

SCHEDULE F – PROJECT COMPLETION REPORT TEMPLATE

VERY IMPORTANT:

Timing: You need to email a report, to your GMF project officer (contact info is in Schedule C), on the dates indicated in Schedule C or whenever FCM asks for such a report.

Copyright: Before you submit a report to FCM, make sure you hold the copyright for the report. If you're hiring a consultant to prepare the report, please make sure to get the copyright (see FCM's copyright tips document), otherwise FCM will not be able to disburse the Grant Amount.

Accessibility for people with disabilities: Please do not change the format, font, layout, etc. of this report. This template has been specially designed, following FCM's Accessibility Guidelines, in order to be accessible to people with disabilities.

Confidentiality: If your report contains any Confidential Information that you would prefer not be made available to the public (e.g. through a case study or other materials produced by FCM that relate to your Project), please submit two versions of the report:

- 1. Complete report including Confidential Information:** Please clearly label this report with the word "**Confidential**" or similar wording and FCM will treat it as confidential.
- 2. Abridged report excluding Confidential Information:** This report may be posted on the FCM website and otherwise made available to interested third parties, to help FCM meet its knowledge sharing objectives.

Please contact your project officer to receive an electronic copy of the Completion Report Template.

Upon completion of the project, a copy of the Final Deliverable must be submitted along with this Completion Report.

FCM will post your report on the [Green Municipal Fund™ \(GMF\) website](#). This is because one of FCM's mandates is to help municipal governments share their knowledge and expertise regarding municipal environmental projects, plans and studies.

How to complete the Completion Report

The purpose of the Completion Report is to share the story of your community's experience in undertaking your project with others seeking to address similar issues in their own communities.

Please write the report in plain language that can be understood by people who are not specialists on the subject. A Completion Report is typically in the range of 5–10 pages, but may be longer or shorter, depending on the complexity of the project.

GMF grant recipients must enclose **final** copies of the Completion Report and the Final Deliverable with their final Request for Contribution. The reports, including all attachments and appendices, must be submitted in PDF format with searchable text functionality. Reports that are not clearly identifiable as final reports, such as those displaying headers, footers, titles or watermarks containing terms like "draft" or "for internal use only," will not be accepted by GMF. Additionally, reports must be dated. If you have questions about completing this report, please consult GMF staff.

GMF number	GMF 17577
Name of lead applicant (municipality or municipal partner)	Clean Air Partnership
Name, title, full address, phone, fax and e-mail address of lead technical contact for this study	Gabriella Kalapos, Executive Director, Clean Air Partnership, gkalapos@cleanairpartnership.org , 416-948-7125 (phone), 75 Elizabeth Street, Toronto, Ontario M5G1P4
Date of the report	July 15 th , 2022
Type of study (Feasibility study or Program Design study)	Feasibility Study

1. Introduction

- a) **Who was involved in doing the Study, and what are their affiliations? Please include name, title and contact information. Those involved could include municipal staff, engineers and other consultants, a representative from a non-governmental organization, and others.**

There were 3 municipalities engaged in the Feasibility Study project:

- Municipality of Clarington: Doran Hoge, Energy and Climate Change Response, DHoge@clarington.net, 40 Temperance Street, Bowmanville ON L1C 3A6
W: 905-623-3379 ext. 2429
- City of Kawartha Lakes: Denise Williams, Strategy and Innovation Specialist, @kawarthalakes.ca, 705-928-5931, and Richard Holy, Director of Development Services, rholy@kawarthalakes.ca, 705-324-9411 ext 1246, 26 Francis Street, Lindsay, ON, K9V 5R8
- Tay Valley Township: Noelle Reeve, Planner, planner@tayvalleytwp.ca, 613-267-5353 ext. 128 or 1-800-810-0161, 217 Harper Rd, Perth ON K7H 3C6

2. The Study

- b) **Please summarize the overall objectives of your study and the key activities or approaches you undertook to meet these objectives.**

The objective of this study was to undertake the market analysis and feasibility analysis for each of the participating cities. This project was combined with GMF 17579 which brought in an additional 4 municipalities into the project. The steps for this project included:

- Collecting the necessary data to undertake retrofit market analysis and uptake scenarios. Data collected included: natural gas and electricity data from utilities for residential sector, MPAC data, geospatial data for building shape, city boundary data (polygon), NRCAN audit data, census data.
- Data sharing agreements needed to be secured to share the data with Lightspark to undertake the analysis.
- Upon collection of the data collection, Lightspark undertook the market analysis to identify the housing archetypes within the community, economic and GHG reduction potential, and measure potentials.
- The market analysis was then presented to each of the municipal leads to gather their input and questions to complete the market analysis. Based on the questions the staff lead had regarding the uptake scenarios Lightspark then undertook the uptake analysis to provide the municipal lead with options to consider regarding uptake and incentive design.

- Upon finalization of the market analysis and uptake scenarios from Lightspark for each of the participating municipalities, CAP then developed a design consultation slide deck to use within each of the municipalities to engage with the lead municipal staff person as well as others within the municipality that were identified as necessary to consult with by the municipal lead (consultations often focused on the finance teams within the municipalities).
- While this project was a FCM CEF Feasibility Study project, the objective was to bring each of the participating municipalities further along the program design pathway to enable them to meet most or all the FCM CEF program design requirements and proceed towards FCM CEF capital and grant proposals should the municipal council approve that direction.
- Based on the input from the internal municipal consultations CAP then developed a design report for each of the municipalities to summarize: the rationale for a community retrofit financing program, the top level finding of the market analysis and uptake scenarios, program design considerations and recommendation and a pathway map and municipal councils decisions needed to apply for a FCM CEF capital and grants proposal. The original intention was to develop a council report rather than a design study, but based on feedback from the municipal leads and due to the different approaches each of the participating municipalities have for their Council reports, it was decided that CAP would develop the Design report that would then enable each of the municipal leads to develop the corresponding staff council report that fits the format used for their municipality.
- Due to 2022 being a municipal election year, each of the participating municipalities determined that it would be more appropriate to seek mandate and budget decisions on next steps from the upcoming council. Tay Valley has submitted an information staff report to Council to bring them up to date on outcomes from the market analysis. For Clarington, consultations have taken place with Durham Region to better understand how to integrate a Clarington program with the Durham Region program and how to ensure they are complementary rather than duplicative. Results from those consultations are provided in the Clarington Design Report. Kawartha Lakes is in the process of using the Design Report to advance conversations with their finance teams. CAP will continue to work with each of the participating municipalities as additional consultations are deemed necessary and as municipal leads advance their council reports in the upcoming Council term.
- In addition to the market analysis and program design for each of the municipalities, CAP also developed the Archotyping Guide for Energy Efficiency Programs. This Guide provides municipalities with guidance on how housing archetypes can be used to classify buildings into representative clusters and describes the importance of archotyping to program design, the utility of different variables, available data sources, and methods for defining housing archetypes and their energy efficiency/GHG reduction opportunities. This Guide is not meant to provide a prescriptive methodology detailing every step required to undertake a market analysis, but rather to better enable staff to more effectively and efficiently collaborate with staff and/or consultants who are experienced in this area.

c) Please describe any public or internal consultations or workshops conducted as part of the Study and their impact on the Study.

- For each of the municipality's consultations were undertaken with the lead staff person. Internal discussions with finance departments were undertaken to gather input from those departments into program design considerations.
- Each of the municipalities were provided with Program Design Reports to summarize the findings of the market analysis and program design considerations and recommendations. Keeping in mind that each of the municipalities will only be going to council in the new municipal term (post November 2022) for decisions regarding next steps and mandate.
- The goal of these consultations was to share the results of the market analysis and housing archetypes to identify which housing archetypes presented the best opportunity to achievement of a "free" retrofit in that instead of spending money of energy costs, the property owner can transfer those costs to their LIC loan repayment. Upon the full repayment of the retrofit loan

- those energy savings would then be accrued by the property owner. This was explored with an economic and GHG lens for both the building envelope, and fuel switching perspective.
- Program design consultation also took place with the Retrofit Training Network to gather their input into the program design recommendations to inform leading practices on creating a customer focused retrofit program in a manner that also takes into consideration municipal program administration concerns (i.e., how these programs can reduce the admin burden on municipalities while still addressing program gaps and retrofit ecosystem advancements).
 - This project did not include community/public consultations within each of the municipalities. However, input from other Ontario retrofit program community/public consultations and user type breakdowns did inform program design considerations and recommendations.

Feasibility Study only: Elements of a Feasibility Study

Please provide the page numbers from the Feasibility Study report for the following program design elements. If the design element is not in the report, please provide a description of the element.

Elements of a Feasibility Study	Page numbers from the Feasibility Study report or description of the feasibility element
A baseline assessment of a community’s housing stock and energy upgrade potential, including assessing building types, energy use profiles and opportunities for energy upgrades to support GHG emissions reductions.	Market Analysis for each municipality in GMF 17577_3cities: 3 cities Lightspark Market Analysis Reports folder. It is also summarized in Part 2 of each of the Program Design Reports.
Potential uptake of home energy upgrades in terms of the number of anticipated projects and level of investment required	Uptake Scenarios for each of the municipalities in GMF17577 available in 3 cities Uptake Scenarios folder
Expected environmental, social and economic benefits that could be achieved from these projects	This is a big component of the uptake scenarios but summarized in part 1 of each of the Design Consultations slides and Program Design Reports. Summaries of the environmental and economic potential are also provided via the Uptake Scenarios folder.
Homeowner barriers to energy efficiency and renewable energy upgrades and to participation in existing efficiency programs, such as those offered by a utility company or regional efficiency agency	Summarized for each of the municipalities in Part 1 of their Program Design Reports.
Evaluation of relevant financing models for your local context	For each of the projects the LIC mechanism was identified as the recommended approach.
Engagement with key municipal and external stakeholders on shared goals for a local program	Market analysis and program design consultations were undertaken with each of the municipalities to engage finance teams in program design/approach. See 3 Cities Design Consultation Slides folder

Program Design Study only: Elements of a Program Design Study

Please provide the page numbers from the Program Design report for the following program design elements. If the design element is not in the report, please provide a description of the element.

Elements of a Program Design Study	Page numbers from the Program Design report or description of the design element
Target audience (e.g. housing stock, socio-economic groups, etc.)	The target audience was defined as those most likely to be able to achieve a “free” retrofit in that their energy reduction opportunity presents the greatest opportunity to replace energy costs with loan repayments. See Part 2 of the Design reports for more details.
Participant eligibility criteria	It was recommended that all residents who would like to participate in the program be eligible to participate in the program. Financial verification was recommended as tax account in good standing. See Part 3 of Design Report.
Eligible energy measures, and non-energy measures if relevant	Page 10 of Design report. It was also recommended that flood protection and contingency related to non energy improvements stemming from energy efficiency measures (ex: identified mold issues) be considered for inclusion.
Funding sources and budget	It is recommended that each of the municipalities that decide to advance a community program apply to FCM CEF capital and grants and that the matching contributions come from municipal capital reserves, Infrastructure Ontario or 3 rd party private capital borrowed by the municipality for the program.
Recommended financing model	LIC based financing is recommended for each of the municipalities.
Financing terms and conditions	Up to a 20 year term with no penalty for early pay back.
De-risking strategies (e.g. credit assessment, municipal loan loss reserve and partial loan guarantee for third-party lenders)	Part 3 of Program Design Report.
Program delivery model	Consideration of a 3 rd Party delivery model was a recommendation for each of the municipalities based on consultations within each of the municipalities on concerns related to admin burden of program delivery. For Clarington there were consultations with Durham Region to identify how a Clarington program could compliment the Durham Greener Homes program rather than duplicate offerings.
Application of the EnerGuide Rating System and relevant requirements for program participants	It was noted in the program Design reports that a NRCan audit requirements was part of the FCM CEF program requirements.
Integration with other relevant incentive programs	A market analysis of programs in market was provided during municipal consultations as well as in Part 1 of the Program Design reports.
Consumer protection measures	Didn't really address this in program design thus far.
Marketing and communications strategies	Didn't really address this in program design thus far
Workforce training needs	Part 3 of Design report
Program implementation plan	Part 4 of Design report re municipal council decisions
Stakeholder roles and responsibilities	Part 3 of Program Design report

Client journey and application process	Later slide in Design Consultation Slides and in Part 1 of Design reports
Program process flow diagrams	Later slide in Design Consultation Slides
Program monitoring and evaluation	Didn't really address this in program design thus far.
Risk identification and management strategies	Part 4 of Design Reports
Contracting and procurement	Addressed in staff council reports seeking council support to advance a FCM CEF grants and capital application with BetterHomes Ontario or other 3 rd party who can work with the municipality to meet all FCM CEF program design requirements and support the municipal development of a capital and grants application to FCM CEF for Tay Valley and Huntsville. For Clarington it was recommended that Clarington work with Durham Region on a possible FCM capital and grants application.

3. Lead Applicant's Next Steps

- a) **Taking the Study's recommendations into account, what next steps do you, as the municipality or municipal partner, plan to take? What barriers or challenges do you anticipate with these next steps, and how might these be overcome?**

Addressing municipal finance departments' concerns related to the admin burden resulting from using the LIC mechanism was raised as an issue. It also highlighted the need to address this issue over the longer term as many of the admin concerns stem not only from the initial few years of program uptake, but rather from concerns re the admin burden when these programs reach scale up numbers. The next steps to address this issue is undertaking some consultations with finance teams to explore possible models for removing that admin burden from municipal finance teams. Discussions are taking place with PACE Atlantic and the municipalities to see if the PACE Atlantic loan administration structure is transferable to Ontario municipalities. There is also the possibility of working with the Province of Ontario to improve the LIC legislation to streamline 3rd party LIC management on behalf of municipalities.

For each of the participating municipalities below is a brief description of their next steps:

Municipality of Clarington: Clarington is continuing its discussion with Durham Region to further explore how a Clarington LIC program would augment the Durham Greener Homes offerings. They are also furthering discussions with their finance team and plan to submit a council report in the next municipal council term (post November 2022) to secure a mandate for next steps.

City of Kawartha Lakes: Kawartha Lakes is a bit behind the other jurisdictions due to staff changes and data acquisition issues, but the next steps are engaging with the finance department and getting a report in front of Council in the upcoming council term (post November 2022) for decision-making on next steps.

Township of Tay Valley: Tay Valley Township has submitted a council report for information purposes to their council but plans to go back to Council in the upcoming term (post November 2022) for decision-making on next steps.

4. Lessons Learned

In answering the questions in this section, please consider all aspects of undertaking the Study—from the initial planning through each essential task until the Final Study report was prepared.

a) What activities or partnerships were critical to the success of your Study?

- Partnerships with municipalities and with a consultant that can undertake the market analysis was instrumental to advancing the to dos related to this project.
- Partnership with the Retrofit Training Network were instrumental in providing input into how the program design can support the advancement of the retrofit ecosystem.

b) What barriers or challenges (if any) did you encounter in doing this Study? How did you overcome them?

- Data collection took longer than expected and while we expected that, it was still a surprise how long it took. One of the efforts that was very helpful was delivering a webinar with all participating municipalities on the data and how they can access it. Helping them identify contact people within utilities they needed to contact, and virtual meetings with lead municipal staff and the municipal MPAC staff lead.
- 2022 being a municipal election year posed a challenge in that the municipalities determined that it would be more appropriate to wait for decision making on next steps for the upcoming council to achieve a longer-term mandate for next steps.

c) What would you recommend to other municipalities interested in doing a similar Study? What would you do differently if you were to do this again?

- There are significant human and financial resource savings to undertaking this work in a cohort manner. This project resulted in each of the 3 municipalities completing their feasibility analysis and a good component of their program design for the costs that some municipalities were spending on doing their individual program design. What will need to be done differently in the future is that municipalities in the cohort will be required to provide cash contributions to this work to better enable this work to be undertaken. They only provided in-kind contributions in terms of their staff time for this project and in the future there is likely to be the need to have them contribute staff as well as financial resources to make this a financially viable project for CAP to undertake again. It is likely that future projects such as this will require municipalities to contribute a minimum of 20% of total program costs.

d) Do you have a project champion who has been instrumental to the success of the study? If so, please include his or her name, title and contact information, and describe his or her role in the study.

- Each of the municipal leads were champions for this project and the consultations and council decisions would not have been possible without their support and effort.

5. Knowledge Sharing

a) Is there a website where more information about the Study can be found? If so, please provide the relevant URL.

<https://www.cleanairpartnership.org/projects/market-analysis-and-program-design-for-municipal-retrofit-programs/>

b) FCM is developing a Community Efficiency Financing resource library to share tools and best practices on designing and implementing local financing programs for home energy upgrades. In addition to the Study results, has your Study produced any resources or materials that would be useful to share with other communities, such as checklists, toolkits, templates, guidelines, bylaws, videos or information brochures? If so, please attach copies or include the relevant website links.

- Each of the participating municipalities' design reports can be shared publicly once they have gone to councils. Links to Design and Council reports will be linked from the above url.
- The Archotyping Guide For Energy Efficiency Programs would be of value to share.

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