



TO: GENERAL COMMITTEE

SUBJECT: COMMUNITY ENERGY AND GREENHOUSE GAS EMISSION REDUCTION PLAN ADOPTION

WARD: ALL

PREPARED BY AND KEY CONTACT: A. MCMULLIN, MANAGER OF ENERGY X.5097

SUBMITTED BY: R. PEWS, DIRECTOR OF CORPORATE FACILITIES

GENERAL MANAGER APPROVAL: D. MCALPINE, GENERAL MANAGER OF COMMUNITY AND CORPORATE SERVICES

CHIEF ADMINISTRATIVE OFFICER APPROVAL: M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. That the Community Energy and Greenhouse Gas Emission Reduction Plan attached as Appendix "A" to Staff Report FAC001-22, be endorsed in principle.

PURPOSE & BACKGROUND

Purpose

2. The purpose of this Staff Report is to:
 - Solicit endorsement of the Community Energy and Greenhouse Gas Emissions Reduction Plan (Plan) in principle;
 - Provide a summary of the Plan's key components for General Committee consideration;
 - Establish community greenhouse gas emission reductions targets;
 - Identify immediate priorities and actions to pursue; and to,
 - Build awareness and momentum to pursue climate action for the community moving forward.

Background

3. In March of 2018, Council adopted motion 18-G-047 allocating \$180,000 in capital funds to develop a Community Energy and Greenhouse Gas Reduction Plan. Staff successfully applied for funding with Ministry of Energy, Northern Development and Mines to support up to 50% (\$90,000) of the project cost.
4. The objective of the initiative is to create a comprehensive and practical Community Plan that includes implementable actions and strategies for improving energy efficiency and reducing community wide Greenhouse Gas (GHG) emissions. The plan leverages energy and GHG emission mapping techniques utilizing various sources of data (including utility, transportation, land-use, MPAC data). The data and maps inform the development of evidence-based goals, strategies and targets that are founded in science and current best practices.

-
5. The Project Team comprised of City of Barrie staff and the consultant LURA (Land Use Research Associates Inc.), with ICLEI and Wood. To support the Project Team, a Stakeholder Advisory Group (SAG) was established to shape the Plan through more in-depth discussion from a variety of perspectives, providing sector-specific knowledge and expertise to define a vision, goals, and strategies that best meet the unique context of Barrie. The SAG has membership representing local conservation authorities, school boards, utility companies, Council, City staff, environmental organizations, local health care services, post-secondary institutions and the construction & development industry. The SAG members included the following organizations:
- Alectra Utilities
 - City Council
 - City of Barrie
 - County of Simcoe
 - Enbridge Gas
 - EV Society
 - Georgian College
 - IESO
 - Lake Simcoe Region Conservation Authority
 - Living Green Barrie
 - Nottawasaga Valley Conservation Authority
 - Ontario Association of Architects
 - Royal Victoria Regional Health Centre
 - Simcoe County District School Board
 - Simcoe Home Builders
 - Simcoe Muskoka District Health Unit
6. The following timeline summarizes the keys steps, milestones and actions taken in the development of this plan:
- **March 2018:** Council approves funding to develop plan
 - **June 2019:** Completed Funding Transfer Agreement with Ministry
 - **October 2019:** Council declares a Climate Emergency
 - **November 2019:** Hired Land Use Research Associates (LURA), ICLEI and Wood consultants
 - **Dec 2019 – June 2020:** Data Solicitation and Analysis
 - **May 2020:** Stakeholder Advisory Group (SAG) established.
 - **July 2020:** Energy and GHG Emission Mapping Completed
 - **August 2020 – November 2021:** Plan development and stakeholder engagement
 - **March 2022:** Plan Completion and presentation to Council
7. The Plan, titled 'Inspiring Climate Action in Barrie', includes several sections that will be summarized and highlighted for the purpose of the Staff Report.
8. *Emissions Inventory and Business as Planned Scenario:* The Project Team worked to develop an energy and GHG emission profile from 2018 to serve as a baseline for the plan and community moving forward. From this baseline a business-as-planned (BAP) forecast to 2050 models the future energy usage and associated greenhouse gas emissions from the community. Below are the key findings from the 2018 baseline energy and greenhouse gas emissions inventory for the community.
- Energy use produced over a million tonnes of carbon dioxide equivalent for the community.
 - Annually, nearly \$600 million is spent on energy (the majority leaves the local economy).
 - The average person spent \$3,870 on annual energy costs and emits 7 tonnes of emissions.
 - Homes, buildings and travel use the most energy and generate the most emissions.
 - Private vehicle transportation use is responsible for 55% of total community emissions.
 - The building sector is responsible for 40% of community emissions.
 - The BAP forecast indicates emissions will increase by 40% by 2050.

- **Without strong action, the community emissions will significantly exceed federal emission targets in both 2030 and 2050.**
9. *Plan Vision:* The Barrie community is taking an integrated, ambitious, and action-oriented approach to climate action providing positive environmental, social, economic, and health outcomes for all.
10. *Plan Principles:* To support the vision a series of principles were established to guide the plan development and future implementation, which include:
- There are economic benefits in pursuing climate action at the local level.
 - Recognize and promote the inextricable link between the natural and built environments, climate change and our community's health and wellbeing, and foster the health co-benefits of climate action.
 - Pursue innovative solutions and an evidence-based approach to climate action.
 - Educate and inspire residents and businesses to make positive environmental change, building on the City's leadership.
 - Develop strategies that are equitable and enhance the quality of life for all residents.
 - Benchmark against best practices and look for continuous improvement.
 - Enable positive environmental actions amongst Barrie's residents.
 - Advance Barrie's climate and energy goals in partnership with residents, organizations, and businesses.
11. *Emission Reduction Target:* The plan establishes a community GHG emission reduction target, which aligns with existing federal and international targets.

The Barrie community aims to reduce overall GHG emissions 45% below 2018 levels by 2030 and to become net-zero by 2050.

12. To achieve these targets goals, strategies, and actions have been developed that are tailored to the Barrie community. The strategies are described as 'Big Moves' within the plan and are categorized within four areas: buildings, transportation, waste, and natural environment and land use. Each *Big Move* includes a goal and supporting actions and are summarized in further detail below.
13. **Big Move – Buildings:** This strategy focuses on all the buildings within the community and includes a goal of 'near zero emissions in new and existing buildings'. Several strategies and actions have been identified with a focus on the following items:
- Deep energy retrofit program
 - Green development standard
 - Energy management and benchmarking
 - Solar generation
 - District energy (pre-feasibility study)
 - Larger renewables (pre-feasibility study)
14. **Big Move – Transportation:** This strategy focuses on all private, public and active forms of transportation in the community and includes a goal of 'near zero emissions from transportation'. Several strategies and actions have been identified with a focus on the following items:
- Active travel and complete streets
 - Local transit options
 - GO transit use
 - Electric vehicle adoption
 - Car-sharing

-
15. **Big Move – Waste Reduction through a Circular Economy:** This strategy focuses on waste related emissions through a circular economy approach that includes a goal of 'Waste reduction through a circular economy'. Several strategies and actions have been identified with a focus on the following items:
- Community sharing economy
 - Phase-out of single use plastics
 - Recovering energy
 - Circular construction
16. **Big Move – Natural Environment & Land-Use:** This strategy focuses on the natural heritage assets in the community and our land-use planning practices. The goal within this Big Move is 'Liveable neighbourhoods that support energy efficiency, mixed-use, complete communities and protection of the natural environment'. Several strategies and actions have been identified with a focus on the following items:
- Higher density mixed-use developments
 - Zero-emissions neighbourhood
 - Local food
 - Nature based solutions
17. *Plan Implementation:* The proposed governance model for implementing the Plan can be described as "municipally-led and community-supported" – meaning that the City (corporation) provides leadership and administrative oversight, while the wider community supports implementation. The wider Barrie community should be involved throughout the implementation of this Plan through continued engagement.
18. Within this framework Action Tables will be established that lead the implementation of community actions identified in the Big Moves. For corporate operations, an internal Working Group will lead the implementation of City-led actions identified with the Plan.
19. The role of the internal Implementation Working Group includes the following activities:
- Leads the implementation of corporate and City-led actions within this Plan.
 - Develops and applies a climate lens for decision-making across the corporation.
 - Assesses funding needs and potential funding sources for corporate actions.
 - Ensures new policies and programs are in line with the Goals of the Plan.
 - Monitors and reports on program for corporate actions.
20. The role of the Action Tables includes the following activities:
- Leads the implementation of community actions based on the 'Big Moves'.
 - Sets priorities for action; assesses funding needs and potential funding sources.
 - Monitors and reports on progress for community actions.
 - Adapts the focus of strategies over time to meet current needs, challenges and opportunities
21. Council approved a dedicated full-time resource during the 2022 business planning process that will serve as the coordination and administrative lead for the Working Group and Action Tables.

-
22. There are several immediate actions and next steps outlined in the Plan to launch the implementation phase of the program. These include administrative and capacity building tasks in addition to initiating specific actions highlighted within the Big Moves that are led and resourced by the City. These immediate activities include:
- Establishment of Action Tables
 - Establishment of Internal Corporate Implementation Working Group
 - Development and implementation of a Communications and Engagement program
 - Development of a Monitoring and Reporting Protocol
 - Investigate the establishment of a carbon budget
 - Initiate the development of a Deep Energy Retrofit Program (*City Led Big Move Action*)
 - Initiate the development of a Green Development Standard (*City Led Big Move Action*)
23. *Public & Stakeholder Engagement:* Public and stakeholder engagement was embedded throughout the Plan development process. Early in the process, a Stakeholder Advisory Group (SAG) was established to shape the Plan through more in-depth discussion from a variety of perspectives, providing sector-specific knowledge and expertise to define a vision, goals, and strategies that best meet the unique context of Barrie. The SAG comprised of membership representing local conservation authorities, school boards, utility companies, Council, City staff, environmental organizations, local health care services, post-secondary institutions and the construction & development industry. The SAG group met seven times throughout the plan development with representation of fifteen different organizations.
24. Public engagement followed a three-phase process. The pandemic significantly altered the original public engagement strategy planned for the project. In-person community-based activities were pivoted to virtual engagement alternatives (as outlined below).
- **Round 1** - The first round of engagement solicited input on community ideas for climate change action, mitigation and sustainability. In the fall of 2020, a public survey was posted to Building Barrie that included 10 questions relating to climate change action, mitigation and sustainability. Seventy-six (76) individuals completed the survey and a summary of the findings have been posted.
 - **Round 2** – The second round of engagement involved a virtual public meeting (PIC) that presented the baseline and base case energy scenarios and solicited feedback on the proposed vision, goals and targets.
 - **Round 3** - The final consultation provided the community and stakeholder groups an opportunity to review the full plan and understand the next steps as the plan transitions to implementation, prior to submission to Council. A survey was included as part of consultation to solicit specific feedback on the Plan's content and direction.
25. A project webpage (<https://www.buildingbarrie.ca/communityenergy>) on the Building Barrie platform serves as the primary communication tool to provide updated information to residents and community partners.
26. Additional stakeholder engagement targeting the local business, youth and construction industries was undertaken focusing on a review of the proposed plan strategies. This will assist to ensure that other community partners and industry not participating in the SAG have input into shaping the final plan.

ANALYSIS

27. Local government plays a significant role through enabling and directly carrying out climate change mitigation action. The City's Plan lays out ambitious goals to align with federal and international targets that ultimately target net zero carbon emissions by 2050.
28. The City will play a lead role in the Plan's implementation, which requires enabling and administrative action that will initially focus on establishing the Transportation and Building Action Tables and the Internal Corporate Implementation Working Group.
29. The recruitment and launch of the Action Tables is a critical key next step in the Plan's implementation. The SAG was a very effective team in shaping the Plan development due to the quality and diverse variety of stakeholders representatives. The Action Tables will need to perform equally as well and will require diligence in the recruitment of stakeholder participants.
30. The City's role will vary when implementing specific Big Move actions. In some cases, the City will serve as the lead, such as the development of a green building standard. But for other actions, such as 'advancing the adoption of electric vehicles', the City can serve a facilitation function by enacting enabling policies to support an EV ready community. Finally, there will be programs and actions that are wholly led by community partners without City participation.
31. The transportation and building sectors are responsible for 95% of the community emissions. Immediate action should target these sectors, and specifically focus on retrofitting residential homes, encouraging electric vehicle adoption, and enhancing public transit and active transportation options.
32. Nearly \$600 million in energy costs leave the community annually and climate action presents an economic opportunity to reduce energy expenditures and keep more dollars in the local economy. These actions should be evaluated not only on the environmental benefits but should be considered as business decisions as well.
33. The City should demonstrate leadership by establishing corporate emission reduction targets that align with the Plan and enact climate change action to showcase to the rest of the community.

ENVIRONMENTAL AND CLIMATE CHANGE IMPACT MATTERS

34. The following environmental and climate change impact matters have been considered in the development of the recommendation:
 - a) Endorsing the Plan will enable future climate change mitigation action and reduce GHG emissions within the community.

ALTERNATIVES

35. The following alternative is available for consideration by General Committee:

Alternative #1 General Committee receive the report and take no action.

This alternative is not recommended. Endorsement of the Plan is necessary to demonstrate leadership and provide a roadmap for the community to reduce GHG emissions. Furthermore, endorsement of the plan and community reduction targets are required as part of the grant funding agreement that support the cost the developing the plan.

FINANCIAL

36. There are no immediate direct costs associated with the recommended motion as Council has previously approved the establishment of a new full-time permanent Climate Change Coordinator position as part of the 2022 business planning and budgeting process. This position which will support the administrative and coordination functions required to enable the Plan's implementation.
37. Future action associated with the Plan implementation will require additional support, funding, and resourcing. These requests will be made to Council on a case-by-case basis or through the annual business planning process.

LINKAGE TO 2018–2022 STRATEGIC PLAN

38. The recommendation(s) included in this Staff Report support the following goals identified in the 2018-2022 Strategic Plan:

- Fostering a Safe and Healthy City

The actions addressed under the Plan supports building a greener Barrie through the mitigation of climate change.