



MANAGEMENT REPORT

Date: July 24, 2024
To: Infrastructure, Transportation and Safety Sub-committee
From: Sadaf Ghalib, Climate Change Program Manager
Report Number: ITS24-015
Attachments: Community Climate Action Plan

Title: Community Climate Action Plan

Objective: To obtain Council approval of the Community Climate Action Plan.

Background: At the November 14, 2023, Regular Council Meeting, Council authorized staff to proceed with the development of a Community Climate Action Plan and retain the services of a technical consultant. Funding support for development of this Plan was provided by the Ministry of Energy, Ontario with the requirement that it be completed and endorsed by Council no later than September 1, 2024, to secure the approved funds.

This report brings forward the Community Climate Action Plan (CCAP) for the consideration of Council for adoption. The development of this document has been informed by the city's latest energy and emissions inventory, community and industry engagement, municipal best practices, and emissions modelling of low-carbon actions to accelerate mitigation efforts toward near-zero emissions by 2050. The CCAP, once adopted, will serve as the overarching plan for the community's energy transition and emission reduction efforts. The Plan is intended to:

1. Advance City priorities such as Council's Climate Emergency Declaration (2021) and Strategic Priorities (2024 – 2027)
2. Inform climate action related to the following areas over the next 30 years:
 - a. homes, buildings, and industry
 - b. sustainable transportation
 - c. neighbourhoods
 - d. energy infrastructure and utility systems and
 - e. waste management
3. Ensure alignment with federal and provincial energy strategies and related funding opportunities

4. Help reduce community greenhouse gas (GHG) emissions and promote related economic benefits

The CCAP includes seven program areas and more than fifteen actionable programs to help reduce community-wide emissions and build a more climate-resilient, low-carbon community. The largest opportunities for emission reductions have been identified in the transportation and building sectors, and scalable actions noted for neighbourhood growth, clean energy transition, industry transformation, and governance.

Consultation on the preliminary recommendations over Spring 2024 found predominant support for the plan and resulted in creation of a community vision, principles and framing goals that have been incorporated into the CCAP, along with feedback received. Staff recommends adoption and shifting focus to implementation.

Analysis:

Stratford's Community Climate Action Plan

The Community Climate Action Plan (CCAP) is a community plan to address energy usage, reduce GHG emissions and promote economic benefits of energy transition in Stratford. The CCAP is one of two major plans developed by the City to address climate mitigation, the other being the Corporate Energy and Emissions Plan (CEEP) 2023, which focuses on corporate assets and operations.

Primarily aimed at enhancing the resiliency of community assets through climate mitigation, the CCAP sets forth a comprehensive strategy to guide the energy transition, facilitate emission reductions, and enable economic benefits from energy conservation and management. This plan will also help the City in fulfilling its legislative requirements and municipal obligations by showcasing due diligence and proactive measures in reducing community GHG emissions and enabling the energy transition while retaining local energy dollars in the community.

Project Process and Timeline: What We Did

The CCAP was developed in three project phases, as noted below.

Phase 1 – The Baseline Update and Analysis Phase consisted of two main activities:

- Determining an updated baseline (2022) of current energy use, GHG emissions, and utility costs for the community; and
- Creating a business-as-usual (BAU) scenario. The BAU scenario projects what GHG emissions would be in the year 2050 starting with the baseline and incorporating only changes that are currently planned and committed to happen (i.e. currently approved projects, population projections, etc.) with no consideration given to climate impacts.

Phase 2 – Community Engagement Phase involved soliciting feedback from the community including residents, businesses and industry representatives on possible community-driven actions that could be taken to reduce GHGs. Engagement took place in Summer 2023 and Spring 2024 to inform, consult, and involve the community-at-large as well as appropriate stakeholders in plan development.

Phase 3 – The Plan Development Phase included the following:

- Emissions modelling to explore various options for reducing GHGs for a Low-Carbon Scenario to 2050;
- Determining program areas for action planning, and specific programs/initiatives;
- Completing a financial analysis and GHG reduction estimation of the programs identified; and
- Synthesizing the above analyses and developing a draft plan.

Baseline Data Analysis: What We Learned

The baseline data analysis (BAU) was conducted for GHG emissions, energy use and utility costs, briefly described below.

GHG Emissions: BAU revealed that in 2022 approximately 347,000 tonnes of carbon dioxide equivalent (tCO₂e) community emissions were generated in Stratford. Sectors with the largest emissions in Stratford are buildings (46%) and transportation (43%). Emissions from residential (15%) and industrial buildings (15%) comprise the most significant share of all building emissions. Under the BAU scenario, total GHG emissions in Stratford are projected to rise to 416,400 tCO₂e in 2050, projecting an approximate 20% increase.

Energy use: Stratford uses 9 petajoules (PJ) of energy each year (2022), which is projected to increase to 11 PJ of energy by 2050. This amounts to an increase of 22%. In line with community GHG emissions, the majority of this energy use (70%) comes from residential buildings and transportation. The increases in both community emissions and energy use are largely due to continuing population growth in Stratford, which drives emissions growth in the sectors of buildings, transportation, and waste.

Utility costs: Energy costs are, by far, the most escalating factor when projecting community greenhouse gases and energy usage into the future. Community-wide energy costs range from \$230 Million in 2022, to between \$700 Million (low price range) and \$1,100 Million (high price range) in 2050 – an increase of 220% to 400%. This translates to approximately \$6,630 per capita in 2022 to more than \$15,218 (low price range) to \$23,913 (high range) per capita utility cost burden in 2050 (2024-dollar value).

Program Areas and Recommended Actions

A robust suite of community engagement activities helped gather public and stakeholder feedback on GHG reductions and energy conservation. Major themes that emerged from these sessions were synthesized to generate options for program areas and identify feasible, actionable initiatives for the plan. Simulation further helped determine the projected GHG reduction and cost savings for the community.

Priority areas of action were captured within seven 'program areas':

- Efficient Homes and Buildings
- Efficient Industry
- Low-Carbon Neighbourhoods
- Energy Supply and Distribution
- Efficient Transportation
- Towards Zero Waste, and
- Governance

Program areas present fifteen specific programs/initiatives to implement. Refer to Attachment 1 of this report containing the CCAP document, and Implementation Strategy for detailed program areas, anticipated GHG reduction and cost implications.

A key consideration through the process of plan development was to pursue local economic development opportunities through climate action. By eliminating wasted energy and localizing energy production, Stratford can enhance its economy, leading to more local jobs, higher property values and reduced living costs over the long term. Currently, significant energy is wasted due to inefficiencies and conversion losses, resulting in most energy spending flowing out of the local economy. This presents a major economic opportunity for Stratford to retain and recirculate more local energy dollars within the community. Doing so will create local jobs, foster new industries, generate savings for local businesses, and make living more affordable for residents.

Other considerations included evaluating co-benefits of actions. For example, improving energy efficiency can create jobs, save residents money, and increase home comfort. Additional examples include complete communities that provide a range of housing, more employment opportunities, and diversity of amenities and services available within a walkable distance. These communities or neighbourhoods can be more efficient to service with infrastructure and have the potential to reduce community GHG emissions associated with transportation.

Costs of Implementation

The CCAP presents a significant shift in the way our community grows, lives, and prospers. Steering this shift will thus require significant investments from the community, industry, and other stakeholders as well as implementation partners.

CCAP implementation will require additional staff resources and/or an external funded entity to direct efforts and advance initiatives. Long-term costs are difficult to determine at this time and may be dependent on external funding sources. Some preliminary costs are noted in the Implementation Strategy (Attachment 1), and will need funding support from the City, provincial and federal governments, and other funding agencies such as Federation of Canadian Municipalities (FCM).

To facilitate some programs and initiatives, the City's role will be to advocate and work with other agencies and levels of government to achieve program goals; for others, the City will be tasked with facilitating or incentivizing actions through policy and regulatory framework. The same commitment and multi-pronged approach will be required by all members of the community and stakeholders to do their part in promoting and supporting uptake of low-carbon actions.

Subject to Council approval, staff will proceed with incorporating the recommendations from the CCAP in upcoming budgets and operational workplans. Sources of funding will continue to be pursued and projects and initiatives will be presented to Council for consideration annually when preparing future draft budgets.

Co-benefits of Investment in a Low-Carbon Economy

As previously noted, as per BAU, total energy expenditures in the community were \$230 Million in 2022. This amount includes money spent on building and transportation fuels: electricity, natural gas, gasoline, and diesel. By 2050, this expenditure is projected to increase, ranging from 220% to 400%. For the average resident this means an energy cost burden of \$6,630 in 2022 to increase to around \$15,217 (low range) to \$23,913 (high range) in 2050.

In contrast, under the Low Carbon Scenario (LCS), community-wide energy expenditures are projected to be between \$300 Million (low range) to \$500 Million (high range) by 2050, representing a per capita energy expenditure of between \$6,521 to \$10,869; with approximately 80-95% energy dollars retained in the local economy.

From 2032 onwards, annual savings and revenue begin to increase as energy-focused investments turn into savings. By 2050, community-wide cumulative savings are anticipated to be between \$5 Billion to \$7.3 Billion. Most programs and initiatives save and/or generate more money than they cost, as does the plan in its entirety.

Another point to highlight is the economic development opportunity. Currently, only about 20% of the energy expenditures by the community remain within Stratford. In

the LCS, the transition from emissions-intensive fossil fuel usage (which is controlled and distributed outside of Stratford) to locally generated electricity and heating, along with average household energy savings, is expected to result in more money being cycled back into the local economy.

Supporting investment and growth in efficient buildings, green industries, and sustainable transportation will position Stratford competitively in the emerging low-carbon economy in Ontario, Canada, and beyond.

Financial Implications:

Financial impact to current year operating budget:

There is no financial impact anticipated on current year operating budget.

Financial impact on future year operating budget:

While there are no immediate financial impacts from adopting the Plan, implementation of the plan will necessarily require additional investment from the City, residents, businesses, and senior levels of government. These will be included in the 2025 budget process upon adoption of the Plan. Should staff be directed to take lead on implementation of specific programs or initiatives from the CCAP, individual projects will be assessed with regards to cost, feasibility, delivery model, cost recovery, and further refined before seeking approval from Council. Staff will also continue to aggressively pursue funding and grant opportunities as well as investigate unique financing approaches to support implementation of the CCAP.

Link to asset management plan and strategy:

The Community Climate Action Plan is not directly linked to the City's asset management plan and strategy, however at a community scale, investments in infrastructure are anticipated to occur. If new corporate assets are added or existing assets refurbished to impact useful life, they will be included in the asset inventory and asset management plan.

Alignment with Strategic Priorities:

Enhance our Infrastructure

This report aligns with this priority as its recommendations inherently support energy transition and emission reductions, ensuring sustainable growth and fostering economic stability.

Work Together For Greater Impact

This report aligns with this priority by emphasizing the importance of building and nurturing community partnerships for successful implementation of the CCAP.

Intentionally Change to Support the Future

This report aligns with this priority as it supports economic growth and encourages innovation.

Alignment with One Planet Principles:

Health and Happiness

Encouraging active, social, meaningful lives to promote good health and wellbeing.

Equity and Local Economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.

Culture and Community

Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living.

Land and Nature

Protecting and restoring land for the benefit of people and wildlife.

Sustainable Water

Using water efficiently, protecting local water resources and reducing flooding and drought.

Local and Sustainable Food

Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein.

Travel and Transport

Reducing the need to travel, encouraging walking, cycling and low carbon transport.

Material and Products

Using materials from sustainable sources and promoting products which help people reduce consumption.

Zero Waste

Reducing consumption, reusing and recycling to achieve zero waste and zero pollution.

Zero Carbon Energy

Making buildings and manufacturing energy efficient and supplying all energy with renewables.

Staff Recommendation: THAT the Community Climate Action Plan (CCAP) be adopted;

THAT staff be directed to:

- **Identify and advance actions in CCAP that can be implemented within the existing staffing capacity and budget resources;**
- **Include CCAP programs and supporting resources required for consideration in the 2025 multi-year budget process;**

AND THAT staff be authorized to continue to explore potential funding opportunities through senior levels of government.

Prepared by: Sadaf Ghalib, Climate Change Program Manager
Recommended by: Taylor Crinklaw, Director of Infrastructure Services
Joan Thomson, Chief Administrative Officer