



Staff Report for Council Meeting

Date of Meeting: May 26, 2021

Report Number: SRPI.21.056

Department: Planning and Infrastructure

Division: Policy Planning

Subject: **SRPI.21.0056 – Final Community Energy and Emissions Plan**

Purpose:

To present the final Community Energy and Emissions Plan, “Richmond Hill’s Path to a Low-Carbon Future”, for approval.

Recommendation(s):

- a) That Council receive staff report SRPI.21.056;
- b) That Council approve the attached final Community Energy and Emissions Plan;
and
- c) That Council endorse the attached Climate Change Toolkit.

Contact Person:

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Report Approval:

Submitted by: Kelvin Kwan, Commissioner of Planning and Infrastructure Department

Approved by: Mary-Anne Dempster, City Manager

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), City Solicitor (as required), Commissioner, and City Manager. Details of the reports approval are attached.

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Background:

Like many other communities, Richmond Hill is not immune to the consequences of severe weather patterns and changing climate conditions, which include disruptions to business continuity, infrastructure damage, risks to health and safety, and increased financial costs. Local communities must now adapt to the impacts of climate change and, conversely, each has a responsibility to mitigate their own contributions to climate change. Richmond Hill's Community Energy & Emissions Plan (CEEP) will help the City meet its legislative requirements and municipal obligations by demonstrating due diligence and affirmative action in reducing our community's greenhouse gas (GHG) emissions which contribute to climate change¹.

The Community Energy and Emissions Plan (CEEP) is a community plan to reduce our GHG emissions and promote related economic benefits by outlining Richmond Hill's pathway to a low-carbon future. In conjunction with the corporate Climate Change Framework, the CEEP was initiated under the "Resilient Richmond Hill" program to develop a coordinated approach to addressing climate change through mitigation and adaptation (Council C#24-18, Item 13.2.4, June 2018) and is largely focused on improving the resiliency of community and corporate assets through climate mitigation. The CEEP has been prepared in consultation with both internal and external stakeholders. It recommends actions to reduce our community's GHG emissions, conserve energy and explore related economic opportunities, including some of the actions directed by Council in its confirmation of the City's commitment to climate change action (Council C#04-20, Item 13.8, February 2020). Partially funded by Ontario's Ministry of Energy, the CEEP will also inform climate change policies in the Official Plan as mandated by the Growth Plan for the Greater Golden Horseshoe, 2019 and consistent with direction in the *Planning Act* and the Made-in-Ontario Environment Plan.

The past year alone has demonstrated that community leaders and residents are able to act and change habits quickly in a time of a crisis. As social distancing, lockdown and telework became the norm, people relied less on cars and more on services and amenities closer to home. They turned to walking and cycling to get around, local businesses to conduct their errands, and parks and greenspace for a sense of community and respite. As people spent more time at home, domestic comfort and energy and water costs became a more prominent concern, sparking a desire to renovate and renew homes and offering the opportunity to upgrade old technologies and retrofit buildings with more efficient designs and materials. Over the last year, the lower emission levels seen initially during the pandemic are returning to pre-pandemic levels. Now is an opportune time to take steps to change the trajectory to a low-carbon future as governments at all levels focus on economic recovery and tie stimulus to measures that will help us 'build back better'. Council has taken the first step by

¹ Insurance requirements and funding grant eligibility are increasingly tied to a municipality's ability to demonstrate climate action and due diligence.

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identifying the Resilient Richmond Hill CEEP as a term of council priority (Council C#49-20, Item 13.5, December 2020).

The purpose of this staff report (SRPI.21.056) is:

- a) To obtain Council approval of the Community Energy and Emissions Plan; and,
- b) To obtain Council endorsement of the Climate Change Toolkit for use by the community.

Draft Community Energy and Emissions Plan (CEEP) – Richmond Hill’s Path to a Low Carbon Future:

The Community Energy and Emissions Plan, titled “Richmond Hill’s Path to a Low-Carbon Future” (see Attachment 1), was developed through public consultation and engagement with community stakeholders and a technical advisory team.

Recommended actions were developed based on a combination of community feedback, modeling and technical analysis (see Attachment 2 for technical report). Key components of the CEEP are summarized below.

Richmond Hill is envisioned to be a resilient and low-carbon city

The goal of the CEEP is to reach net-zero emissions by 2050. Net zero signifies that, by the year 2050, Richmond Hill will have reduced its GHG emissions as much as possible and will not be emitting more than it is offsetting. Offsetting is the reduction of emissions in one place to compensate for emissions in another location. This low-carbon pathway is community driven and the entire Richmond Hill community is invited to take part in its transformation.

What does this look like? The CEEP states: “In 2050, the vision for a low-carbon city includes rooftop gardens and bioretention gardens/LIDs across the city and more trees everywhere. The air is cleaner and everyone is healthier. Those who own a car have an electric one that doesn’t emit any pollution. On many days, people don’t use their cars at all. All essentials are a short walk away, there’s more bike paths than ever, and the subway shuttles residents downtown within minutes. Everything—the lights, heating and air conditioning, computers, public buses—is powered by electricity generated from renewable sources like hydro, wind, and solar.”

Richmond Hills’s Low-Carbon Pathway – recommended actions

While the low-carbon vision is ambitious and aspirational, the steps to get there are not unattainable. To implement this strategy and become a low-carbon city, the City of Richmond Hill must work together with residents, businesses, and all levels of government. The Low-Carbon Strategy details seven program areas with twenty-nine area-specific sub-targets to help Richmond Hill achieve its emissions reduction target of net-zero GHG emissions. In some cases, the City’s role will be to advocate and work with other agencies and levels of government to achieve program goals; in other areas the City will be tasked with facilitating or incentivizing actions through its policy and

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regulatory framework; and in many cases it will also demonstrate corporate responsibility through its own GHG reduction measures. 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.

Net-Zero Program Area Sub-Targets

Transportation Transformation	Energy Efficient Buildings	Smart, Renewable	Towards Zero Waste	Compact Community	Municipal Leadership	Natural Heritage
Majority active transportation mode share	Net-zero energy residential	Rooftop solar	Anaerobic digestion and water conservation	Development along Yonge Street corridor	Net-zero municipal buildings	Urban Forest Management Plan implementation
E-bike and car share	Net-zero energy non-residential	Energy storage	100% methane recovery	Promote intensification	Electric municipal fleet	Natural Heritage Strategy
Zero-emission ownership vehicle targets	Retrofit existing residential	District energy		Car free zones in Richmond Hill Centre	Education plan	
Electrify transit	Retrofit existing non-residential	Ground mount solar				
Expand subway	Green roofs	Wind generation				
Expand VIVA	Increase efficiency of industrial	Renewable natural gas and hydrogen				
Areas with zero-emission vehicle exclusivity						

Priority actions are identified in each of the program areas that chart a pathway to achieve the Net-Zero Target and the 29 Sub-targets. Details of all the actions can be found in the CEEP (Attachment 1 to this staff report).

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Investment in a low-carbon economy is expected to bring net benefits and household savings

According to the Business-as-Planned Scenario, total spending by all sectors of the community in Richmond Hill (residents, businesses, all levels of government, etc.) would normally be in the range of \$2 billion per year or \$67 billion over the 2020-2050 scenario period. Additional investments required under the Net-Zero Scenario are estimated to be an average of about \$250 million per year or \$8.4 billion (2016 dollars) over that same time period. In relation to normal spending, investments towards a low carbon future would be in the order of 10-13% more.

From 2032 forward annual savings and revenue begin to increase as energy improvements turn into savings. By 2050, cumulative net benefits reach \$12.3 billion and are still growing. Most actions save and/or generate more money than they cost, as does the plan as a whole.

More specifically, in 2016, the average Richmond Hill household spent on average \$5,400 dollars on energy per year. This amount includes money spent on electricity, natural gas, gasoline, and diesel. By 2050, in the net-zero scenario, that figure is reduced to just under \$1,700. Between 2018 and 2050, the average household could save approximately \$23,000.

The entire community spends \$462 million dollars on energy per year, of which only 18% stays within Richmond Hill. In the net-zero scenario, the shift from fossil fuel use (controlled and distributed outside of Richmond Hill) to electricity and heating generated in Richmond Hill, combined with the aforementioned household energy savings results in more money that can and will be cycled into the local economy. In 2050 under the net-zero scenario, up to 50% of dollars spent on energy would stay in the community.

Many investments into the CEEP will have direct benefits for Richmond Hill. Implementing the CEEP is projected to add over 68,000 person-years of employment, or an average of 2,000 person-years of employment per year. Person-years of employment is a unit of measurement for the amount of work done by an individual throughout the entire year, expressed in the number of hours. While these do not necessarily represent new jobs, as some jobs may be displaced or eliminated each year, they represent new employment opportunities within the city supporting investment and growth in green industries, knowledge and innovation, positioning Richmond Hill competitively in the emerging low-carbon economy in Ontario, Canada, and beyond.

Comments on the Draft CEEP

Staff received comments on the CEEP during the public comment period. The major themes and responses are found below.

- Distributed Energy Resources (district energy, renewables, smart grids) should figure prominently in the plan.

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- The Smart Renewable Energy program area is focused on these actions. With 6 Program Specific Sub-Targets, and 8 actions, this theme features prominently in the plan.
- Some of the actions in the plan are already done.
 - While Richmond Hill has already started on the path to being a low-carbon community, a lot more needs to be done to reach the net-zero target. All of the actions in the plan focus on boosting Richmond Hill's efforts to take climate action.
- Access to Broadband should be a theme in the plan.
 - Broadband is relatively easy to access in most parts of Richmond Hill. In addition, the provincial government has announced \$2.8 billion to increase access to broadband in the province. This should address the concern.
- Because of COVID, we should not be prioritizing transit.
 - Creating walkable communities where people can live, work, and play is integrated into the plan through the Compact Community program area. However, there is still a significant part of the population that will have to travel to work and continue to rely on transit. In addition, it is likely that after the pandemic is over, many people will have to return to the workplace. Investing in transit provides a more affordable and sustainable option for commuters and reduces the amount of travelers and trips taken within the region by car.

Climate Change Toolkit

As previously mentioned, to implement this strategy and become a low-carbon city, the City of Richmond Hill must work together with residents, businesses, and all levels of government. Information and data on how to take action on climate change that is specific to Richmond Hill was identified as a gap. Leveraging the wealth of data that the City had and has obtained through the development of the CEEP, and on the momentum and interest of concerned citizens and groups in Richmond Hill, staff gathered a group of community members to create a resource for community members to fill that gap. Participants in this group included youth from local high schools and eco-clubs, members of local climate groups, as well as business and academia.

An innovative co-creation process was used to leverage the diverse input and backgrounds of the group to create this resource for the community. It was identified that there is a need to bring more people into climate action in ways that are inclusive and accessible; that speaks to the specifics of Richmond Hill and could be used to reach out to its diverse communities, using their knowledge level and lifestyle as a starting point. The output of those workshops is a community outreach toolkit, 'A guide to talking to people in your life about climate change'.

The Climate Change Toolkit (Attachment 3) will be released to the public alongside the CEEP as an initial call to action for residents to get involved. Staff will monitor its use and effectiveness.

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Financial/Staffing/Other Implications:

While there are no immediate financial impacts from this staff report, implementation of the plan will include resources from the City, residents, businesses, and all levels of government. Projects requiring additional funds and resources from the City will be considered through business cases as part of normal budget procedures.

Relationship to Council's Strategic Priorities 2020-2022:

The CEEP is identified as an initiative under Resilient Richmond Hill which is one of the Balancing Green and Growth Strategic Priorities. This is a plan to reduce GHG emissions that proposes to create jobs and reduce costs for residents, embodying the outcomes of the Strategic Priority Area in which it is found.

Climate Change Considerations:

This initiative is a climate change mitigation plan. It contains a number of actions and strategies to reduce GHG emissions, including planting trees and enhancing natural areas, converting vehicles to electric or other low-carbon sources, and retrofitting buildings to be more energy efficient.

Conclusion:

This staff report SRPI.21.056 recommends Council approve the Community Energy and Emissions Plan and endorse the Climate Change Toolkit for use by the community.

The CEEP is a community plan to reduce our greenhouse gas (GHG) emissions and promote related economic benefits by outlining Richmond Hill's pathway to a low-carbon future. The goal of the CEEP is to reach net-zero emissions by 2050. Net zero signifies that, by the year 2050, Richmond Hill will have reduced its GHG emissions as much as possible and will not be emitting more than it is offsetting.

An innovative co-creation process was used to leverage the diverse input and backgrounds of a group of community members to create a resource for citizens to reach out to other members of the community and encourage climate action. The output of those workshops was a climate change toolkit, 'A guide to talking to people in your life about climate change'. The toolkit will be released to the public alongside the CEEP as an initial call to action for residents to get involved. Staff will monitor its use and effectiveness.

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Attachments:

The following attached documents may include scanned images of appendixes, maps and photographs. All attachments have been reviewed and made accessible. If you require an alternative format please call the contact person listed in this document.

- Attachment 1 Final Community Energy and Emissions Plan (Richmond Hill's Path to a Low-Carbon Future)
- Attachment 2 Technical Report (Low-Carbon Technical Report)
- Attachment 3 Climate Change Toolkit (A guide to talking to people in your life about climate change)

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Report Approval Details

Document Title:	SRPI.21.056 - Final Community Energy and Emissions Plan.docx
Attachments:	- SRPI.21.056 Attachment 1 - Final CEEP.pdf - SRPI.21.056 Attachment 2 - Technical Report.pdf - SRPI.21.056 Attachment 3 - Toolkit.pdf
Final Approval Date:	May 6, 2021

This report and all of its attachments were approved and signed as outlined below:

Patrick Lee - May 5, 2021 - 11:55 AM

Kelvin Kwan - May 5, 2021 - 1:02 PM

MaryAnne Dempster - May 6, 2021 - 1:15 PM