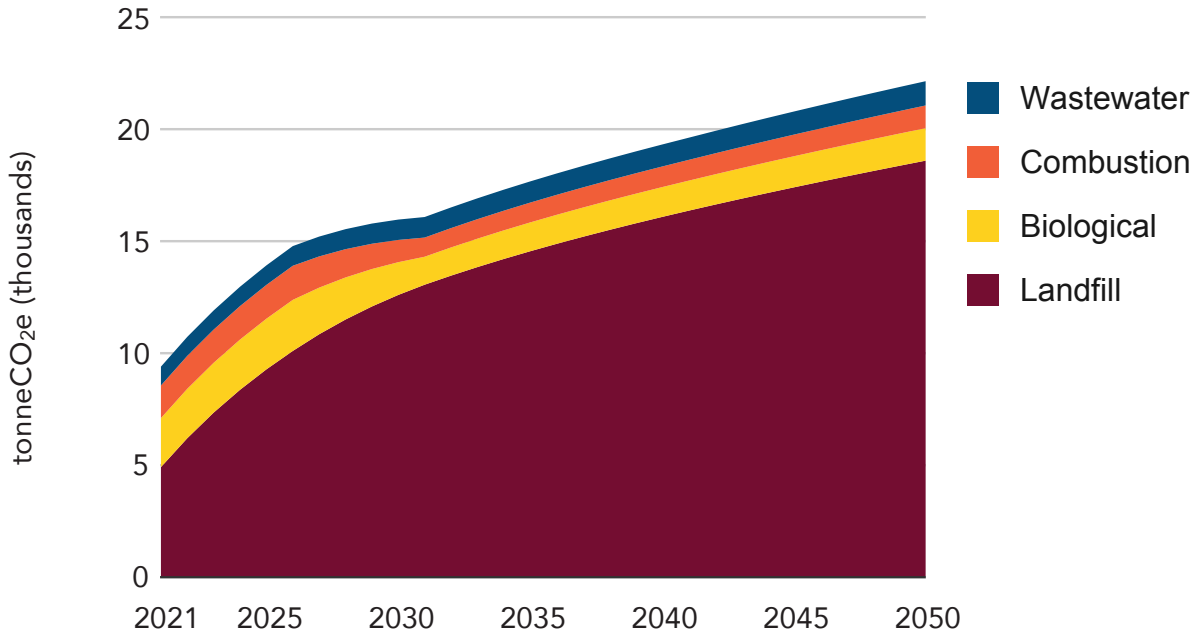
Figure 19. Energy demand by fuel type in the LC Scenario, 2021–2050.



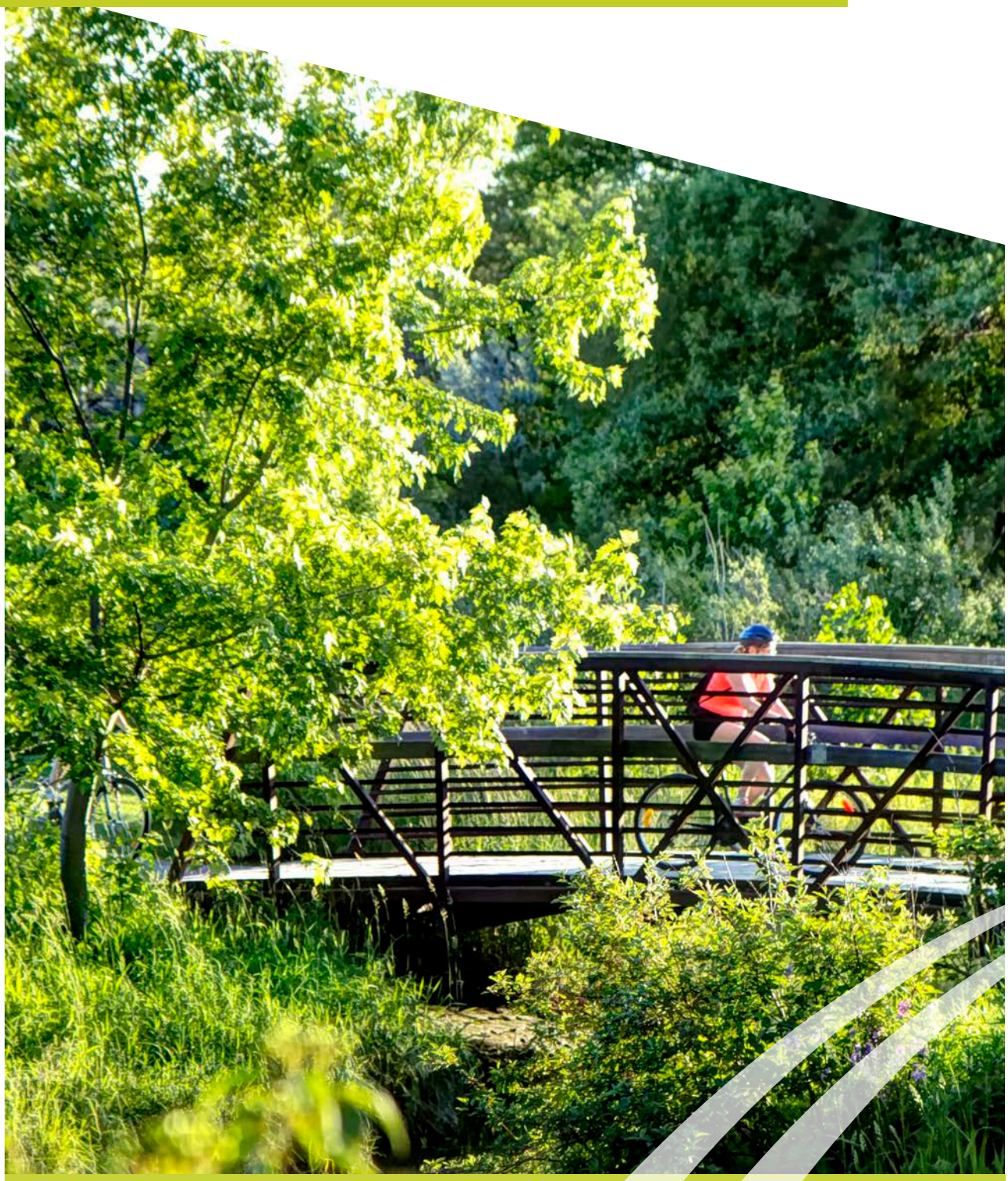
Waste

Waste emissions are 9,400 tCO_2e in 2021, and are anticipated to increase over time proportional to population growth in Newmarket. This equates to less than 2% of Newmarket's total emissions in 2021. In the LC Scenario, waste emissions increase to 16,000 tCO_2e by 2030, 19,700 tCO_2e by 2040, and up to a total of 22,200 tCO_2e by 2050. The majority of emissions across all periods are related to landfill emissions. Organic material takes time to decompose, meaning material already deposited will continue to release GHG emissions into the future.

Figure 20. Waste GHG emissions by subsector in the LC Scenario, 2021–2050.



5 | Costs and Opportunities



Pedestrian bridge, Newmarket. Photo by Town of Newmarket.

5.1 Useful Definitions and Concepts

Key concepts used to analyze financial impacts of the pathways are summarized below.[34]

- **Costs Are Relative to the BAP Scenario:** This financial analysis tracks projected costs and savings from low-carbon measures that are above and beyond the costs in the BAP Scenario.
- **Discount Rate:** The baseline growth value an investor places on their investment dollar. A project is considered financially beneficial by an investor if it generates a real rate of return equal to or greater than their discount rate. This rate varies with the type of project, duration of the investment, level of risk, and scarcity of capital. The social discount rate is used to compare the value to society of investments made for the common good and, as such, it is inherently uncertain and difficult to determine. Some argue that a very low or even zero discount rate should be applied when evaluating climate change mitigation investments. In this project, we evaluate investments in a low-carbon future with a 3% discount rate.[35]
- **Net Present Value (NPV):** The difference between the present value of the capital investment and the present value of savings and revenue generated by the investment. Four categories are used to track the financial performance of the low-carbon actions in this analysis: capital expenditures, energy savings (or additional costs), operations and maintenance savings, and revenue generation.[36] Administrative costs associated with implementing programs, as well as any required energy system infrastructure upgrades, are not included, as these require detailed local and regional analyses that are out of the scope of this work. Similarly, the broader social costs, such as health costs or damages from climate change, that are avoided from mitigating climate change are not included; however, the social cost of carbon (SCC) captures some of the potential savings from reducing GHG emissions and thereby reducing climate impacts.
- **Abatement Cost:** The abatement cost of an action is the estimated cost for that action to reduce 1 tonne of GHG emissions, which is calculated by dividing the action's NPV by the total GHG emissions reductions (tCO_2e) resulting from the action.

34 Detailed financial assumptions are described in the Data, Methods, and Assumptions Manual (DMA) in Appendix F.

35 Canada's Cost-Benefit Analysis Guide for Regularity Proposals (Treasury Board of Canada Secretariat, January 2019), https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwiki.gccollab.ca%2Fimages%2F8%2F8e%2FCBA_Guide-EN.doc&wdOrigin=BROWSELINK.

36 Usually associated with renewable energy production facilities and some transit actions.

5.2 Overall Costs and Savings

Historically, one discourse around climate action is that it costs money and requires sacrifices; however, an economic analysis of the costs and benefits to the community of Newmarket of implementing the LC Scenario shows the opposite. There are compelling economic reasons to implement a net-zero pathway as quickly as possible.

Following convention, the following economic analysis of the LC Scenario designates **costs as positive**, and **savings and revenue as negative**.

The implementation of the LC Scenario represents a total investment of $1.99 billion from 2026–2050, averaging approximately $83 million annually (undiscounted) from all sectors.[37] This capital investment generates savings of $1.36 billion from energy expense savings and avoided operations and maintenance costs, resulting in a net cost of $630 million to the community. This cost transfers to the community as a whole, including households, businesses, other levels of government, and the municipality itself. The financial benefit would decrease if the investments are financed as a result of interest payments, but increase if natural gas prices rise more rapidly than electricity prices. When considering the social cost of carbon, the LC Scenario generates a net benefit of $502 million.

Table 6. Summary of financial results for the LC Scenario, 2026–2050.

Financial Estimate	LC Scenario (undiscounted)	LC Scenario (3% discount rate)
Total incremental capital investment, 2026–2050	$1.99 billion	$1.27 billion
Total energy savings, 2026–2050	-$1.14 billion	-$676 million
Operations and maintenance savings, 2026–2050	-$220 million	-$134 million
Net cost, 2026–2050	$630 million	$476 million
SCC	-$1.13 billion	-$677 million
Net benefit with SCC, 2026–2050	-$502 million	-$219 million

37 All modelling and graphic representations of the financial analysis of the LC Scenario start in 2026, rather than the 2021 energy and emissions modelling base year.

Figure 21. LC Scenario present values of investments and returns, discounted at 3%, 2026–2050.

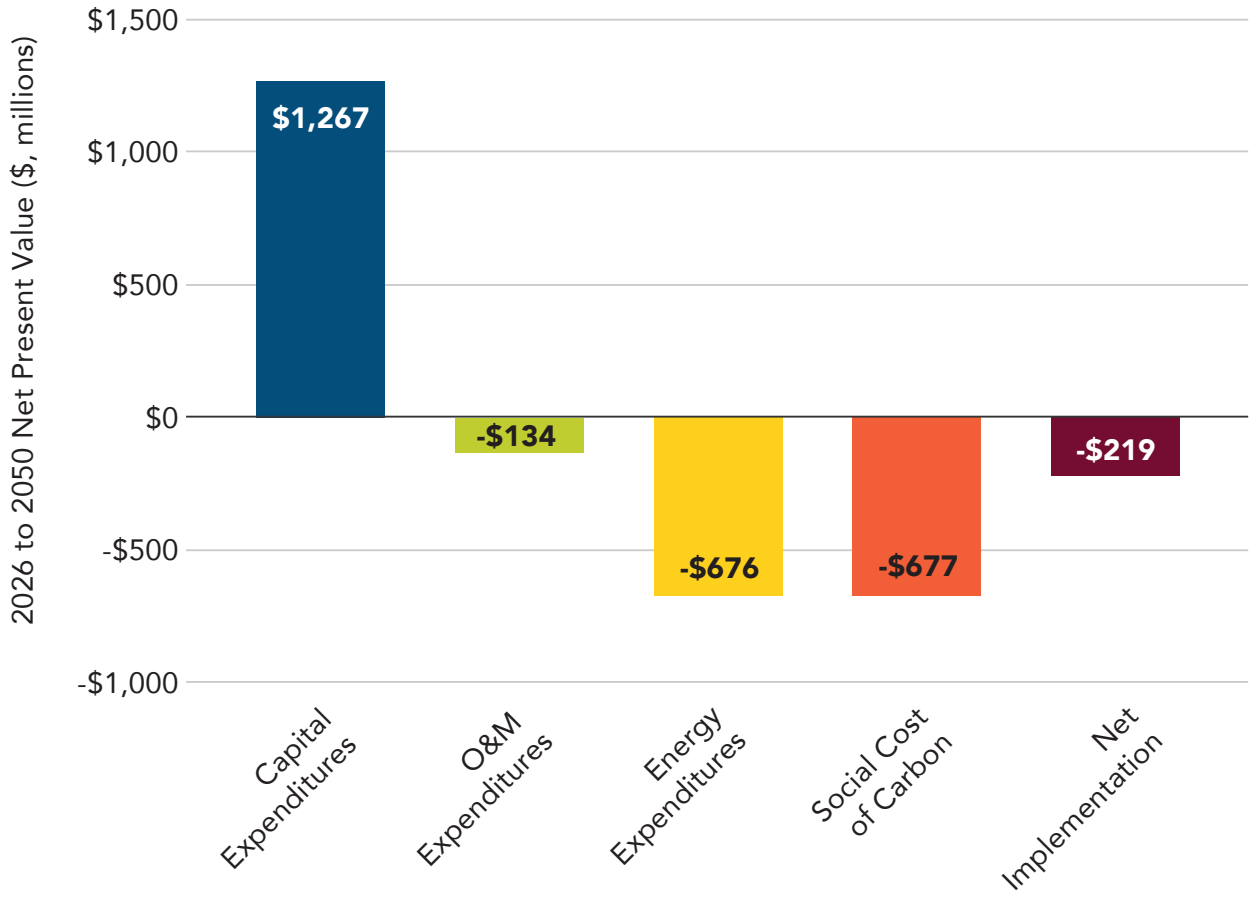
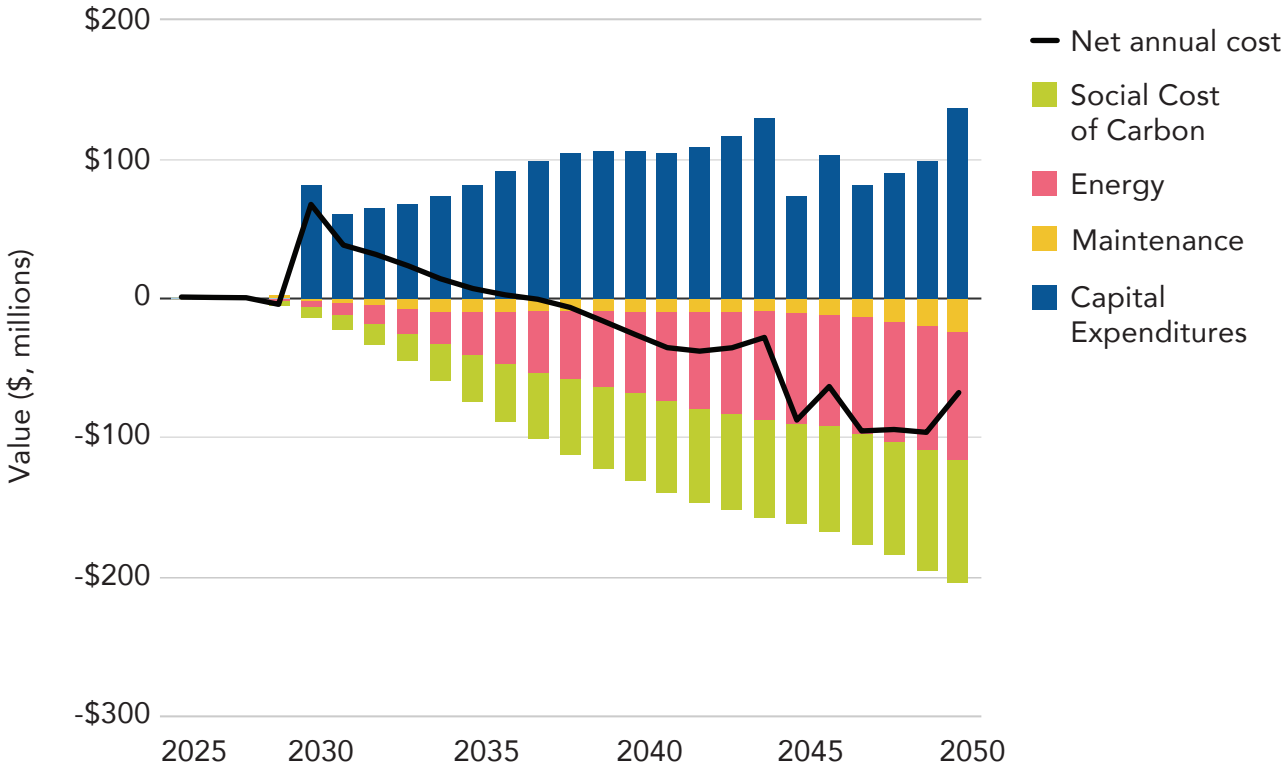


Figure 22 details the annual costs, savings, and revenue associated with fully implementing the actions in the LC Scenario, with capital expenditures shown in full for the years in which they are incurred. As is characteristic of low-carbon transitions, the capital expenditures in the early years of the transition are greater than the savings and revenues generated, but after 2036, the savings outweigh the costs.

Figure 22. Year-over-year LC Scenario investments and returns including the SCC, undiscounted, 2026–2050.



The majority of investments are for building retrofits. Because Newmarket is largely composed of residential buildings, the need to retrofit existing homes represents the primary investment in the LC Scenario. The incremental investment in transportation is negligible because the costs of electric vehicles are projected to reach parity with internal combustion engines as early as 2027. The reduced operation costs of electric vehicles compared with internal combustion engine vehicles represent a major opportunity for cost savings going forward.

The Social Cost of Carbon

Climate change represents a burden on future generations, and the complexity of the climatic system means these impacts are difficult to anticipate. The burden of action increases the longer action is delayed.

The social cost of carbon (SCC) is an estimate of climate change damages. It includes changes in net agricultural productivity, human health, property damages from increased flood risk, and energy system costs, such as reduced costs for heating and increased costs for air conditioning.

The SCC is one of the most effective ways to reflect potential future damages to ensure that decisions affecting future emissions properly account for their long-term impacts.

The discount rate is a significant assumption within the models that calculate SCC. Discounting reflects the idea that people would rather have $100 now than $100 in 10 years.[38] For the purposes of consistency with other processes, a 3% discounting rate is used in this analysis. The analysis presents the results of the SCC for the avoided emissions resulting from the actions taken in Newmarket's CEP.

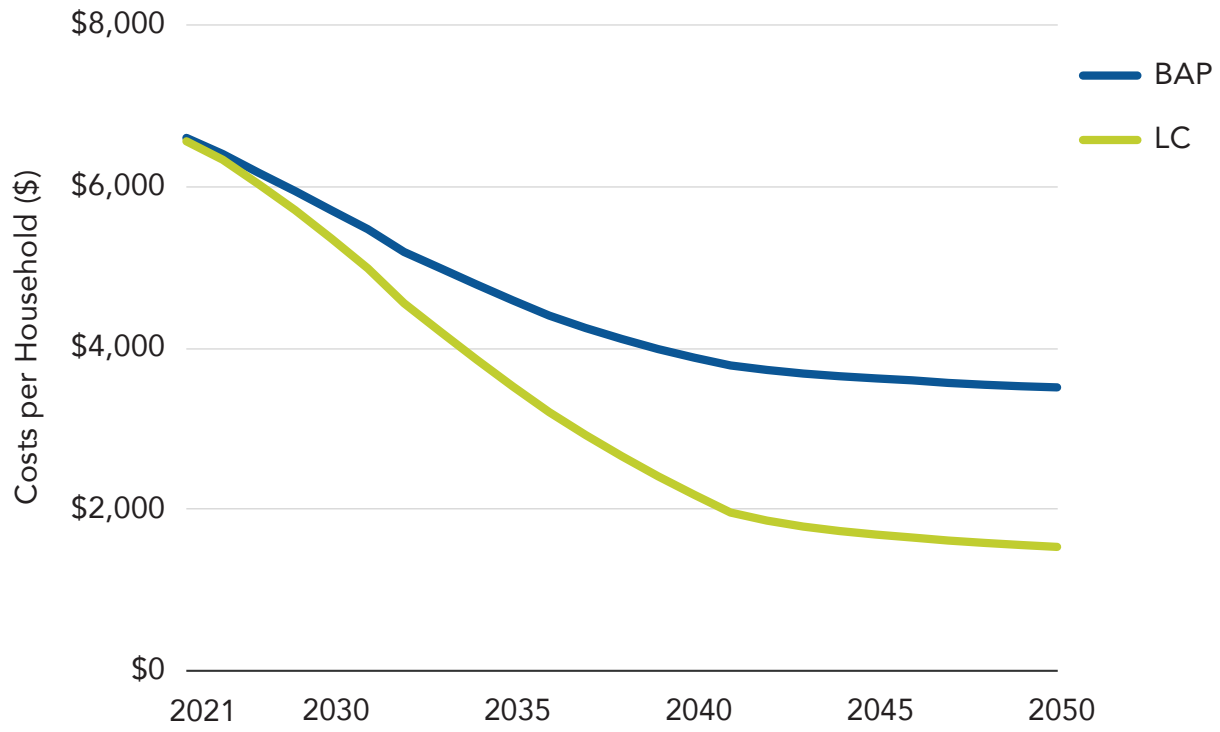
38 Nicholas Stern, "Economic development, climate and values: making policy," Proceedings of the Royal Society B 282, no. 1812 (2015): 20150820, https://doi.org/10.1098/rspb.2015.0820.

5.3 Energy Savings for Households

Household energy expenditures—natural gas, electricity, gasoline, and diesel—are projected to decline by 56% in the BAP, from $7,940 in 2021 to approximately $3,500 by 2050 (Figure 23). In the LC Scenario, savings are much greater. Household energy expenditures fall by 81% to $1,530 by 2050. Depending on the business, policy, and financing strategies used in the implementation of the actions, these savings will be partly offset by the incremental capital expenditures required.

Gasoline and diesel expenses are removed through the electrification of vehicles. Furthermore, natural gas furnaces are replaced with electric heat pumps as part of the deep retrofits and fuel switching, minimizing heating energy requirements to ensure homes are comfortable in summer and winter.

Figure 23. Newmarket's household energy costs (BAP and LC Scenarios), 2026–2050.



Energy Poverty

Household energy expenditures can result in energy poverty, which can have a range of impacts. Households experiencing energy poverty or energy insecurity face challenges such as "pay the rent or feed the family," "heat or eat," or "cool or eat."

Energy insecurity disempowers low-income residents such as single parents, the elderly, persons with disabilities, and others with low or fixed incomes, resulting in stresses such as utility-related debt, shutoffs, inefficient heating systems, antiquated appliances, and extreme home temperatures.

These stresses can cause significant health impacts—children may experience nutritional deficiencies, higher risks of burns from non-conventional heating sources, higher risks of cognitive and developmental behaviour deficiencies, and increased incidences of carbon monoxide poisoning.

5.4 Employment Opportunities

Implementing the LC Scenario is expected to impact labour markets in four categories: additional jobs will be created in emerging sectors, some employment will be shifted (e.g., from fossil fuels to renewables), certain jobs will be reduced or eliminated (e.g., combustion engine vehicle mechanics), and many existing jobs will be transformed and redefined. The LC Scenario adds 17,000 person-years of employment over the BAP Scenario between 2026 and 2050 (Figure 24).[39]

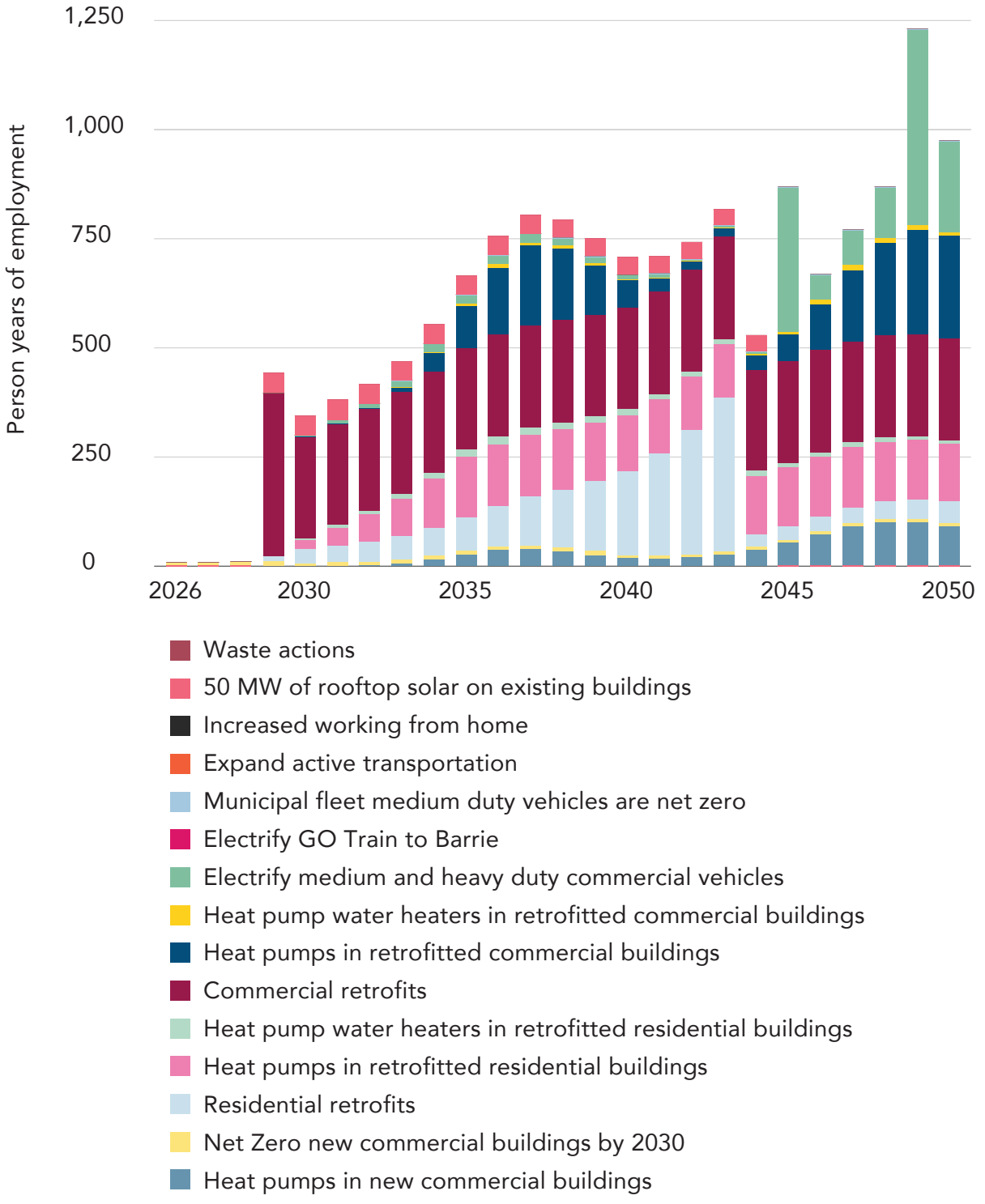
Building retrofits present the largest opportunity for new employment, creating pathways to partner with local education centers. This could include developing training programs that teach the skills needed to complete deep energy retrofits and install high-efficiency equipment. Developing partnerships to expand local knowledge will jumpstart this activity.

At the same time, improvements can be made to accessibility features of public buildings and common areas.

The transportation maintenance sector shows small losses in total person-years of employment, since EVs require less maintenance than internal combustion engines.

39 A person-year of employment is full-time employment for one person for one year.

Figure 24. Annual person-years of employment generated in the LC Scenario.



5.5 Marginal Abatement Costs

The marginal abatement cost (MAC) is the incremental cost of one tonne of GHG reductions. The lower the cost, the more affordable the action, and in some cases, the action can be profitable. The MAC is calculated by summing the NPV of capital costs and operating costs over the lifetime of investments, divided by the tonnes of GHGs reduced.

By providing individual costs for actions, the MAC can imply that the actions are a menu from which specific actions can be selected. Many actions are dependent on each other; for example, if retrofits are not included with the conversion to electric heat pumps, energy costs can rise when compared to natural gas heating systems.

Table 7 summarizes the MAC for the modeled actions in Newmarket's LC Scenario. The actions with negative abatement costs generate financial returns over their lifetimes. A positive abatement cost, costs money over the span of the project. This comparison provides one way to view the costs and benefits of the implementation of emissions-reducing actions but should not be the sole metric to prioritize an action.

Table 7. MACs for modeled actions.

Low-Carbon Action	Cumulative Emissions Reduction (kt CO_2e)	NPV (millions $)	Marginal Abatement Cost ($/t$CO_2e$)
Waste actions	43	-$151	-$3,478
Increased working from home	3	-$11	-$3,273
Expand active transportation	8	-$15	-$1,777
Electrify medium and heavy duty commercial vehicles	166	-$251	-$1,516
50 MW of rooftop solar on existing buildings	34	-$40	-$1,154
Net Zero new commercial buildings by 2030	54	-$50	-$940
Net Zero new residential buildings by 2030	120	-$99	-$825

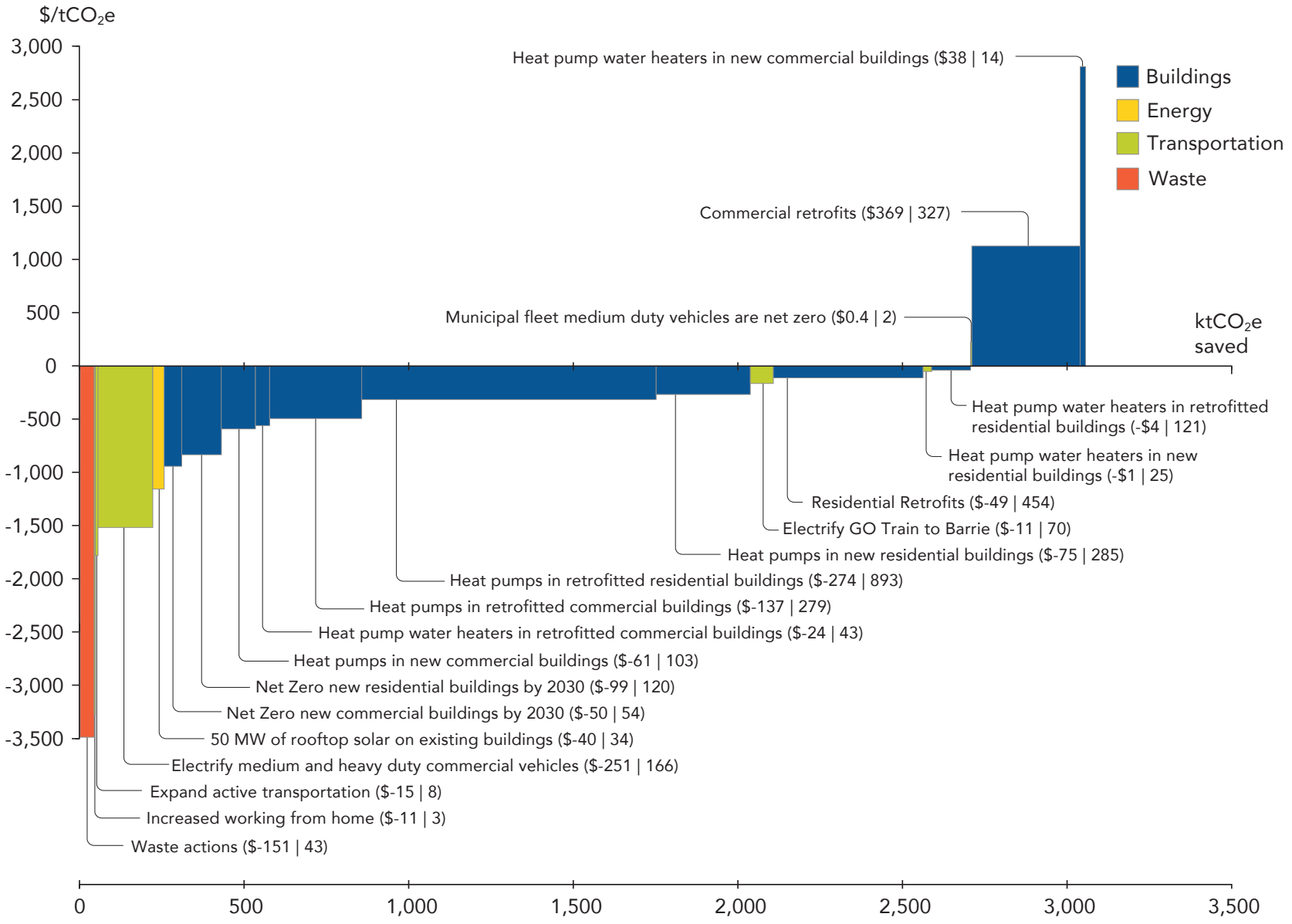
Low-Carbon Action	Cumulative Emissions Reduction (kt CO_2e)	NPV (millions $)	Marginal Abatement Cost ($/t$CO_2e$)
Heat pumps in new commercial buildings	103	-$61	-$589
Heat pump water heaters in retrofitted commercial buildings	43	-$24	-$558
Heat pumps in retrofitted commercial buildings	279	-$137	-$491
Heat pumps in retrofitted residential buildings	893	-$274	-$307
Heat pumps in new residential buildings	285	-$75	-$262
Electrify GO Train to Barrie	70	-$11	-$162
Residential retrofits	454	-$49	-$109
Heat pump water heaters in new residential buildings	25	-$1	-$49
Heat pump water heaters in retrofitted residential buildings	121	-$4	-$36
Municipal fleet medium duty vehicles are net zero	2	$0.4	$224
Commercial retrofits	327	$369	$1,128
Heat pump water heaters in new commercial buildings	14	$38	$2,804
Total	**3,043**	**-$846**	**-$278**

Illustrated differently, the MAC curve gives a visual representation of the financial implications and the emissions reductions associated with each action (Figure 25). The height of the bar indicates the size of the financial costs/savings, and the width shows the potential GHG savings.

The two most expensive actions per tonne of CO_2e reduced are conducting commercial retrofits and installing commercial heat pumps for space heating. Actions with minimal costs associated with them, like working from home and improving waste management, show the lowest cost per tonne of CO_2e reduced.

While retrofits to all building types, as well as the conversion to efficient heat pumps for space heating and cooling, require significant capital investment, they also provide the benefits of being easier and less expensive to keep at safe, comfortable temperatures, and being more resilient during power outages and extreme weather. Well-insulated buildings maintain their internal temperature for longer periods of time during power outages.

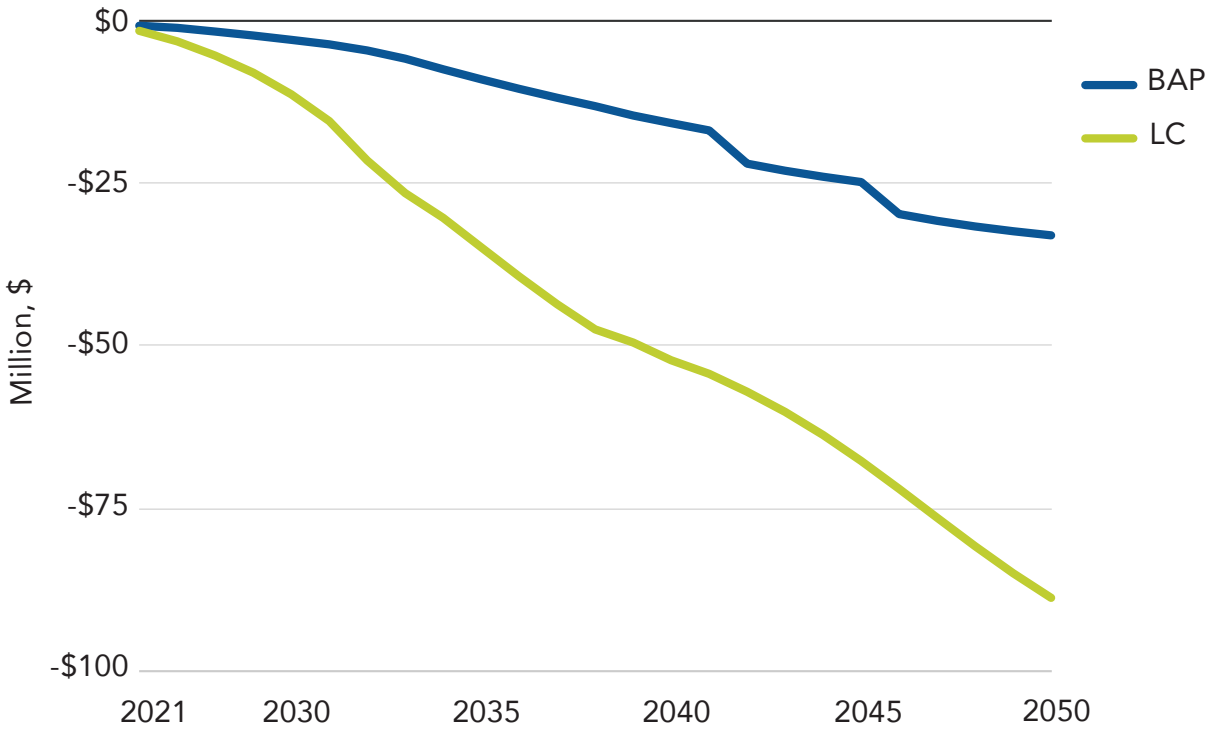
Figure 25. MAC curve for the LC Scenario, 2026–2050.



5.6 Social Cost of Carbon

Climate change is driving extreme weather patterns, resulting in more frequent and more expensive impacts than in previous decades. The value of avoided damage or avoided costs from climate change can be calculated using the SCC.[40] When the SCC is applied to the cumulative emissions in the BAP Scenario between 2026 and 2050, the cost of damages is $3.38 billion. In the LC Scenario, the cost of the damages declines to $1.13 billion (Figure 26). The method used to calculate the SCC is shown in Appendix F.

Figure 26. Cumulative SCC for the BAP and LC Scenarios, 2026–2050.



40 Kevin Rennert, et al., "Comprehensive evidence implies a higher social cost of CO_2," Nature 610, no. 7933 (2022): 687–692.

6 | Implementation

Walking tour, Newmarket. Photo by Town of Newmarket.

Translating the technical work of modelling into an implementable plan relies heavily on the information gathered during the engagement phases of the project. Modelled actions are specific, quantifiable, and grounded on elements that are tracking in the modelling. These modelled actions identify **what** needs to be done to meet Newmarket's climate goals, but don't identify **how** to complete the work. Moving from "what" to "how" requires using the information gathered during engagement to identify opportunities, existing programs and successes, climate champions, barriers, and priorities across Newmarket.

Based on the modelling and the engagement results, five priority areas for the CEP were identified:

1. Efficient Buildings
2. Sustainable and Inclusive Transportation
3. Clean Energy for All
4. Sustainable Waste Management
5. Leadership and Communication

Within each of these priority areas, several implementation actions have been identified. Sections 6.1 to 6.5 outline these actions, along with information about the timeline, co-benefits, key performance indicators (KPIs), resources, and partners (each defined below) that are needed to implement the actions.

Timeline

The timeline of an action is the amount of time needed to enact an action successfully. To avoid confusing meeting a final target versus an intermediate milestone, the timeline defines the time it takes to meet the final target. The timeline criteria is measured as ongoing, immediate, and the following 24-year time horizons: the near-term, mid-term, and long-term. These 24-year time horizons match the scale of time that climate change impacts are anticipated to occur, as well as the lifecycle of infrastructure. Therefore, the actions implemented for the long-term should consider its lasting impact over time.

- **Ongoing Actions:** Typically built upon current work within the Town or region.
- **Immediate Actions:** Can be launched within the next five years.
- **Short-Term Actions:** Can be launched within the next five to 10 years.
- **Medium-Term Actions:** Can be launched within the next 10 to 20 years.
- **Long-Term Actions:** Can be launched within the next 20+ years.

Co-Benefits

Co-benefits describe how the action may support other goals within Newmarket. Actions are mapped to at least one of the following shared outcomes:

- builds community knowledge
- improves air quality
- improves health and well-being
- enhances resilience
- promotes economic development
- promotes equity and justice
- provides cost savings
- provides ecosystem services
- sequesters carbon
- supports housing supply and diversity
- continuity of municipal services

Key Performance Indicators

Key performance indicators (KPIs) are measurable values that are identified to monitor and evaluate the performance of the implemented action over time.

Lead Department

The lead department is the group responsible for leading the implementation of an action. It may be a Commission, Department, or Business Unit at the Town, or an external body like York Region.

Supporting Departments and Organizations

Supporting departments and organizations are the Town Commissions, Departments, or Business Units, and external organizations that are able to support the implementation of the action.

Funding and Other Opportunities

Identified funding and other opportunities are sources that can cover the cost of the action. Funding sources may include the allocation of internal financial resources or external funding (e.g., grants, loans, sponsorship).

Cost and Savings

Cost ranges estimate the price of implementing each action (Table 8). This range reflects expenses related to staff time, materials, equipment, services, and any external partners or consultants involved. Specifically, these represent the anticipated costs (or savings) to the Town of Newmarket associated with implementing the actions. Five cost ranges are summarized in the following table.

Table 8. Cost ranges to implement actions in the LC Scenario.

Cost Level	Cost Range	Examples of Costs
Very Low ($)	<$100,000	• Staff time • Purchasing moderate supplies and/or equipment • Research or consulting needs
Low ($$)	$100,000 to $250,000	• Staff time • Consultants or research needs • Purchasing equipment or supplies
Moderate ($$$)	$250,000 to $1,000,000	• Staff time • Seed funding that may or may not come from grants • Purchasing equipment or assets
High ($$$$)	$1,000,000 to $10,000,000	• Staff time • Significant financial input for equipment, or materials/ services, such as EV chargers or new ZEVs
Very High ($$$$$)	>$10,000,000	• Large-scale renewable energy generation • Transportation planning and/or new transportation infrastructure • New wastewater infrastructure

6.1 Efficient Buildings

Building emissions (stationary emissions sources) for Newmarket account for 250 $ktCO_2e$, or roughly half of the community's total emissions (53%). Residential buildings are responsible for 61% of building sector emissions, which is expected given Newmarket's predominantly residential land use.

The implementation actions are designed to improve the efficiency of new and existing buildings, ensure residents have access to high-efficiency space heating and cooling, and build a construction industry to support the need for retrofits and net-zero construction.

Table 9. Summary of Efficient Buildings actions.

Index	Action Name
1.1	Green development standards
1.2	Incentives for net-zero construction
1.3	Building efficiency rating program
1.4	Education for construction industry
1.5	Training to expand the construction labour force
1.6	Implement the Property Assessed Clean Energy (PACE) Residential retrofit pilot project- Newmarket Energy Efficiency Retrofit (NEER) program
1.7	Community housing retrofit pilot project
1.8	Develop a list of pre-approved contractors
1.9	Retrofit municipal buildings
1.10	Develop a revolving energy efficiency fund

1.1 Green development standards (GDS)	
Continue to implement and refine the green development standards to require (or encourage) energy-efficient new construction.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Planning ▪ Newmarket Building ▪ Newmarket Forestry ▪ Newmarket Development Engineering ▪ York Region ▪ Climate Action Partnership ▪ The Atmospheric Fund (TAF) ▪ Other municipalities in the region ▪ Other municipalities in surrounding regions ▪ Province of Ontario
Co-Benefits	▪ Provides cost savings ▪ Improves air quality ▪ Enhances resilience
Timeline	Ongoing
Cost	$
Savings	N/A
KPI	▪ Number of energy-efficient projects implemented ▪ Efficiency targets over time ▪ Number of development applications that include GDS metrics
Funding and Other Supports or Opportunities	▪ Funding: TAF ▪ Other municipalities in the region ▪ Other municipalities in other surrounding regions

1.2 Incentives for net-zero construction	
Explore incentives to encourage developers to choose net-zero buildings, for buildings that exceed the green development standards and current building code.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Planning and Building Services ▪ Newmarket Financial Services ▪ Industry Associations ▪ Development Organizations ▪ Energy and Utility Partners ▪ Province of Ontario ▪ Federal Government of Canada
Co-Benefits	▪ Builds community knowledge ▪ Promotes economic development ▪ Enhances resilience ▪ Provides cost savings ▪ Supports housing supply and diversity
Timeline	Short term
Cost	$–$$
Savings	N/A

1.2 Incentives for net-zero construction	
KPI	▪ Number of permits issued for net-zero builds ▪ Number of incentive programs created or tested ▪ Developer cost

Funding and Other Opportunities

Climate Action Partnership - Green Development Standards Toolkit for Municipal Staff: highlights the Canadian Home Builders' Association (CHBA) Net Zero Home Labelling Program and what other southern Ontario municipalities are doing to incentivize net-zero buildings.

Canada Mortgage and Housing Corporation (CMHC):

(UPDATED) Eco Plus: offers a 25% partial premium refund for applicants who are CMHC insured and buying a newly built[1] energy-efficient home.

Enbridge:

Savings by Design for Affordable Housing: gives providers free access to building science expertise and financial incentives up to $120,000 to design and build new construction affordable housing projects that exceed the Ontario Building Code by at least 20%.

Savings by Design Residential: gives builders and developers free access to industry experts and energy modelling to build a Net Zero Energy Ready discovery home plus qualify for incentives to build to ENERGY STAR© for New Homes standards.

Savings by Design Commercial & Multi-Residential: gives free access to industry experts and technical tools to build high-performance and resilient buildings.

Local improvement charge: An innovative approach is to give loans for higher-performance buildings using a local improvement charge, with payment equal to the energy savings over a base building. It could also be targeted to specific technologies such as solar or geothermal.

1.3 Building efficiency rating program

Develop a rating program in partnership with York Region and other local municipalities, for assessing the efficiency of new buildings to allow consumers to select more efficient homes and buildings.

Lead Department	York Region
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Windfall Ecology Centre ▪ York Region ▪ Climate Action Partnership ▪ TAF ▪ Other municipalities in the region ▪ Other municipalities in surrounding regions
Co-Benefits	▪ Builds community knowledge ▪ Provides cost savings ▪ Promotes equity and justice ▪ Supports housing supply and diversity
Timeline	Short term
Cost	$$
Savings	N/A
KPI	▪ Percentage of buildings enrolled in the rating program annually ▪ Number of participating municipalities ▪ Number of consumers accessing or using the rating program ▪ Progress to develop this rating program

Funding and Other Opportunities

Energy Star Canada: provides a standardized rating system for homes and buildings.

Energy Efficiency for Homes: encourages the construction and retrofit of low-rise residential housing, making the stock more energy efficient.

1.4 Education for construction industry

In collaboration with regional municipalities and other partners, support developers and the construction industry with resources and educational opportunities about high-efficiency building practices and opportunities.

Lead Department	York Region
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Corporate Communications ▪ Newmarket Planning and Building Services ▪ Newmarket Community and Economic Innovation ▪ Academic Institutions ▪ Climate Action Partnership ▪ Energy and Utility Partners
Co-Benefits	▪ Builds community knowledge ▪ Promotes economic development ▪ Supports housing supply and diversity
Timeline	Short term
Cost	$
Savings	N/A
KPI	▪ Number of events hosted ▪ Number of event attendees ▪ Number of participating organizations

Funding and Other Opportunities

Save on Energy[41] training and support initiatives:

- Building Operator Certification Incentive
- Certified Measurement and Verification Professional Certification Incentive
- Energy Manager Training Incentive

41 "Training and Support," Save on Energy, accessed January 28, 2026, https://saveonenergy.ca/Training-and-Support.

1.5 Training to expand the construction labour force	
Partner with local education institutions and organizations to develop training programs and microcertification opportunities to expand the efficient-building construction labour force.	
Lead Department	York Region/ Province of Ontario
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Community and Economic Innovation ▪ Workforce York Region ▪ Academic Institutions ▪ Construction Industry Association
Co-Benefits	▪ Builds community knowledge ▪ Promotes economic development ▪ Promotes equity and justice ▪ Supports housing supply and diversity
Timeline	Immediate term
Cost	$
Savings	N/A
KPI	▪ Number of participating institutions ▪ Number of training programs established ▪ Number of participants ▪ Number of certifications awarded

1.5 Training to expand the construction labour force

Funding and Other Opportunities

There are several opportunities to guide local businesses and industry toward existing resources to expand the labour force. These include:

- Ontario Skills Development Fund:[42] offers funding to organizations for innovative projects that address challenges to hiring, training, or retaining workers, including apprentices, to drive Ontario's economic growth.
- Better Jobs Ontario:[43] assists Ontarians to re-join the workforce.
- STEP and Windfall Ecology Centre: leverages existing partnerships to develop training programs.

1.6 Implement the Newmarket Energy Efficiency Retrofit (NEER) program

Continue to explore funding opportunities to implement the Newmarket Energy Efficiency Retrofit (NEER) Business Plan. The NEER program aims to facilitate residential retrofits converting natural gas heating systems to electric heat pumps and improve home weatherization/insulation.

Once implemented, future expansions to the NEER program could include retrofit packages beyond the installation of heat pumps, such as energy-related add-ons. Initially, these could include solar power, solar thermal, and EV charging stations.

Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Planning and Building Services ▪ Enerva Energy Solutions Inc. ▪ Province of Ontario ▪ Federal Government of Canada
Co-Benefits	▪ Provides cost savings ▪ Improves air quality ▪ Enhances resilience
Timeline	Ongoing

42 "Skills Development Fund Training Stream," Employment Ontario, updated October 2, 2025, http://www.ontario.ca/page/skills-development-fund-training-stream.

43 "Better Jobs Ontario," Ontario Ministry of Labour, Immigration, Training and Skills Development, updated February 4, 2026, http://www.ontario.ca/page/better-jobs-ontario.

1.6 Implement the Newmarket Energy Efficiency Retrofit (NEER) program	
Cost	$$–$$$
Savings	N/A
KPI	▪ Number of heat pump conversion and retrofit uptake ▪ Number of participants in program

Funding and Other Opportunities

Ontario's Home Renovation Savings Program

Save on Energy - Energy Affordability Program: offers Ontario homeowners savings on improving their home's energy efficiency. It includes a detailed in-home energy assessment, professional installation of energy-saving measures (including ENERGY STAR® certified LED light bulbs) and advice on actions to save more energy. All conservation devices and products provided are directly installed in the home and are free of charge to participants.

Save on Energy - Existing Building Commissioning (EBCx): is designed to help owners, operators, and managers of commercial and institutional buildings in Ontario improve their energy management.

Save on Energy - Retrofit Program: provides businesses with financial incentives for implementing energy-efficient measures in their facilities. Prescriptive, engineered, and custom track applications are available to suit the intended retrofit project.

Save On Energy - Small Business Program: provides financial incentives up to $2,000 worth in energy-efficient lighting upgrades, including ENERGY STAR® certified LED lighting products, and up to $2,500 for non-lighting upgrades to qualifying businesses. The program provides licensed electrical contractors, a no-risk assessment, and clean-up which includes recycling and proper disposal.

1.7 Community housing retrofit pilot project

Support the work of York Region, and seek out funding to conduct a bulk energy retrofit pilot to retrofit several housing units at one time with minimal disruption to residents.

Lead Department	York Region
Supporting Departments and Organizations	▪ Newmarket Office of the CAO ▪ Newmarket Climate, Environment and Sustainability ▪ Energy and Utility Partners
Co-Benefits	▪ Enhances resilience ▪ Promotes equity and justice ▪ Provides cost savings ▪ Supports housing supply and diversity ▪ Improves air quality ▪ Improves health and well-being
Timeline	Short term
Cost	$–$$$
Savings	N/A
KPI	▪ Number of participating agencies ▪ Number of eligible dwellings (and types of retrofits eligible) ▪ Number of funding applications ▪ Number of successfully funded projects ▪ Amount of successful funds acquired

Funding and Other Opportunities

York Region Community Housing Supply Grant: provides capital funding to non-profit and co-operative housing organizations that are ready to build new community housing units.

Enbridge Affordable Housing Multi-Residential (AHMR) Retrofit Program: offers owners of affordable housing multi-residential buildings a one-time incentive of $2.50 per m3 of natural gas saved, up to $200,000, on the implementation of any number of energy-saving measures. Eligible measures include better building controls, water conservation, and efficient make-up air and ventilation systems.

IESO CoolSaver Program: helps homeowners and tenants upgrade their home cooling systems to reduce their electricity consumption and energy costs.

Enbridge Home Efficiency Rebate Plus: offers rebates toward eligible retrofits such as home insulation, windows and doors, heat pumps, and renewable energy systems.

1.8 Develop a list of pre-approved contractors

Continue to collaborate with York Region and Windfall Ecology Centre to develop a publicly accessible list of pre-approved contractors who are qualified to do deep energy retrofits, install heat pumps, and build high-efficiency buildings.

Lead Department	York Region
Supporting Departments and Organizations	▪ Newmarket Corporate Communications ▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Community and Economic Innovation ▪ Other municipalities in the region ▪ Other municipalities in surrounding regions
Co-Benefits	▪ Builds community knowledge ▪ Promotes economic development
Timeline	Immediate term
Cost	$
Savings	N/A
KPI	▪ Number of contractors reviewed and approved ▪ Last update to public lists ▪ Homeowner engagement and user experience ▪ Coverage of priority groups/areas

1.8 Develop a list of pre-approved contractors

Funding and Other Opportunities

York Region

Windfall Ecology Centre

Builders, Renovators, and Developers in Ontario:44 is an organization committed to working with builders interested in responsible sustainability practices in the residential building sector.

Save On Energy (Ontario and Enbridge):

- Ontario's Home Renovation Savings Program
- Enbridge Home Winterproofing Program (HWP):45 provides energy-saving upgrades including home audits at no cost.

1.9 Retrofit municipal buildings

Retrofit all current municipal buildings to net-zero and share the challenges and success with the public.

Lead Department	Newmarket Parks and Facility Services
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Corporate Asset Management ▪ Newmarket Financial Services ▪ Newmarket Building Services ▪ Newmarket Community Services ▪ Newmarket Procurement
Co-Benefits	▪ Builds community knowledge ▪ Enhances resilience ▪ Provides cost savings ▪ Continuity of municipal services
Timeline	Long term
Cost	$$$$$

44 "Builders, Renovators, and Developers in Ontario," BUILT GREEN® Builders, accessed February 17, 2026, https://www.builtgreencanada.ca/ontario?mid=979.

45 Home Winterproofing Program (HWP)," Enbridge, accessed February 17, 2026, https://www.enbridgegas.com/ontario/rebates-energy-conservation/.

1.9 Retrofit municipal buildings	
Savings	$$$
KPI	▪ Percentage of buildings retrofitted over time ▪ Type of retrofit applications ▪ Percent reduction in municipal building emissions ▪ Percentage of buildings generating renewable energy onsite ▪ Annual avoided utility costs ▪ Lifecycle cost savings

Funding and Other Opportunities

Align capital investments and the Town's asset management to fund this action. Other options include:

- SOFIAC financial solutions for municipal project
- Buildings Retrofits Initiative: finances energy efficiency and decarbonization retrofit projects in existing buildings.
- Ontario's One Investments
- Sustainable Municipal Buildings program (opening soon for 2026 applications): supports projects at various stages of development through grants and loans. Funding amounts are based on total eligible costs. Further details on eligible costs are provided on individual funding pages.

1.10 Develop a revolving energy efficiency fund	
Develop a revolving energy fund policy that ensures utility and operations and maintenance savings achieved from Municipal building retrofits is reinvested into future Municipal retrofit projects.	
Lead Department	Newmarket Financial Services
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Corporate Asset Management ▪ Newmarket Parks and Facility Services
Co-Benefits	▪ Enables continuity of municipal services
Timeline	Short term
Cost	$$$$$, can include grants
Savings	TBD
KPI	▪ Amount of funding reinvested ▪ Number of projects invested in ▪ Energy savings/ $ spent
Funding and Other Opportunities	
The fund could be capitalized by cost savings from the municipal retrofit program once seed money has been used to develop the revolving loan fund.	

6.2 Sustainable and Inclusive Transportation

In 2021, transportation emissions were 198,000 tCO_2e, which is about 43% of the total baseline emissions for Newmarket. By 2050, decarbonization of all types of transportation, and encouraging the use of active transportation and public transit, reduces emissions by 94%.

EVs cost less to operate and maintain, and can save households money in the long term. Ensuring that all households have access to reliable charging stations means building charging infrastructure across Newmarket, but also developing supports to help homeowners, renters, and developers build chargers into residential spaces.

Reducing reliance on personal vehicles remains the most effective way to cut emissions and lower transportation-related energy use. By improving transit services and expanding active transportation infrastructure, more residents can choose sustainable travel options for their daily trips.

Table 10. Summary of Sustainable and Inclusive Transportation actions.

Index	Action Name
2.1	Support charging infrastructure development
2.2	Expand the charging network
2.3	Increase transit and active transportation infrastructure
2.4	Implement the Green Fleet Strategy
2.5	Encourage working from home

2.1 Support charging infrastructure development	
Explore incentives and/or provide education and support for EV chargers installations for all building types.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Financial Services ▪ Newmarket Planning and Building Services ▪ Newmarket Community and Economic Innovation ▪ Newmarket Corporate Communications ▪ Local Electricity Provider
Co-Benefits	▪ Promotes economic development ▪ Provides cost savings ▪ Builds community knowledge ▪ Improves air quality ▪ Improves health and well-being
Timeline	Short term
Cost	$
Savings	N/A
KPI	▪ Number of incentives given ▪ Number of new EV chargers installed
Funding and Other Opportunities	
Plug-n-Drive York Region Transportation	

2.2 Expand the EV charging network

Expand the EV charging network to include municipal buildings, parking lots for local attractions, on-street parking locations, and private parking lots in high-traffic commercial areas.

This action can be further expanded to include the advocacy and development of public policy for public charging (e.g., bylaw amendment, new regulation).

Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Community and Economic Innovation ▪ Newmarket Parks and Facility Services ▪ Newmarket Transportation Services
Co-Benefits	▪ Promotes economic development ▪ Provides cost savings ▪ Builds community knowledge ▪ Improves air quality ▪ Improves health and well-being
Timeline	Ongoing
Cost	$$$$
Savings	N/A
KPI	▪ Percentage of non-residential properties with EV chargers ▪ Percentage of municipal facilities with EV charging equipment ▪ Completion of EV charging policy updates

Funding and Other Opportunities

Electric Vehicle (EV) ChargeON program: supports the installation of public EV-charging stations across Ontario.

Zero Emission Vehicle Infrastructure Program: provides funding toward the deployment of EV chargers and hydrogen refuelling stations across Canada.

More information about developing public policy for EV charging can be found online for several Ontario municipalities, including the City of Cambridge, City of Hamilton, City of Kitchener, City of Mississauga, City of Toronto, City of Waterloo, Town of Ajax, and Town of Whitby.

2.3 Increase transit and active transportation infrastructure

Support York Region expansion and increase of public transportation route frequencies.

Support York Region to add shade structures and shelters at transit locations to protect transit users in all weather

Working with the Region, expand the Town's walking and cycling trail network to increase accessibility across the Town, and to maximize connectivity of the trail network.

Lead Department	York Region/ Newmarket Engineering Services
Supporting Departments and Organizations	▪ Newmarket Parks and Facility Services ▪ Newmarket Transportation Services ▪ York Region Transportation ▪ York Region Transit ▪ Viva Rapid Transit ▪ Metrolinx ▪ Smart Commute
Co-Benefits	▪ Improves air quality ▪ Improves health and well-being ▪ Promotes equity and justice ▪ Improves resilience ▪ Continuity of municipal services
Timeline	Ongoing
Cost	$$$$$
Savings	N/A
KPI	▪ Number of kilometers for a continuous active transportation infrastructure ▪ Number of shade structures/shelters at transit stations ▪ Time between buses on a route

Funding and Other Opportunities

The Canada Public Transit Fund: offers funding for public transit, providing municipalities, transit authorities, and other groups with the resources they need to plan and implement key public transit projects over the long term.

2.4 Implement the Green Fleet Strategy	
Continue to implement the Municipal Green Fleet Strategy.	
Lead Department	Newmarket Public Works Services
Supporting Departments and Organizations	▪ Newmarket Financial Services ▪ Newmarket Public Works Services ▪ Newmarket Parks and Facilities Services ▪ Newmarket Legislative services ▪ Central York Fire Services ▪ York Region Transportation
Co-Benefits	▪ Improves air quality ▪ Reduces emissions ▪ Enables continuity of municipal services
Timeline	Ongoing
Cost	$$$
Savings	$$$$
KPI	▪ Number of fleet vehicles that are ZEVs ▪ Percentage of fleet that are ZEVs
Funding and Other Opportunities	
Funding this action would require aligning capital investments and the Town's asset management plans. Other opportunities to consider include: ▪ Plug-n-Drive ▪ SmartDriver training series:[46] include free online courses to help professional drivers of medium- and heavy-duty commercial vehicles reduce fuel consumption and operating costs. ▪ Options to further expand this action: ▪ SmartWay Transport Partnership:[47] works with freight carriers and shippers committed to benchmarking their operations, tracking their fuel consumption, and improving their annual performance. ▪ Green Freight Program:[48] provides fleet energy assessments, fleet retrofits, engine repowers, logistical best-practice implementation, and the purchase of LC vehicles.	

46 "SmartDriver Training Series," Natural Resources Canada, modified February 2, 2026, https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/green-freight/smartdriver-training-.

47 "SmartWay," Natural Resources Canada, modified January 8, 2025, https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/green-freight/smartway.

48 "Green Freight Program," Natural Resources Canada, modified January 16, 2026, https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/green-freight/green-freight-program.

2.5 Encourage reduced commuter trips

Work with Smart Commute to create a campaign to expand the existing program to further encourage working from home or to carpool to reduce daily commuting trips.

Lead Department	Newmarket Transportation Services
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Community and Economic Innovation ▪ Smart Commute
Co-Benefits	▪ Builds community knowledge ▪ Improves air quality ▪ Provides cost savings ▪ Promotes equity and justice ▪ Enables continuity of municipal services ▪ Improves resilience
Timeline	Immediate term
Cost	$
Savings	NA
KPI	▪ Number of employees working from home ▪ Number of businesses participating in a work-from-home strategy
Funding and Other Opportunities	
Smart Commute[49]	

49 "Smart Commute," Town of Newmarket, accessed February 16, 2026, https://www.newmarket.ca/LivingHere/Pages/Environment%20and%20Sustainability/Smart-Commute.aspx.

6.3 Clean Energy for All

Newmarket relies on a variety of fuels for energy, including emissions-heavy fossil fuels for heating homes and for powering vehicles. By encouraging local renewable energy generation, the community can benefit from zero- and low-emissions alternatives, and offset the costs associated with grid electricity.

Maximizing rooftop solar generation, and exploring community solar gardens allows everyone in the community to benefit from local renewable electricity generation, including the financial and climate resiliency benefits.

Table 11. Summary of Clean Energy for All actions.

Index	Action Name
3.1	Residential and commercial on-site solar energy generation incentive programs
3.2	Community solar gardens
3.3	Local renewable energy generation
3.4	District energy
3.5	Battery back-up and community-scale energy storage
3.6	HVAC fuel-switching incentive program

3.1 Residential and commercial on-site solar energy generation incentive programs	
Explore incentives and/or provide education and support of existing incentives for solar generation installation on private property.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Financial Services ▪ Newmarket Planning and Building Services ▪ Central York Fire Services
Co-Benefits	▪ Enhances resilience ▪ Promotes economic development ▪ Provides cost savings
Timeline	Medium term
Cost	$–$$
Savings	N/A
KPI	▪ Number of properties with solar energy installations ▪ Number of residents/businesses reached ▪ Number of residents supported
Funding and Other Opportunities	
Local improvement charge (see example: Solar City Program, Halifax, NS). Save ON Energy: Ontario Home Renovation Savings Program Retrofit Program (includes non-residential microgeneration) TAF Home Solar Accelerator (https://taf.ca/homesolar/)	

3.2 Community solar gardens	
Develop a community solar garden pilot project, in partnership with others, allowing those without access to solar PV to benefit from investment in community solar generation.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Economic Development ▪ Newmarket Parks and Facility Services ▪ Local Electricity Provider ▪ Private land owners ▪ Could also include a solar co-op
Co-Benefits	▪ Builds community knowledge ▪ Promotes equity and justice ▪ Provides cost savings
Timeline	Immediate term
Cost	$–$$
Savings	N/A
KPI	▪ Number of solar gardens ▪ Amount of power (kWh) produced ▪ Number of participating residents
Funding and Other Opportunities	
Community bonds from Tapestry Capital (see example: Ottawa Renewable Energy Cooperative)	

Smart Grid Nova Scotia

Smart Grid Nova Scotia is a community solar program and net-metering that allows residents to benefit from solar energy without needing their own rooftop. Participants subscribe to local solar gardens, receiving credits on their Nova Scotia Power bills based on energy generated. This specific project is located in Amherst, Nova Scotia, and produces about 2,700 MWh of electricity per year.

3.3 Local renewable energy generation	
Complete the updates to the zoning bylaw identified in the 2006 Official Plan, clarifying setbacks, definitions, size, and heights of renewable energy generators.	
Lead Department	Newmarket Planning and Building Services
Supporting Departments and Organizations	▪ Newmarket Planning and Building ServicesNewmarket Planning and Building Services
Co-Benefits	▪ Promotes economic development ▪ Builds community knowledge ▪ Enhances resilience
Timeline	Ongoing
Cost	$
Savings	NA
KPI	▪ Completion of the zoning by-law update as per the Official Plan
Funding and Other Opportunities	
Additional considerations include aligning the Official Plan with Climate-Ready Plans and Processes (Green Municipal Fund, FCM)	

3.4 District energy	
Explore district energy and heat recovery opportunities with York Region.	
Lead Department	York Region
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Engineering Services
Co-Benefits	▪ Enhances resilience ▪ Promotes economic development ▪ Enables continuity of municipal services
Timeline	Short term
Cost	$–$$
Savings	N/A
KPI	▪ Feasibility study for placement of district energy project ▪ Project status for district energy ▪ Number of participating buildings for district energy
Funding and Other Opportunities	
Community Energy Systems (Green Municipal Fund)	

3.5 Battery back-up and community-scale energy storage	
Explore a battery back-up pilot project for community-scale energy storage along with retrofit batteries. This action can be expanded to also explore the feasibility of larger battery/storage opportunities.	
Lead Department	Newmarket Engineering Services/ Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Parks and Facility Services ▪ IESO ▪ Local Electricity Provider
Co-Benefits	▪ Enhances resilience ▪ Enables continuity of municipal services
Timeline	Short term
Cost	$$$–$$$$
Savings	N/A
KPI	▪ Locations for battery back-up identified ▪ Number of residents served ▪ Number of vulnerable residents served ▪ Number of disruptions (before and after installation)

3.5 Battery back-up and community-scale energy storage

Funding and Other Opportunities

Case Study: Project Alba Nova Smart Grid[50]

Demonstrated in the Town of Berwick, Nova Scotia, Equilibrium Engineering and partners retrofitted 10 homes with solar PV panels, energy efficiency measures, and intelligent battery systems. Within the community, two additional large commercial battery systems were also installed at the Town hall and ice hockey rink. The solution provided benefits to customers through maximizing their consumption of solar energy, using low tariff grid energy, and providing back-up during outages. It also supported the grid through reducing the peak demand, increasing the utilization of renewable energy, and stabilizing the grid.

Case Study: AMERESCO storage bank in Newmarket[51]

Ameresco worked with Ontario's Independent Electricity System Operator (IESO) to design and build two battery energy storage systems (BESS) on Newmarket – Tay Power Distribution Ltd's distribution grid. Ameresco owns, operates, and maintains both facilities, with a total capacity of 5 MW / 20 MWh. This project provides critical timeshifting of energy consumption and production and demonstrates the value of ancillary services.

50 Alba Nova: A Smart Grid Pilot Using Advanced Battery Storage (StorTera and Equilibrium Engineering Inc., February 28, 2022), https://static1.squarespace.com/static/5ab100dc5417fc8a1eea732e/t/6245a41f23718a1316f6e21f/1648731171108/Alba+Nova+Condensed+Report+The+Power+Forward+Challenge.pdf.

51 Ameresco. "Newmarket, Ontario Energy Storage Case Study | Ameresco," February 4, 2025. https://www.ameresco.com/portfolio-item/newmarket-battery-energy-storage-system-ontario/.

3.6 HVAC fuel-switching incentive program	
Explore opportunities and develop a program to incentivize switching from fossil fuel heating to heat pump space conditioning.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Financial Services ▪ York Region ▪ Energy and Utility Partners
Co-Benefits	▪ Builds community knowledge ▪ Enhances resilience ▪ Provides cost savings ▪ Improves air quality
Timeline	Short term
Cost	$$–$$$
Savings	N/A
KPI	▪ Number of buildings with heat pumps installed ▪ Total incentives issues ▪ Number of installations by building type
Funding and Other Opportunities	
Consider a "building condition bylaw" that requires heat pumps instead of air conditioners, targeting rental homes. See examples in other Ontario Municipalities: Kitchener, Toronto, Hamilton	

6.4 Sustainable Waste Management

Although waste management accounts for a relatively small share of Newmarket's total GHG emissions, reducing waste and strengthening the circular economy can significantly lower lifecycle emissions linked to the production, transportation, and disposal of the goods we use every day.

Reusing and repairing material goods helps to reduce waste, and can save money and build a skilled workforce able to repair and rebuild equipment, clothing, and household items. Reducing waste from construction can include reusing waste material in new construction and expanding material reclamation systems. This can help save money for developers and the construction industry.

Table 12. Summary of Sustainable Waste Management actions.

Index	Action Name
4.1	Expand the circular economy
4.2	Reduce construction waste

4.1 Expand the circular economy

Identify options to develop community reuse programming such as programs or events that encourage repairing products, or donation events for community organizations.

Lead Department	Newmarket Public Works Services
Supporting Departments and Organizations	▪ Newmarket Community and Economic Innovation ▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Communications ▪ NewMakeIt ▪ York Region
Co-Benefits	▪ Builds community knowledge ▪ Promotes equity and justice ▪ Provides cost savings ▪ Reduces operating costs for businesses
Timeline	Immediate term
Cost	$–$$
Savings	N/A
KPI	▪ Number of Re-use/Re-purpose events ▪ Number of participating vendors (e.g., repair specialists, salvation) ▪ Number of participants

Funding and Other Opportunities

Currently, the Newmarket Library runs repair cafes in partnership with the non-profit organization New-Make-It.[52] Other opportunities to explore to further divert waste include:

A. York Region Circular Economy Initiatives Fund: offers $5,000 to $25,000 in funding to non-profit organizations for community-driven, innovative projects that reduce residential waste and advance a circular economy within York Region.

B. Thermostat Recovery Program: recovers and recycles thermostats that are no longer in use.

52 "About," NewMakeIt, accessed January 28, 2026, https://www.newmakeit.com/pages/about.

4.2 Reduce construction waste	
Coordinate with York Region to convene local construction associations and homebuilders associations to explore programs and incentives to reduce construction waste.	
Lead Department	York Region
Supporting Departments and Organizations	▪ Newmarket Planning & Building Services ▪ Newmarket Climate, Environment & Sustainability ▪ Construction Industry Association
Co-Benefits	▪ Builds community knowledge ▪ Provides cost savings
Timeline	Short term
Cost	$–$$
Savings	N/A
KPI	▪ Number of incentives and programs available ▪ Number of participating organizations ▪ Estimate of construction waste reduction
Funding and Other Opportunities	
York Region Housing, Infrastructure and Communities Canada	

6.5 Leadership and Communication

Climate action requires participation and action from all members of a community. By demonstrating strong leadership and initiative, the Town of Newmarket can lead by example, sharing the successes and challenges of their decarbonization journey for the benefit of the rest of the community. The Town can act as a convener, an innovator, and a leader by bringing together partners to have conversations, to collaborate on funding opportunities, and to communicate freely.

Embedding climate action at the core of the Town's processes make climate change work accessible for everyone at the municipality, and help to normalize the work across the community.

Table 13. Summary of Leadership and Communication actions.

Index	Action Name
5.1	Education about solar PV and storage
5.2	Develop a carbon budget
5.3	Develop an online portal for climate action
5.4	Develop an equity lens
5.5	Develop a Community Climate Hub
5.6	Green procurement
5.7	Develop and implement a climate lens
5.8	Inclusion in culture day

5.1 Education about solar PV and storage	
Develop community education materials on the benefits of solar PV and storage, and addressing myths about the technologies.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Corporate Communications ▪ Local Electricity Provider ▪ TAF ▪ Climate Action Partnership ▪ York Region ▪ Community environmental groups
Co-Benefits	▪ Builds community knowledge
Timeline	Immediate term
Cost	$–$$
Savings	N/A
KPI	▪ Number of online education materials shared annually ▪ Number of printed education materials shared ▪ Engagement impact of online education materials (online statistics/impressions)
Funding and Other Opportunities	
TAF Solar Accelerator	

5.2 Develop a carbon budget	
Develop a carbon budget for the Town of Newmarket to track annual corporate emissions, and help prioritize activities by the Town.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	Newmarket Financial Services
Co-Benefits	▪ Continuity of municipal services
Timeline	Immediate term
Cost	$$
Savings	N/A
KPI	▪ Annual emissions reporting ▪ Progress toward net zero ▪ Annual GHG reduction rate
Funding and Other Opportunities	
No funding required	

5.3 Develop an online portal for climate action

Develop an online portal for climate action in Newmarket, with information for residents, resources about opportunities, and details about successes and challenges on ongoing climate action and implementation of the CEP.

Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Corporate Communications ▪ Newmarket Information Technology
Co-Benefits	▪ Builds community knowledge ▪ Enables continuity of municipal services
Timeline	Immediate term
Cost	$–$$
Savings	N/A
KPI	▪ Progress for creating materials ▪ Number of updates annually ▪ Total visits to climate portal annually ▪ Participation in posted opportunities ▪ Number of residents signed up for climate newsletters or alerts

Funding and Other Opportunities

No funding required

5.4 Develop an equity lens	
Further develop a climate equity lens for all municipal projects to ensure that all residents of Newmarket are able to participate in the CEP.	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Human Resources ▪ York Region ▪ Province of Ontario (Save ON Energy) ▪ Faith in the Common Good (Holy Cross Lutheran in Newmarket is a member) ▪ Climate Action Newmarket-Aurora ▪ Climate Reality Project
Co-Benefits	▪ Improves health and well-being ▪ Enhances resilience ▪ Promotes equity and justice ▪ Enables continuity of municipal services
Timeline	Ongoing
Cost	$
Savings	N/A
KPI	▪ Number of home owners participating in climate action ▪ Number of renters participating in climate action ▪ Number of youth participating in climate action ▪ Number of seniors participating in climate action ▪ Number of LIM-AT qualified households participating in climate action
Funding and Other Opportunities	
No funding required	

5.5 Develop a Community Climate Hub

Create a community program to build awareness of Newmarket's environmental initiatives. The program could offer monthly events to highlight key environmental initiatives (e.g., Rain Barrel Sale, Canadian Environmental Week, Plastic-free July) as well as provide education/ participation events about new initiatives (e.g., retrofits, solar gardens).

Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	▪ Newmarket Public Works Services ▪ Faith in the Common Good (Holy Cross Lutheran in Newmarket is a member) ▪ Climate Action Newmarket-Aurora ▪ Climate Reality Project
Co-Benefits	▪ Builds community knowledge ▪ Promotes equity and justice ▪ Provides cost savings ▪ Provides ecosystem services
Timeline	Short term
Cost	$
Savings	N/A
KPI	▪ Number of events related to environmental initiatives ▪ Number of participants

Funding and Other Opportunities

This action would not need additional funding but would leverage the opportunities within existing environmental initiatives. New events may be added to provide opportunities or education for any newly proposed actions within this plan. In this instance, additional partnerships or internal capacity may be required.

5.6 Green procurement

Enhance the Town's procurement policy to prioritize reducing the climate and environmental impacts of new projects, awarding points to proposals or purchasing options that will have a lower impact where possible.

Lead Department	Newmarket Procurement Services
Supporting Departments and Organizations	▪ Newmarket Climate, Environment and Sustainability ▪ Newmarket Legal Services
Co-Benefits	▪ Enhances resilience ▪ Builds community knowledge
Timeline	Short term
Cost	$
Savings	N/A
KPI	▪ Number of requests for proposal applications which include green procurement ▪ Number of successful requests for proposal applications which include green procurement ▪ Environmental impact of the project (estimate provided compared to actuals). Impact may include GHG reporting and waste diversion strategy.
Funding and Other Opportunities	
See the Canadian Climate Lens guide on environmental impact reporting for projects.	

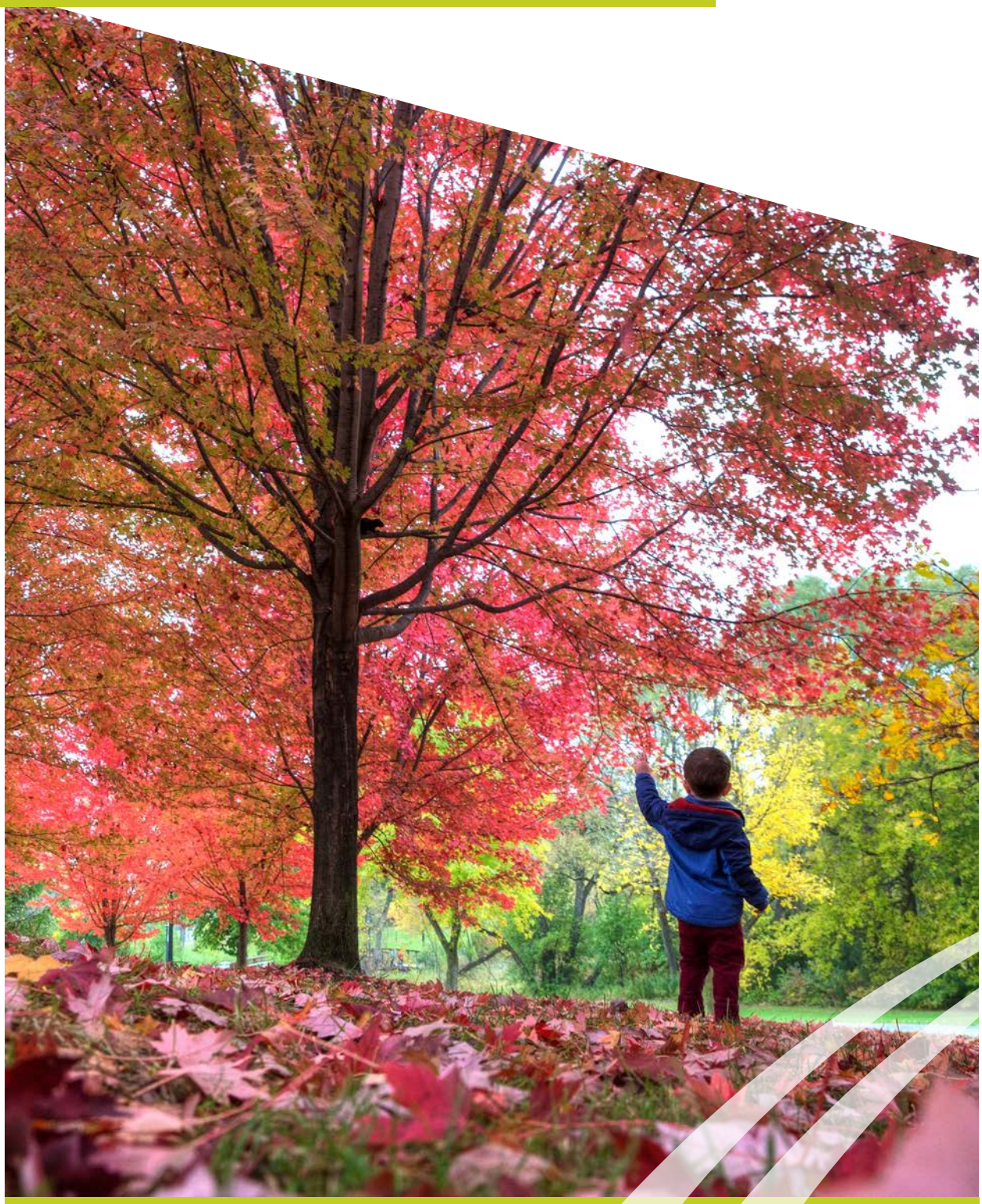
5.7 Develop and implement a climate lens

Develop a climate lens to integrate climate change into the Town's decision-making framework to: a) initiate plans, strategies, and/or actions that respond to and prepare for climate change; and b) assess the potential climate impacts of current and proposed municipal projects.

Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	All Town Departments
Co-Benefits	▪ Enhances resilience ▪ Provides ecosystem services ▪ Sequesters carbon
Timeline	Immediate term
Cost	$
Savings	N/A
KPI	▪ Number of municipal plans, strategies, or actions that include a climate lens ▪ Percentage of new municipal projects assessed for climate risks ▪ Percentage of projects demonstrating a net GHG reduction
Funding and Other Opportunities	
No funding required CAP Climate Lens Tool	

5.8 Inclusion in culture day	
Include climate change literacy in the onboarding process for new Town staff by including a representative from Newmarket Climate, Environment and Sustainability in the Culture Day presentations	
Lead Department	Newmarket Climate, Environment and Sustainability
Supporting Departments and Organizations	Newmarket Human Resources
Co-Benefits	▪ Enables continuity of municipal services
Timeline	Immediate term
Cost	$
Savings	N/A
KPI	▪ Number of new staff participating
Funding and Other Opportunities	
No funding required	

7 | The Business Cases



Autumn in Newmarket. Photo by Town of Newmarket.

Business cases can help refine the potential benefits, risks, costs, and goals of implementation actions. Three actions were selected for a deeper review, to allow Newmarket to explore the benefits to the Town and the community as well as the potential risks, the costs, and the outcomes of the implementation of the action.

These business cases were developed from the standpoint of the Town, and the costs and benefits reflect impacts to the Town directly, not to the community as a whole. The three actions selected were:

- Municipal retrofits: retrofitting all current municipal buildings, and share the challenges and successes with the public
- Develop a revolving energy efficiency fund: Develop a policy that ensures utility and operations and maintenance savings achieved from Town building retrofits is reinvested into future Town retrofit projects
- HVAC fuel-switching incentive program: Develop a program to incentivize heat pumps.

Each of these actions is explored in greater detail below.

7.1 Municipal Retrofits (Action 1.9)

Project Description

Retrofit all current municipal buildings and share the challenges and successes with the public.

The Town of Newmarket owns and operates a number of buildings and facilities. These include:

- The municipal offices on Mulock Drive
- Two fire stations
- Three spray pads
- Elman W. Campbell Museum
- The Gorman outdoor pool
- Magna Centre
- Newmarket Community Centre and Lions Hall
- NewRoads Performing Arts Centre
- Old Town Hall
- Ray Twinney Recreation Complex
- Recreation Youth Centre and Indoor Skate Park
- Robert N. Shelton Operations Centre
- Seniors' Meeting Place

The Town also manages several water pumping stations and a maintenance yard.

Energy efficiency retrofits to these facilities would greatly reduce the energy costs associated with operating the buildings, as well as improving their resilience during major climate and weather events.

The initial step to this project would be to complete energy audits on all municipal facilities to determine the scale and types of upgrades needed for each site. Upgrades include changing lighting for LEDs, improving the building envelope to reduce gaps and leaks, improving insulation, windows, and doors, installing low-flow hot water systems, and replacing natural gas furnaces with electric heat pump systems.

The 2024 corporate Conservation and Demand Management Plan has identified opportunities to improve the efficiency and reduce GHG emissions from corporate assets by 2028.[53] These actions would result in a 10% reduction in total energy demand from corporate assets. These are a good start at improving the efficiency, but have not been developed with the goal of deep retrofitting in mind, which would aim at reducing 50% of the building's energy use.

While work on the CDMP actions continues, a deep energy retrofit and net-zero[54] corporate plan can be developed that includes improvements already completed. At the same time, a communication plan can be developed to ensure that progress, decision-making and prioritization criteria, challenges, barriers, and successes are openly shared with the public.

How retrofits are prioritized can depend on the conditions of the building and the energy use/GHG emissions from activities within the building or facility. The criteria for selecting facilities, and the types of retrofits and upgrades, should be transparent and shared with municipal staff and the community.

Progress of retrofit projects from start to finish, and progress toward the goal of net-zero municipal operations, should also be shared transparently with the public. A dedicated home for information about the retrofit process, types of work being undertaken, timelines and budgets, successes, and challenges should be shared openly.

The deep retrofit level energy audits of municipal facilities can begin immediately and should be completed within six months to a year. At the same time, selection criteria for prioritizing the work can be established, so that once the audits are completed, retrofit projects can begin immediately.

The exact timeline of this work will depend on the specific nature of the work that is needed on each facility, as well as available funding and staff resources to manage the projects.

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53 Town of Newmarket, Conservation and Demand Management Plan (CDMP), July 1, 2024 (PDF), https://www.newmarket.ca/LivingHere/Documents/Town%20of%20Newmarket%20CDMP.pdf

54 For new buildings

Strategic Case

The Town of Newmarket has a goal of net-zero emissions for its new corporate activities by 2050. It also has the goal of minimizing or eliminating, where feasible, GHG emissions in existing operations. The Green Fleet Strategy is an established pathway to decarbonize the vehicle fleet, and municipal facilities are the next phase of the net-zero journey. Existing building plans target a 10% decrease in energy, and a deep retrofit plan should be built on top of that existing work, considering GHG emissions as well as energy efficiency.

Outcomes

This project will result in municipal facilities that are energy efficient, and that rely on low-emissions fuels to heat, cool, and operate. These facilities will also have on-site solar generation where possible. These improved efficiencies and the on-site generation will work to greatly reduce the energy costs associated with operating the facilities, saving the Town of Newmarket money.

By aiming for net-zero emissions, the annual energy needs for a given new facility will be met with on-site electricity generation, entirely offsetting the energy costs to operate that facility. For facilities with very high electricity demands, like indoor swimming pools, a full offset may not be available, but energy costs will be greatly reduced with energy efficiency retrofits.

Net-zero buildings are more resilient during power outages and extreme weather events. Well-insulated and efficient buildings help maintain safe inside temperatures for longer periods during cold snaps or heat waves. With these improvements, municipal buildings can act as safe spaces for the community during power outages or extreme weather events.

Risks

Risks associated with this project fall into several categories. Financial risks include restrictions on short-term borrowing to fund the retrofit projects, or not meeting the payback schedule originally outlined from projected energy cost savings.

Construction projects have an inherent risk of changing scope as the project progresses, where problems or deficiencies may not be identified until the project is underway. Estimations of energy savings from retrofits may not be accurate, so the actual financial benefits may not meet the original estimations.

Coordination of multiple projects across multiple departments requires staff time and resources, and a mandate to work across departmental boundaries. Establishing a centralized home for the retrofit program can help streamline this, and requires clear communication with all affected departments during each retrofit project. Identifying ways to bundle small projects together can improve efficiency and reduce costs, but this requires coordination across the entire retrofit program.

Major retrofits to municipal facilities could involve interruptions to municipal services while the work is being completed. Additionally, scope creep that extends a construction project beyond the initial focus on energy efficiency and GHG reduction can increase the costs associated with a project. While bundling work for the greater public benefit is important, the reporting on the budget and timelines for each stage should be clearly tracked and communicated with the public and Town staff for transparency.

Benefits

Deep energy retrofits will reduce the energy costs of operating facilities, saving the Town money. Retrofits can also improve indoor air quality and make buildings more resilient during power outages and extreme weather.

Sharing the process of retrofitting the facilities from the very start, through to completion, helps the community understand what deep energy retrofits entail and the benefits associated with them. By sharing the successes and challenges of each retrofit project, the community can learn alongside the Town and share the benefits of that education process.

By normalizing climate action, the Town can open conversations about energy efficiency, the financial benefits associated with energy retrofits, and climate adaptation and emergency preparedness.

Reducing GHG emissions from municipal facilities is an essential step in Newmarket reaching its climate targets. This helps to establish the Town as a climate leader, and a home for innovation, fiscal responsibility, and open, trust-based relationships with the community.

Reducing the combustion of natural gas for space heating improves air quality, conducting retrofits helps to strengthen local businesses and the economy, and sharing details with the community expands the local understanding of climate change and climate action.

Financial Evaluation

The 2024 corporate energy conservation and demand management plan[55] outlines immediate next steps to reduce energy demand and improve efficiency across Newmarket's corporate assets.[56] The exact costs associated with the retrofit program will not be known until energy audits are completed[57], and the funding and administrative structures to support the program are identified.

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55 This plan can be used to identify projects that are suitable for funding with a revolving fund.

56 Town of Newmarket, Conservation and Demand Management Plan (CDMP), July 1, 2024 (PDF), https://www.newmarket.ca/LivingHere/Documents/Town%20of%20Newmarket%20CDMP.pdf

57 According to the CDMP, not all facilities have had recent (2024) energy audits completed.

The LC Scenario tracked 16 municipal facilities by size, with a schedule of retrofits starting in 2026, and finishing by 2050. The cost of these retrofits are estimated by building archetype, based on the floorspace of each building, with an estimate of $240/m^2$. This results in a total cost of $20.6 million (undiscounted) for retrofits to all municipal facilities. By 2050, these retrofits reach a total energy reduction of nearly 40%, assuming that 80% of the facility is retrofitted, with 30% to 50% efficiency gains.

When implementing a retrofit that achieves 10% energy reduction (CDMP), the Town would be spending approximately $0.9 million. Therefore, it is much more costly to reach a deep energy retrofit and the additional monetary efforts of the Town of Newmarket would be $19.7 million.

In terms of savings, deep energy retrofits save around $10 million from energy consumption reduction. Adding savings from equipment and on-site renewable energy generation would almost net the costs, reaching an estimate of $17.7 million in savings.

Deep energy retrofits aim to reduce a building's total energy consumption by at least 50%, with higher gains in certain systems. Heating and cooling systems account for the largest energy use in many buildings, and upgrades to these can reduce heating and cooling costs by 50%–75%. Converting to high-efficiency LED lighting can reduce lighting energy costs by 60%.

Further efforts should be focused on local energy generation, since in the modelled LC scenario, by 2050 11% of the energy in municipal buildings would come from solar energy generation. By increasing the amount of energy that comes from renewable sources, the business case for deep energy retrofits would be even better.

7.2 Develop a Revolving Energy Efficiency Fund (Action 1.10)

Project Description

Develop a revolving energy fund policy that ensures utility and operations and maintenance savings achieved from Town building retrofits is reinvested into future Town retrofit projects.

A revolving fund for energy efficiency measures is a self-sustaining pool of capital that is used to pay for expenses associated with municipal building retrofits. The savings generated by these projects are reinvested into the revolving fund to pay for the next round of energy efficiency projects.

Initial seed funding is needed to establish the revolving fund. Thus, the first step is to identify the seed funding. This funding can come from grant funding, or from municipal funding allocated in the corporate budget for this purpose. A policy should also be developed to outline approved activities for the revolving fund and anticipated payback periods.

The first round of projects are then approved and implemented, with direct energy savings associated with these projects. The savings from these projects is then reinvested in the revolving fund—here, the initial invested is repaid, and continued financial benefits are invested. This allows the revolving fund to grow and be used again and again to support work to improve the efficiency of municipal assets.

Careful tracking of the projects, anticipated savings, and subsequent reinvestment in the revolving fund allow the Town and the community to identify the benefits of these projects.

Strategic Case

The Town of Newmarket has a goal of net-zero emissions for its new corporate activities by 2050. It also has the goal of minimizing or eliminating, where feasible, GHG emissions in existing operations. Using this innovative funding approach provides dedicated funding for decarbonization activities, and provides an opportunity for municipal departments to work collaboratively to identify projects that cross departmental boundaries to reach this goal.

Outcomes

Energy efficiency and emissions reductions projects have a steady, reliable source of funding, streamlining the implementation process and reducing barriers to completing municipal retrofits.

Risks

The risks associated with establishing a revolving loan fund for municipal climate projects include delayed or incomplete repayment of the seed fund, reducing the ability to fund subsequent projects; not allocating sufficient staff resources to establish and manage the fund and project applications; and fluctuations in energy prices and material costs that make repayment projections unstable.

These risks can be mitigated through careful planning to ensure staff resources are adequately prepared to manage the fund, looking to examples of success, like with the City of Edmonton.

The risks associated with not doing this work are that climate action and energy retrofits at the municipality will be slow, or nonexistent, and municipal assets will continue to be expensive to operate, and continue to emit GHGs at current rates.

Benefits

The benefits of establishing a revolving energy fund is ensuring that a constant source of funding is available for municipal retrofits and efficiency projects. This will, in turn, reduce the time lag between identifying potential projects and implementing those projects.

By ensuring this funding source is stable, reliable, and clearly administered, the Town of Newmarket would be able to speed up the rate of energy efficiency projects for municipal assets.

Financial Evaluation

The initial seed funding for the revolving energy fund can reflect the ambition of the Town, as well as the access to supporting funds for the seed funding. The City of Edmonton's initial fund was $1 million, and has now grown to $30 million.[58]

Staff resources would be needed to establish the fund and provide guidance around the selection of projects. Ongoing staff resources would also be required to manage the fund. These staff are typically found within the finance department of a municipality.

Payback periods for projects funded by the revolving energy fund can be set by the Town, but typical ranges are 8–10 years from completion of the project.

58 City of Edmonton, Energy Management Revolving Fund, (Edmonton, AB: City of Edmonton), accessed February 4, 2026, https://www.edmonton.ca/public-files/assets/document?path=EnergyManRevolvingFund.pdf.

7.3 HVAC Fuel-Switching Incentive Program (Action 3.6)

Project Description

Develop a program to incentivize heat pumps.

Electric heat pumps are an energy-efficient way to heat and cool spaces, and converting from natural gas heating systems is a simple way to reduce the GHG emissions associated with space heating in buildings.

The Town of Newmarket can develop a program to encourage homeowners and building owners to swap their existing fossil fuel-powered systems with heat pumps by providing financial incentives and reducing the technical and administrative barriers associated with the conversion.

This program can have multiple streams, based on the incomes and needs of participants. Higher income households can use a PACE style of funding, where the initial costs of the upgrade is covered by a low-interest loan from the municipality, and this loan is repaid over time via the property tax bill. Lower-income households can qualify for grants or funding from the Town to help reduce the costs of this conversion.

Strategic Case

Building emissions (stationary emissions sources) for Newmarket account for 250 $ktCO_2e$, or roughly half (53%) of the community's total emissions. Residential buildings are responsible for 61% of the building sector emissions. In order to meet Newmarket's GHG emissions targets, the community needs to switch from natural gas for heating homes and buildings to low-emissions energy. High-efficiency electric heat pumps are the best alternative, especially when paired with Ontario's clean grid electricity.

Outcomes

This project would facilitate the decarbonization of heating systems across Newmarket, allowing residents to simply and affordably convert their homes to heat pumps for space heating and cooling.

This would reduce the GHG emissions from homes and other buildings. It would also provide residents with high-efficiency systems to heat their homes, and add space cooling to help reduce the risks of extreme heat in the summer.

Risks

The risks to the Town of a heat pump incentive program would depend on the specific design of the program and the funding sources used. If the program uses PACE-style financing, the failure of participants to repay the loan, and subsequent tax and resale complications, could pose a financial or credit risk to the Town.

Seed funding for a PACE program, or for a revolving loan fund, is required. If program uptake or repayment is slow, this may pose a risk for repayment or management of this seed funding.

The program requires staff and resources to support it, and to ensure participants have a smooth experience with the program. Under-resourcing the program could add complexities for homeowners, reduce participation, and risk the reputation of the Town and the program itself.

Benefits

The benefits to the Town include decarbonizing Newmarket's largest source of GHG emissions, helping the community reach its climate goals. Participants in the program will benefit from having high-efficiency space heating and space cooling in their homes, allowing them to keep their homes at safe, comfortable temperatures year-round.

Electric heat pumps remove the risk of carbon monoxide poisoning associated with natural gas heating systems in the home, and also improve outdoor air quality across the community.

By adding space cooling, residents are protected from the potentially fatal impacts of extreme heat events, particularly the risk of mortality associated with very hot nights.

Financial Evaluation

Because this program directly impacts community members and private property, the direct financial benefits will be seen by the community, rather than the Town itself.

The specific costs associated with a heat pump incentive program will depend on the design of the program. Regardless of whether the Town offers PACE-style loans, grants, or some combination of the two, a heat pump program will come with staff costs to develop and administer the program, to advertise it, and to monitor and review its success. Some grant programs available to municipalities require that the municipality contribute funds to match the input from federal or private grant or funding sources.

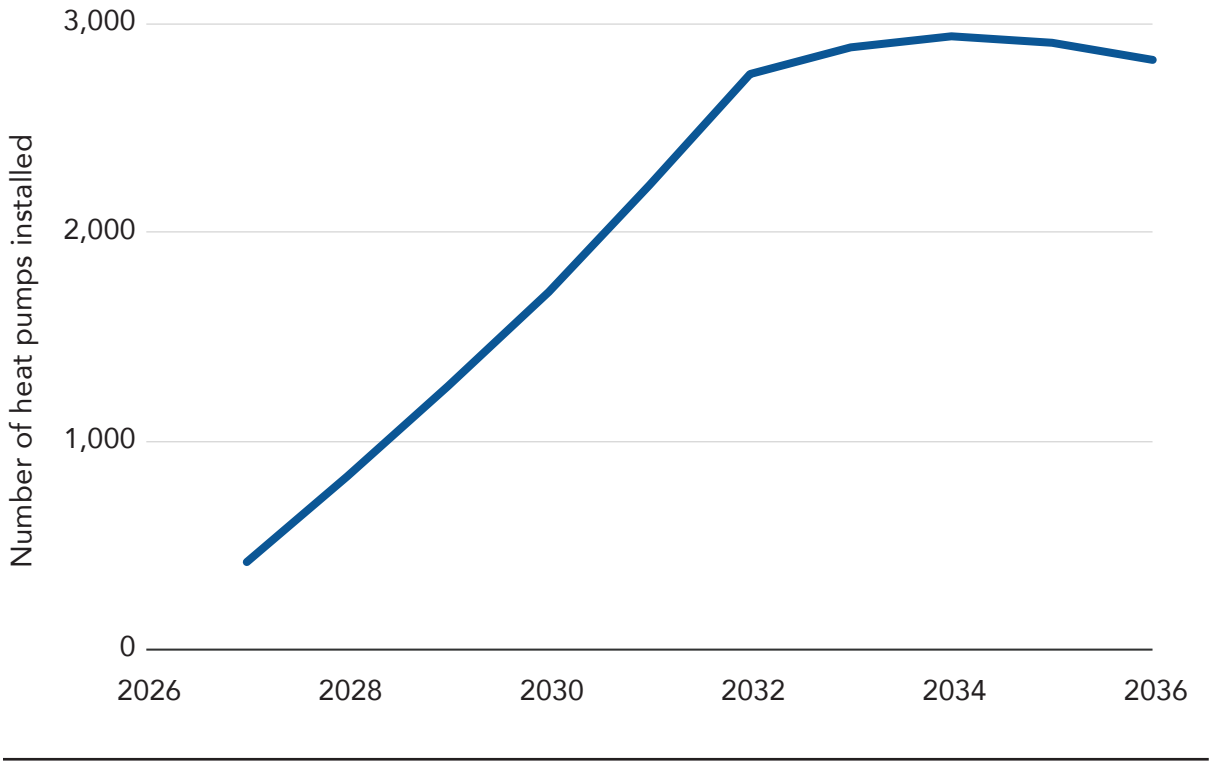
The introduction of heat pumps in new and existing residential buildings reduces GHG emissions by more than 1 million tonnes between 2027 and 2050 (Table 14). The negative abatement cost indicates that when the capital and operating costs are summed over that time period, the savings are greater than the costs for this action.

Table 14. Cumulative GHG emissions and abatement cost of heat pumps.

Low-Carbon Action	Cumulative Emissions Reduction (kt CO_2e)	Marginal Abatement Cost ($/t$CO_2e$)
Heat pumps in retrofitted residential buildings	893	-$307
Heat pumps in new residential buildings	285	-$262

The number of heat pumps installed over the next 10 years climbs annually up to nearly 3,000 pumps per year (Figure 27), with 21,000 heat pumps installed by 2036. At this rate, heat pumps will account for 58% of the heating systems, which total 35,351 heat pumps in 20,833 dwellings in 2036.

Figure 27. Number of heat pumps installed annually in Newmarket's LC Scenario.



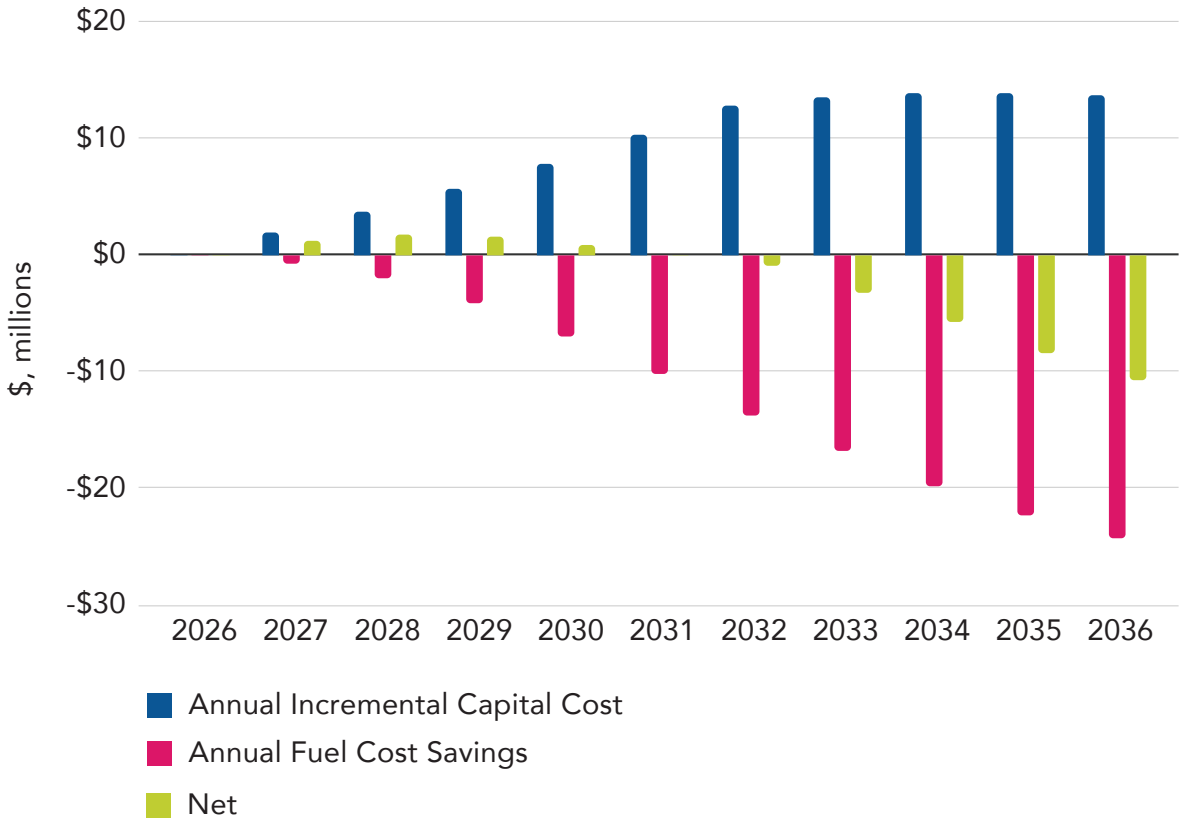
The total capital cost of this investment in heat pumps is $190 million; however because these systems are replaced at end of life of an existing system, the incremental capital investment is $94 million (Table 15).

Table 15. Total and incremental capital cost.

Heat Pumps (HPs)	# of systems	Capital cost ($M)	Incremental capital cost ($M)
New Dwelling HPs	3,352	$31	$17
Existing Dwelling HPs	17,431	$160	$77
Total	20,783	$190	$94

Annual energy savings resulting from installing heat pumps exceed annual capital costs; net annual savings total $11 million by 2036 (Figure 28).

Figure 28. Annual capital costs, fuel savings and net benefit from heat pump installations.



7.4 Funding Recommendation

The Green Fund framework, as outlined in the Municipal Capital Facilities and Municipal Benefits Agreement from Shining Hill, is being considered as a potential funding source for the outlined actions. In terms of options on how to allocate those funds, it is recommended that the Town invests in heat pumps for the community, which not only has a bigger impact but also will be valuable to households that may struggle to make such investments.

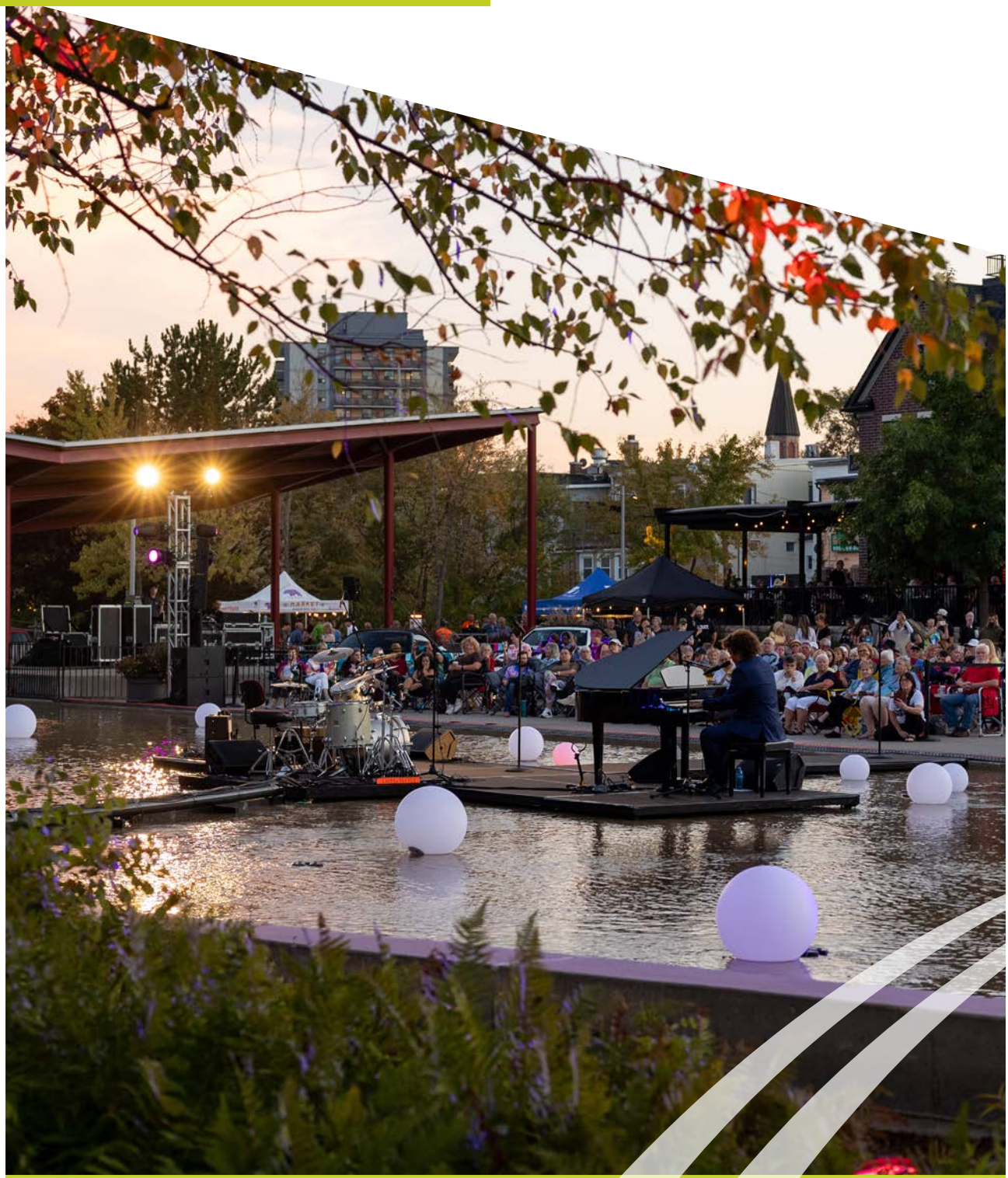
The rationale behind this recommendation is because heat pumps have the highest GHG reduction of any action, nearly 1 million tCO_2e in existing residential buildings. Implementation needs to be focused on retrofitted buildings and targeting those currently heated with gas furnaces.

Depending on the structure of the program, $1 million can install between 200 and 715 heat pumps over 3-10 years. The program is straightforward to implement and could be coupled with IESO programming until November 2026 to significantly increase the impact. Also, the Town could seek to leverage its investment with investments from other levels of government (i.e. $1 million investment becomes $3 million) to increase impact.

Another relevant consideration is that the program could include a mix of grants and interest-free loans. An increased share of interest-free loans results in more installations through a revolving loan fund scheme.

Lastly, implementing a successful, high-profile municipal heat pump program will serve as a powerful catalyst to kickstart and normalize the use of heat pumps more broadly across Newmarket. The program could act as a demonstration project, increasing public awareness, building installer capacity, and driving down future installation costs through market scaling and competition.

8 | Conclusion



A Splash of Culture 2025. Photo by Town of Newmarket.

Newmarket is a growing community, where people come to live, work, and play. Embracing a low-carbon future takes coordinated effort from everyone in the community. Like many North American cities, Newmarket also faces pressures to increase affordable housing, decrease the cost of living, and increase community services while reducing municipal costs. The transition to a clean economy offers opportunities for employment, development, innovation, and exploration. Developing systems to support these activities will help Newmarket's transition to be quick and as smooth as possible.

By prioritizing equity, those most vulnerable to climate change impacts will see benefits in the affordability of heating, the quality of their homes, and the accessibility of their community.

In developing the CEP, priority was given first to actions that **avoid** emissions altogether, followed by those that meaningfully **reduce** total community energy use. To support successful implementation, the plan also identifies several overarching strategies, including strengthening community partnerships, leveraging available funding opportunities, and embedding climate action and energy planning into core municipal processes. Together, these approaches provide a strong foundation for carrying out activities outlined in the CEP and for sustaining long-term climate leadership across Newmarket

While the actions in the CEP help to reduce total GHGs across Newmarket, they also offer other benefits including:

- Decreased energy costs for households, companies and the Town itself
- Increased affordable and accessible transportation options in Newmarket
- Increased comfort and safety of homes for all residents of Newmarket
- Improved air quality from fewer fossil fuels being combusted in cars and buildings
- New employment opportunities within the community

This positions this CEP as a strategy that can support the global work to reduce GHG emissions, while also ensuring Newmarket remains an affordable, healthy, and economically thriving community in the future.

The following appendices are found as a separate document:

Appendix A: Engagement Strategy

Appendix B: Interested & Affected Parties Survey Analysis

Appendix C: Community Questionnaire Analysis

Appendix D: Engagement Summary

Appendix E: GHG Inventory/GPC Reporting

Appendix F: Data, Methods, and Assumptions Manual

Appendix G: Energy Mapping

Newmarket