



SUBJECT: Residential deep energy retrofit pilot program

TO: Environment, Infrastructure & Community Services Cttee.

FROM: Environment, Infrastructure and Community Services

Report Number: EICS-18-20

Wards Affected: NA

File Numbers: 210-19

Date to Committee: September 14, 2020

Date to Council: September 28, 2020

Recommendation:

Authorize the Mayor and Clerk to enter into an agreement with the Centre of Climate Change Management at Mohawk College to project manage the development of a pilot home energy efficiency retrofit program to the satisfaction of the Executive Director of Legal Services;

Approve a budget of \$182,000 for year one of this project from the Tax Rate Stabilization Reserve Fund; and

Direct the Executive Director of Environment, Infrastructure and Community Services to report back to council within one year on the progress of the pilot program and confirm the budget request for year two.

PURPOSE:

Vision to Focus Alignment:

- Increase economic prosperity and community responsive city growth
- Support sustainable infrastructure and a resilient environment

Background and Discussion:

On July 6th, 2020, staff reported to the Environment, Infrastructure and Community Services Committee with background information and options to deliver a residential

deep energy retrofit program in Burlington. This is a key program area identified in the Climate Action Plan approved by Council on April 6th, 2020 (EICS-01-20).

This report responds to the staff direction, specifically the last paragraph, from report EICS-07-20.

Receive and file environment, infrastructure and community services report EICS-07-20 regarding an update on options for a residential deep energy retrofit program; and

Direct the Executive Director of Environment, Infrastructure and Community Services to continue to work with partners, stakeholders and municipalities listed in environment, infrastructure and community services report EICS-07-20 and report back before the end of 2020 with final recommendations, including resources and actions required to implement a deep energy efficiency retrofit program for homes in Burlington; and

Direct the Executive Director of Environment, Infrastructure and Community Services to report back in September 2020 on the initial implementation of the Deep Energy Retrofit Program including but not limited to a **scale-able home owner pilot project, research on resident take up and commitment, homeowner technical support to energy retrofit including the involvement of Burlington Enterprises Corp, and that staff report back with any financial implications of the pilot project.**

Scale-able Pilot Project:

Staff recommend engaging the Centre for Climate Change Management (CCCM) at Mohawk College and the Bay Area Climate Change Council (BACCC) to develop and implement a scale-able home owner pilot project. The City has an existing partnership with the City of Hamilton and Mohawk College to accelerate action on climate change through the CCCM and BACCC. Both cities recently contributed financially to support the administration of BACCC. Further information about this partnership is described in the Climate Action Plan under Partnerships and Collaboration.

The CCCM is embarking on the development of a business plan for a Low-Rise Home Energy Retrofit Delivery Program for the region of Hamilton-Burlington on behalf of BACCC, with the following objectives:

- identify the Centre's core services to provide to homeowners
- develop a financially feasible business model for the program
- recommend a governance structure to promote transparency and accountability
- define program eligibility criteria, as well as monitoring and evaluations frameworks

- identify opportunities to scale and transfer solutions (e.g. integration with Brant or other adjacent regions, supporting multi-unit residential retrofits)
- investigate whether outreach and education services should be part of the Centre's core mandate.

As city staff reviewed the CCCM's proposal and objectives, it became clear that there is an opportunity and benefit to join forces with the CCCM to expand the scope of this work. The CCCM can act as the project manager with financial investment from Burlington to develop and deliver a scale-able pilot program for a home energy efficiency retrofit project. The additional work to be managed for the City of Burlington will include:

- additional home energy efficiency audits
- market research
 - an initial survey of a scientific random sample of homeowners in Burlington to determine market readiness, barriers and demand for incentives
 - focus groups following the process to complete more in-depth analysis of homeowners' experience following completion of a home energy audit and implementation of measures
- education – engage organizations such as Humber College and the Clean Air Partnership to deliver workshops and online sessions to residents on deep home energy efficiency retrofits
- marketing – promoting current opportunities and benefits to homeowners interested in completing home energy efficiency retrofits.

Additional details are provided in the budget in Appendix A.

The CCCM views this as an opportunity to expand the scope, where the experience and results of the partnership with Burlington will provide additional data and information to support the business plan for a Home Energy Retrofit Delivery Centre.

Project Deliverables

The CCCM proposes the following work to be completed within a year:

- Business plan for a Hamilton-Burlington Retrofits Delivery Centre for Hamilton-Burlington region
- Report on implementation plan
- Results on a study of home energy audits in Hamilton and Burlington, in which the project team identifies common consumer needs to verify delivery centre's core services (additional energy audits will be completed in Burlington)
- Market research for Burlington – survey of homeowners and focus groups

- Outreach & education initiatives for Burlington residents

The goal is to incubate the Delivery Centre so that it can eventually grow to become its own organization or partner with another organization where synergies exist. The centre will provide the support and knowledge needed by homeowners, ensuring the energy retrofit process can be convenient, easy to access and effective. Pending the completion of the City of Hamilton's Community Energy Plan, flexibility exists for Hamilton to invest resources to expand the scope of the program within its own community.

Project Management

The project will be managed by the CCCM, an applied research division of the College, aimed at supporting the Hamilton-Burlington region's transition to a low carbon economy. The Centre works with municipal, industry and community partners to develop and accelerate climate change solutions. Some of the Centre's current partners include the City of Burlington, City of Hamilton, ArcelorMittal Dofasco, and the National Research Council's High Performance Buildings Group.

Project Advisory Committee

For 2020-22, the Bay Area Climate Change Council has identified the acceleration of a home energy efficiency retrofit program as one of its priority areas of focus. As such, the Bay Area Climate Change Council's Implementation Team on Home Energy Retrofits will act as a project advisory committee. The Implementation Team will meet monthly to provide project feedback and guidance. This group will comprise of 8-10 stakeholders from across the home energy retrofit ecosystem in Hamilton-Burlington.

Recommendation/Next Steps

Pending council's approval, city staff will enter into an agreement with the CCCM to complete the activities outlined in the budget outlined in Appendix A to this report. Staff will work closely with the CCCM on this project and use the opportunity during the market research to assess the need and demand for a municipal supported home energy efficiency loan using a local improvement charge approach. On bill financing in partnership with Burlington Hydro could also be explored as other municipalities are doing in partnership with their local distribution companies.

Staff will report back within the year on the results of the business plan and the necessary resources to expand the scope of this work, including financing options to support home energy efficiency retrofits. Staff are recommending a budget of \$182,000 for year one and will report back for confirmation of a budget for year two, pending the results of the market research and development of the business plan. Furthermore, if

Burlington decides to join the municipal consortium (see below), a budget contribution may be required to support this work.

Municipal Consortium in Ontario

As noted in report EICS-07-20, the Clean Air Partnership is continuing its efforts, including discussions with the Federation of Canadian Municipalities (FCM) to develop a municipal consortium in Ontario to support home energy efficiency retrofits. Many of the municipalities (see Appendix B to this report) are applying to FCM for funding to develop and/or implement their programs. The overall goal is to ensure customer experience and administration of programs are efficient and effective. It is recognized that a one-size fits all may not be effective given the diversity of municipalities.

However, given the common elements for each project, Ontario municipalities can benefit greatly from a collaborative approach. Municipalities applying to FCM will work with the organization to determine how and where resources can be pooled, as well as share experiences, expertise and collaborate on common platforms and tools. The collaboration could take many forms from assignment of project leadership for a set of tools or in other cases it may be advantageous to have group development. Common platform pieces could include:

- One stop web site
- Program marketing materials
- Program outreach materials to key stakeholders (homeowners, realtors, contractors)
- Applications forms
- Client management system
- Client supports/resources
- Contractor supports/resources
- Better understanding how to handle and what are the differences in needs/capacity across municipalities with regards to these common platform pieces.

Staff will continue to monitor progress on this collaborative initiative and engage in discussions to determine the best approach for Burlington.

Strategy/process

A number of external organizations, other municipalities and internal city staff were contacted to discuss options and resources required to develop a scale-able pilot

project; complete market research; create a budget; and provide technical expertise (see list under 'Engagement' section).

For information purposes, a summary of the progress of a sample of other Ontario municipalities in the development of home energy retrofit programs is provided in Appendix. It is important to note that municipal staff involved in developing home energy retrofits continue to discuss and share information with each other on a regular basis, including external organizations such as the Clean Air Partnership. It is recognized that we are all working towards achieving the same goal of supporting homeowners to improve home energy efficiency and reduce greenhouse gas emissions.

Options Considered

Staff assessed creating a scale-able home energy efficiency retrofit pilot program with in-house resources, however, the benefits of working with an external community-based organization outweighed that option. The CCCM can be flexible in managing the development of this program, has access to expertise within the college, has the ability to reach the community through its networks and, will receive additional guidance and support from the Bay Area Climate Change Council and Implementation Team. Mohawk College has a positive reputation for being a leader in applied research and skills training, an important element of scaling up the trades, skills and knowledge to support energy efficient building retrofits in the Burlington and Hamilton communities.

Financial Matters:

Attached in Appendix A to this report is the proposed budget for the partnership with the CCCM to develop a scale-able pilot program to deliver home energy efficiency retrofits in Burlington.

Total Financial Impact

Burlington's total budget share for year one is \$182,000 and year two \$103,500. Year one includes one-time funding to develop the business plan and complete market research, including a survey and focus group.

The CCCM has applied to The Atmospheric Fund (TAF) for its share of funding of \$32,800 for year one.

Source of Funding

Staff recommend the use of the city's Tax Rate Stabilization Reserve Fund (TRSRF) for the one-time funding of \$182,000 to partner with CCCM for development of a business plan, pilot project and associated market research costs. As of June 30, 2020 the

balance in the city's tax rate \$4.72 million net of commitments. It is important to note, that the city is projecting a year end shortfall as a result of Covid-19. Therefore, the TRSRF will not be replenished at year end with any retained savings, and furthermore, it is possible that the balance may be further drawn upon based on the year end forecasted shortfall.

Other Resource Impacts

N/A

Climate Implications

The use of fossil fuels for the purpose of space and water heating in existing buildings is a significant source of greenhouse gas emissions. The proposed pilot program is focused on improving energy efficiency within the residential sector, specifically singles, semis and towns/row homes. Program delivery in this sector has been limited and inconsistent in recent years with added challenge of the diversity of the size and diversity of this sector.

Engagement Matters:

Staff consulted on the development of the pilot program for the home energy efficiency retrofit program included the City Manager, Executive Director of Environment, Infrastructure & Community Services, Director of Finance, and Manager of Communications. Legal staff will be engaged in the development of the agreement with the CCCM.

Staff representatives from the following municipalities and organizations were consulted on this report included:

- Town of Oakville
- Town of Halton Hills
- City of Windsor
- City of London
- City of Guelph
- Region of Waterloo
- Eco Superior (Thunder Bay)
- Green Venture (Hamilton)
- BurlingtonGreen
- Halton Environmental Network

- Clean Air Partnership
 - Clean Foundation Nova Scotia
 - The Centre for Climate Change Management at Mohawk College
 - Bay Area Climate Change Council
 - Burlington Climate Action Plan Stakeholder Advisory Committee
 - Burlington Hydro
 - Aladaco – the Power of Conservation
 - MDB Insight (survey research)
 - Leger360 (survey research)
 - Humber College – HERO program
 - QUEST
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Conclusion:

The City of Burlington has set a target for the community to be net carbon zero by 2050. The development and implementation of a deep energy efficiency retrofit program for homes is necessary to achieve the low carbon scenario described in the Climate Action Plan for Burlington.

Respectfully submitted,

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Appendices:

- A. Program Budget
- B. Municipal Summary

Report Approval:

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Council.