

CHAPTER 3

The Opportunity of a Century

Benefits and Opportunities of Energy and Emissions Planning

KEY TAKEAWAYS

- The energy transition offers untapped opportunities and the CEERP lays out a path to realize the benefits of this latest energy transformation.
- The CEERP is a comprehensive plan to drive innovation, employment, and economic development, and simultaneously support environmental and social goals.
- Its implementation will keep more energy dollars within the community and increase local jobs by spurring local energy investments and improving local energy efficiency.
- It will also result in multiple health benefits and quality of life enhancements for local residents, such as improved local air quality, more active lifestyle choices, more socially connected community, and reduction in health-related issues from climate change (e.g. heat waves, vector borne diseases).
- The CEERP advances social equity in Brampton through social benefits such as more affordable living, housing choices, accessible transportation options, accessibility to services, and comfortable homes and buildings.
- The CEERP will provide direct local environmental benefits in both the short and long term, such as cleaner air and water, greener streets, lower GHG emissions, and the reduction in severity of impacts from climate change.
- Realizing these community benefits requires combined efforts of the City, federal, provincial, and regional governments, institutions, local utilities, businesses, developers, community stakeholders, and residents.
- The CEERP is the collaborative effort of the City of Brampton, Sheridan College, and the Community Task Force, with funding support from the Province of Ontario.
- A full glossary of terms is available at the beginning of this report. Some of the key terms used in this chapter include: Latest Energy Transition.



3.0 Building a Community Energy and Emissions Reduction Plan

Through the approval of the Brampton Grow Green Environmental Master Plan, and more recently the 2018 - 2022 Term of Council priorities, Brampton Council directed staff to develop a Community Energy and Emissions Reduction Plan. The CEERP aims to improve energy efficiency, reduce GHG emissions, ensure energy security, create economic advantage, and increase the city's resilience to climate change.

This is the City's first comprehensive plan to address these issues. It integrates efforts of the municipality, local utilities, and community stakeholders to set out and implement priority projects from 2020-2025.

3.1 What is the Community Energy and Emissions Reduction Plan?

The CEERP is a comprehensive plan to drive innovation, employment, and economic development, while at the same time achieve environmental and social goals.

3.1.1 Energy Related Emissions

Community energy planning places emphasis on reducing energy related emissions. Energy related emissions arise

from the heating and cooling of our homes and buildings, the powering of industries, and the movement of people and goods. Community energy planning may also consider measures that address non-energy related sources of emissions, like local opportunities for waste-to-energy or methane-to-energy.¹

3.1.2 Energy Costs

Community energy planning also identifies opportunities to keep energy dollars local by promoting energy conservation and efficiency as well as opportunities for local energy supply and distribution. In the long term, community energy plans can also reduce energy costs for residents.

3.2 Seizing Opportunity

The modern energy transition promoted in the CEERP is a source of untapped opportunities and a vital step in our energy evolution. The CEERP allows us to fully capitalize on the multiple potential benefits available through this transition such as economic, health and wellness, social equity, and environmental improvements.

3.2.1 Economic Benefits

Each new energy transition comes with significant potential to generate economic opportunities. Currently, the

community of Brampton spends over \$1.8 billion annually on energy. Of those energy dollars, \$1.4 billion leaves the community. This implies significant unrealized economic potential that the community can tap into. The CEERP can keep more energy dollars within the community by spurring local energy investments and improving local energy efficiency.

The CEERP helps identify where and how local energy investments can provide the greatest opportunity for Brampton’s local economy such as investing in the local generation and distribution of energy, manufacturing of energy technologies and infrastructure, and retrofitting of buildings.

In turn, new jobs and skills will be needed to support the businesses and organizations driving the implementation of the CEERP, such as knowledge and skills in home retrofits and infrastructure development to facilitate distributed energy systems. From post-secondary institutions (education for skills) to manufacturing (energy/construction technology and materials) to construction (installing retrofits), retrofitting buildings for energy efficiency can stimulate local economy and job growth.

Thirty percent of the energy users pay for is lost before it reaches end use. By increasing energy efficiency in our energy systems and at user end, it will help reduce energy waste and lead to lower energy costs.



The more energy-related goods and services are provided by our community, the more energy dollars and benefits re-circulate within the Brampton's economies and industries, creating a ripple effect of benefits throughout the whole community.

In addition to helping keep dollars within the community, more local jobs and new sources of income can be realized. As local industries establish themselves within Brampton, expertise, materials, and technologies will need to be sourced. By situating Brampton as a leader in this energy transition, we will increase the benefits of establishing these markets by creating a competitive edge. Additionally, building a more energy-efficient and cleaner city would provide advantages that would motivate businesses to locate to Brampton.

3.2.2 Health and Quality of Life

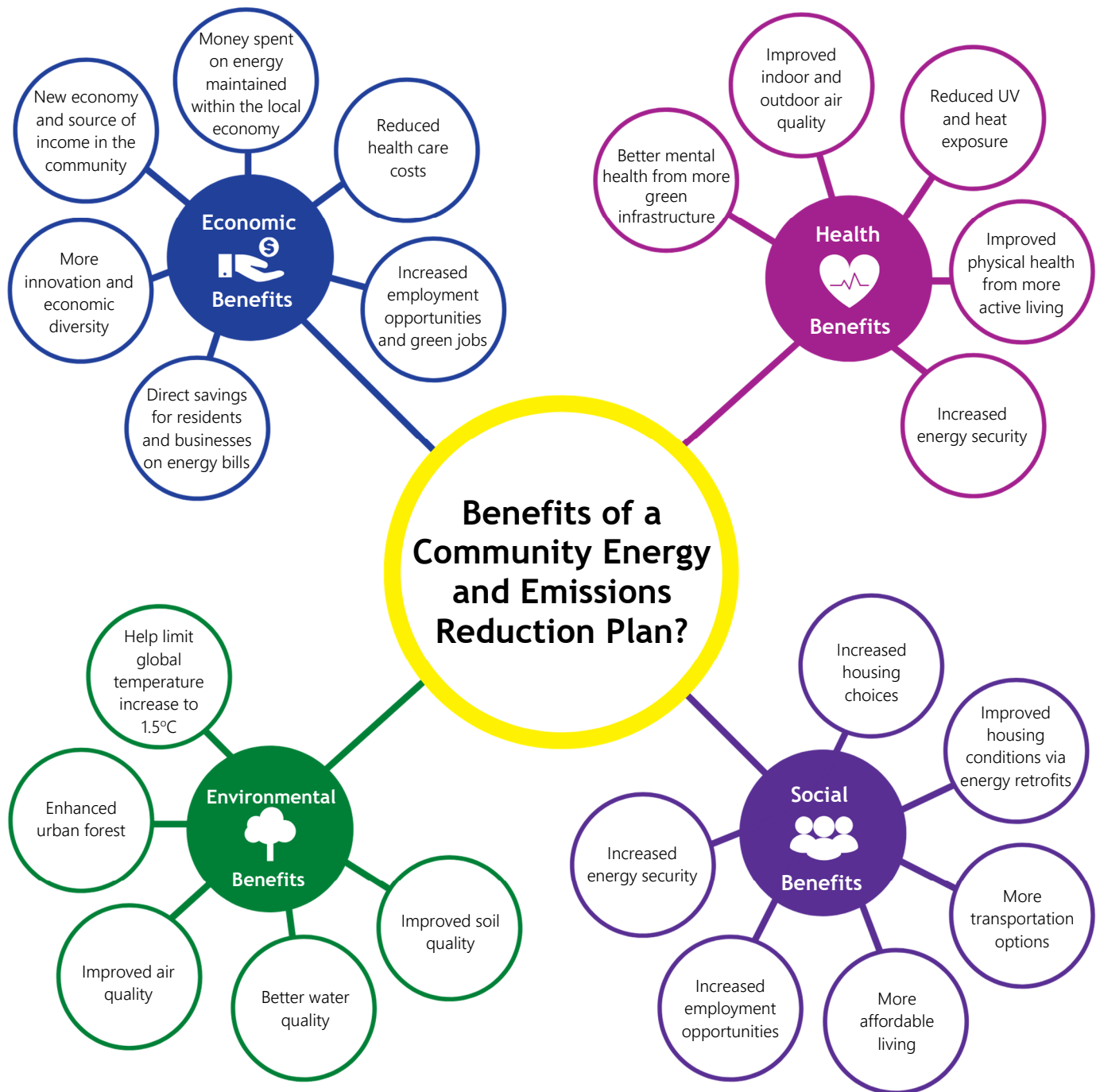
Energy use reduction and efficiency coupled with lower emissions result in a range of health benefits and overall quality of life improvements for local residents. Less GHG emissions can improve local air quality. Communities planned with energy efficiency in mind result in neighbourhoods that promote active living and foster social cohesion, which contribute to physical and mental health. Furthermore, retrofitting buildings for energy efficiency can drastically improve indoor air quality and thermal comfort for occupants. The integration of green infrastructure provides additional health benefits by reducing the impacts of climate events, such as heatwaves.

3.2.3 Social Equity

Social equity and climate equity are increasingly becoming integrated, especially in plans like the CEERP addressing both energy and GHGs. This integration speaks to the principle of promoting solutions that give equal opportunity for everyone to benefit from investments in climate change mitigation/adaptation and energy system transformation, while ensuring marginalized or vulnerable populations do not bare an unequal burden.

Ensuring that all Brampton residents have equal access to the benefits of community energy planning is a critical component of the success and lasting benefits of the CEERP. Social equity is instrumental to long term prosperity within communities.





“Canadian communities have untapped opportunities to strengthen local economics, reduce current and future energy costs and GHG emissions, and create jobs by investing in smarter and more integrated approaches to energy use at the local level.”

- QUEST (Canadian smart energy NGO)

3.2.4 Environmental Benefits

The next energy transition has the potential for significant environmental gains. Though a key goal of the CEERP is to contribute toward global efforts to limit temperature rise to 1.5°C, this also brings many long and short term local environmental gains such as cleaner air, green streets, and cleaner water. These benefits are generally a result of reduced emissions and the increase in green infrastructure within the community resulting from CEERP actions.

3.2.5 Community Transformation

With the initiation of its first Community Energy and Emissions Reduction Plan, Brampton is following in the path of world energy leaders endeavoring to reap the environmental, social, health, and economic benefits of the next energy transition. This is done by ensuring reliable, cost-competitive energy services for residents and businesses.

To be a leader in this energy transition of deep decarbonization and distributed energy, Brampton will need to initiate a transformation that involves well-designed communities, including;

- more investment in sustainable transportation options;
- a shift away from natural gas as a primary source of home heating;
- more efficient homes;
- more use of cleaner and electric vehicles;
- more walkable and mixed-use communities;
- more housing choices, such as low and mid-rise options;
- more local jobs; and
- more trees.

3.3 Working Together

Achieving these community benefits requires combined efforts of the municipality, federal, provincial, and regional governments, institutions, local utilities, businesses, developers, community stakeholders, and residents.

Collaboration and shared efforts were the main ingredients that launched the development of the CEERP. The Plan was initiated when the City of Brampton and Sheridan College came together with a common purpose. They organized a Community Task Force representing community stakeholders to provide governance and oversight of the

planning process. This Task Force consists of 28 individuals from 20 different stakeholders representing a diverse range of sectors who have come together to help create and champion the CEERP.

The City secured funding from the Government of Ontario to support the planning of the CEERP. Both the City of Brampton and Sheridan College contributed funding towards the completion of the CEERP and assigned staff to a Project Working Team to support the Community Task Force.

The successful implementation of the CEERP will require the combined efforts of all community sectors. Section 5.8 in Chapter 5 further defines the roles each community sector will need to play. Additionally, the Action Plan in Section 5.7 identifies the leads for each action of the CEERP.

The establishment of the Task Force and building more partnerships was the first milestone in this journey together. The creation of a Community Organization will be the next.

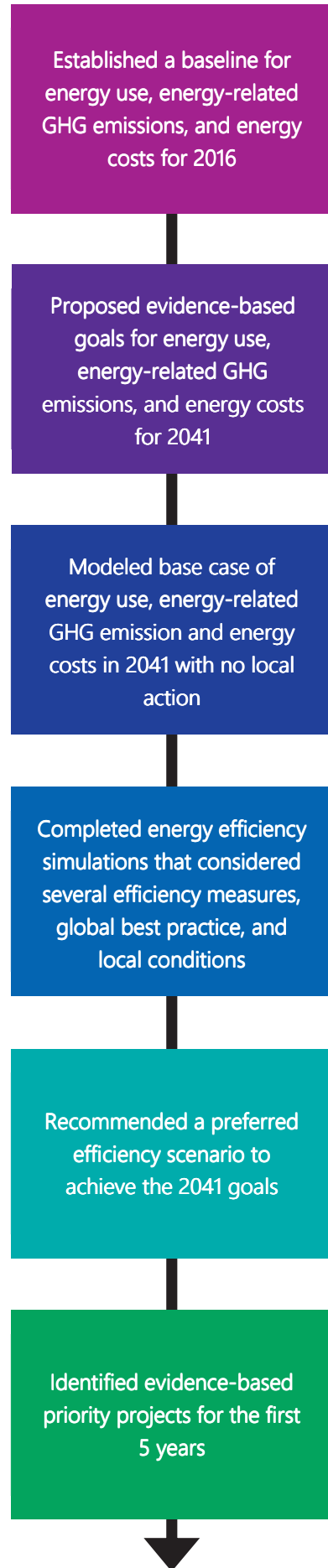
Global Covenant of Mayors

In 2019, the City joined the Global Covenant of Mayors (GCoM) for Climate and Energy, which is a first of its kind and largest global alliance of cities leading the fight against climate change with over 9000 municipalities participating worldwide. The GCoM supports ambitious, locally relevant solutions. Collaboration across multiple levels of government results in increased sharing of city-level data and fosters momentum for investment in low carbon municipal operations and infrastructure. As part of GCoM, Brampton was selected to participate in the Showcase Cities, which provides the City with technical support and access to networking opportunities.

The GCoM framework includes three levels: “Commitment”, “Mitigation” (Inventory, Target, Plan), and “Adaptation” (Assessment, Goal, Plan). The CEERP will allow Brampton to achieve the “Mitigation” level.

3.4 The CEERP Planning Process

To achieve the benefits and opportunities offered through community energy planning, the CEERP planning process employed six key steps summarized to the right.



Notes

¹Non-energy related measures can include anaerobic composting, landfill gas capture, and methane capture at wastewater treatment facilities.