

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JANUARY 5, 2016
FROM:	JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE
SUBJECT	UPDATE: LOCAL IMPROVEMENT CHARGES (LICs) FOR ENERGY AND WATER EFFICIENCY IMPROVEMENTS

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, the:

- a) This report **BE RECEIVED** for information; and
- b) This report **BE FORWARDED** to the Advisory Committee on the Environment (ACE) for information and discussion.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Some relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Community Energy Action Program – Update and Status (May 5, 2015 meeting of the Civic Works Committee, Agenda Item #13)
- Update: Local Improvement Charges for Energy and Water Efficiency Improvements (March 25, 2014 meeting of the Corporate Services Committee, Agenda Item #10)

STRATEGIC PLAN 2015-2019

The following report supports the Strategic Plan in the important areas of public service delivery, climate change mitigation and adaptation, and job creation. Specifically, the potential use of Local Improvement Charges (LICs) for building energy and water conservation retrofits addresses all four Areas of Focus, directly and indirectly, as follows:

Strengthening Our Community

- Vibrant, connected, & engaged neighbourhoods
- Healthy, safe, & accessible city

Building a Sustainable City

- Robust infrastructure
- Strong & healthy environment

Growing Our Economy

- Diverse & resilient economy
- Urban regeneration
- Local, regional, & global innovation
- Strategic, collaborative partnerships

Leading in Public Service

- Innovative & supportive organizational practices
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this information report is to provide Committee and Council with an overview of current activities underway to investigate the potential use of LICs for energy and waste conservation projects on private property.

CONTEXT

Carrying out “deep retrofits” of older buildings – improvements to insulation, draft-proofing, and heating system – has the potential for significant energy savings and associated greenhouse gas emission reductions for London and other cities with a significant amount of older building stock. Typically, these retrofit projects have financial payback periods ranging from 8 to 15 years, well within the future lifespan of these buildings. However, for some homeowners and building owners, the payback time may be longer than they are planning to keep the building. Homeowners may have concerns that they might not recoup their investment when they sell their house compared to other home upgrade options (e.g., marble countertops and hardwood floors). For other households, as experienced during the former ecoENERGY Home Retrofit Grant program, access to funds needed to finance these retrofits may not be readily available for lower-to-middle income homeowners (e.g., seniors with fixed income).

To help overcome these barriers, in October 2012, the Ministry of Municipal Affairs and Housing amended Ontario’s LIC mechanism under Ontario Regulation 586/06 (Local Improvement Charges — Priority Lien Status) of the Municipal Act, 2001. The amendments allow for new uses for the LICs to fund energy efficiency, renewable energy and water conservation capital works on individual, private properties. This is in addition to the traditional uses for LICs, which were previously limited to City infrastructure improvements in neighbourhoods, such as sidewalks, water and sewer pipes, and parks, which require a two-thirds vote of support from local property owners.

In 2013, City of London staff (from Environmental & Engineering Services and Finance) participated in the Advisory Group for Collaboration on Home Energy Efficiency Retrofits in Ontario (CHEERIO) to evaluate the potential use of LICs across Ontario. This project addressed many of the questions and concerns raised about using LICs for funding home retrofits.

In the London Community Energy Action Plan (approved by Council in July 2014 for community engagement), the first of two Highest Priority Actions under Policy Support for Community Energy Action Planning for the City of London in 2014-2015 is to:

Establish new, easy to implement policy tools within the new Official Plan and supporting plans for encouraging energy efficiency and renewable energy, as well as accommodating energy infrastructure in coordination with existing tools and programs (including those from utilities). Examples of these include Local Improvement Charges for energy and water retrofits, Community Improvement Plans, and other monetary and non-monetary incentive mechanisms within the Development Approvals process.

To implement this action, the subsequent program report titled, “2014/15 City of London Actions as Part of the Community Energy Action Program” stated that City staff would:

Study the implementation of Local Improvement Charges for residential and commercial building energy and water retrofits in other jurisdictions, such as the pilot program implementation of the Home Energy Loan Program launched in the City of Toronto in 2014.

DISCUSSION

A detailed discussion of the work done to date on the use of LICs for energy and water retrofits is presented in Appendix A and summarized on the next page in 5 Parts (A to E).

City staff have been working with a number of municipalities that are monitoring or directly participating in pilot projects and other studies. The CHEERIO participants met in November 2015 to discuss the status of LIC programs in Ontario, and much of the information written below was provided at this meeting.

Activity	Summary Comment
PART A Summary of CHEERIO study	This summary of the findings from the CHEERIO study was included in the March 2014 report to Corporate Services Committee (CSC), but it is worth including in this report again to provide the context for the work being undertaken in Toronto (Part B) and Guelph (Part C).
PART B City of Toronto's Home Energy Loan Program (HELP) and High-Rise Retrofit Improvement Support (HiRIS)	<p>As of December 2015, the only LIC program for energy and water conservation in operation in Ontario is a pilot project in the City of Toronto.</p> <p>City of Toronto's HELP was launched in select test neighbourhoods in January 2014, with \$10 million in funding to cover activities for a three year pilot project (2014 - 2016), with a target to retrofit 1,000 homes. HiRIS has the same budget and timeline, with a target to retrofit 10 multi-unit residential buildings. HELP is administered by two additional full-time equivalents (FTEs), whereas HiRIS is managed with existing City staff.</p> <p>HELP is integrated with existing home energy retrofit incentives from Enbridge Gas Distribution and Toronto Hydro. Homeowners are free to select their own product and service providers. As of October 31, 2015, 339 HELP applications have been received. About half of all applicants have been unable to participate due to challenges in receiving consent from mortgage lenders for applicants with CMHC-insured mortgages. To date, 186 funding offers have been issued and 87 contracted projects are underway or completed. The average project value is around \$14,000 per home, with an average utility incentive of \$1,400, providing payback times in the 10-12 year range.</p> <p>As of October 31, 2015, eight HiRIS applications have been received, and all eight have received funding offers. To date, two contracted projects (\$3.5 million total) are underway, benefitting 800 apartment units. Projects completed to date have seen an average of 28% reduction in energy use and net-positive cash flows when utility cost savings are compared to the 15-year LIC monthly charge.</p>
PART C City of Guelph's Energy Efficiency Retrofit Strategy (GEERS)	<p>City of Guelph's proposed GEERS is being designed with a different approach than that used by HELP, primarily through:</p> <ul style="list-style-type: none"> • Creation of a stand-alone service organization, with about 10-12 full-time equivalents to manage and market GEERS; • Pre-qualified product and service providers "purchased in bulk" by the GEERS service organization to provide competitive pricing; and • Full rollout of the program (i.e., not a pilot project) <p>City of Guelph staff have been directed to report back by Q1 2016, with a full report on program details.</p>
PART D Feasibility Study for the use of LICs for commercial buildings	The City of London, along with City of Guelph and Durham Region, has provided limited funding for a project that will study the feasibility of using LICs for commercial buildings. Other organizations involved include the Canadian Real Estate, Green Building Finance Consortium, Energy Services Association of Canada and Association Energy Profiles. This project is still in the development stage, with background technical research under way. Funding from senior levels of government and associated agencies has not been secured to date.
PART E Ontario's proposed On-Bill Financing	Ontario's Long-Term Energy Plan (December 2013) proposed that the Ontario Ministry of Energy make "on-bill financing" (financing through electricity and natural gas utilities) available for building retrofits. There are currently no details as to how such a program would work. The Ministry of Energy proposes to revise regulations so that utility companies have the ability to offer on-bill financing for energy conservation measures should they wish to do so.

Key Outstanding Questions for London and Next Steps

Although the pilot project in Toronto is helping to answer some questions involving LICs, coupled with the additional research in program design in Guelph, many technical, legal and financing questions and potential direction are outstanding. These include but are limited to:

- Do stakeholders understand the differences between using a LIC versus conventional financing from a bank or other financial institution? For example, LICs are a form of property tax that come with stringent repayment options as prescribed by the Municipal Act. Municipalities have limited options for dealing with defaults on LIC repayments. Banks or other financial institutions have different rules and flexibility for dealing with defaults on loan repayments.
- The use of LICs for home energy retrofits proved unsuccessful in Vancouver and is seeing low uptake in Toronto thus far. Is this due to inadequate marketing of the benefits of LICs over conventional bank-based financing, or do LICs in fact offer little or no advantage – or even disadvantages – over conventional financing in the eyes of property owners?
- What are the current barriers - real and perceived - that are holding back “deep retrofits” of existing buildings in London? Are these the same as other Ontario municipalities as noted by the CHEERIO study, or are there other barriers that have not been identified to date?
- Is the use of building retrofit LICs better suited as a niche application that targets a subset of building sectors, types, and/or actions? If so, which building sectors, types, and/or actions are best suited for using LICs?
- Most of the focus on the use of LICs in Ontario has been on “deep retrofits” for energy conservation. Are there other measures – renewable energy, water, and/or stormwater – for which the use of LICs may be better suited and/or more popular? Could LICs play a role in funding climate change adaptation measures on existing properties?
- What advantages could LICs provide compared to existing municipal tools used in London such as Community Improvement Plans (i.e., Upgrade to Code program) and grants/rebates (e.g., Basement Flooding Grant Program) for targeted actions? Could LICs be used to augment these existing municipal plans and programs?

To answer these questions, the following activities are planned over the next nine months, using a timeframe that can be accommodated with existing resources. The goal is to lead to the preparation of a Business Case for a LIC Pilot Project:

Activity	Lead Area	2016 Timeframe
Organize a series of discussions with key energy stakeholders such as City staff, London Home Builders' Association, London Property Managers Association, London Hydro, Union Gas, and local lenders to discuss the outstanding questions and receive comments on the approaches taken in Toronto and Guelph.	Environmental Programs	January – April
Review and comment on the municipal finance aspects of Toronto's HELP and HiRIS pilot programs, as well as Guelph's proposed GEERS program.	Finance	June – August
Review and comment on the municipal legal aspects of Toronto's HELP and HiRIS pilot programs, as well as Guelph's proposed GEERS program.	Legal Services	July – August
Prepare a DRAFT Business Case for a LIC Pilot Project including implementation scope, framework, costs, and risks.	Environmental Programs, Finance, Legal Services	May - August

Activity	Lead Area	2016 Timeframe
Prepare a Committee report with recommendations, based on the DRAFT Business Case, regarding the use of LIC financing for: <ul style="list-style-type: none"> • energy and water conservation (climate change mitigation), • economic local benefit, and • climate change adaptation measures 	Environmental Programs, Finance, Legal Services	September

ACKNOWLEDGEMENTS

This report was prepared with assistance from Pat Donnelly, Urban Watershed Program Manager and Tara Clayton, Manager, Water Demand. This report has been reviewed by Jim Logan Division Manager-Taxation & Revenue; and Jennifer Smout, Solicitor.

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Appendix A

- Part A Collaboration on Home Energy Efficiency Retrofits in Ontario
 Part B City of Toronto's Home Energy Loan Program (HELP) and High-Rise Residential Improvement Strategy (HiRIS)
 Part C Guelph Energy Efficiency Retrofit Strategy (GEERS)
 Part D LICs for Commercial Buildings – Multi-organization Feasibility Study Under Development
 Part E On-Bill Financing

APPENDIX A

Part A - Collaboration on Home Energy Efficiency Retrofits in Ontario

City of London staff (from Environmental Programs and Finance) participated in a multi-municipality and intergovernmental pilot project - Collaboration on Home Energy Efficiency Retrofits in Ontario (CHEERIO) - to evaluate the potential use of LICs across Ontario.

Participants in this project included:

AMO	CMHC	Ontario Power Authority
City of Barrie	County of Frontenac	Region of Durham
City of Burlington	Enbridge Gas	Region of Peel
City of Guelph	King Township	Toronto Atmospheric Fund
City of Hamilton	Natural Resources	Town of Aurora
City of London	Canada	Town of East Gwillimbury
City of Mississauga	Ontario Ministry of	Town of Markham
City of Ottawa	Municipal Affairs &	Town of Newmarket
City of Toronto	Housing	
Clean Air Partnership	Ontario Ministry of Energy	

The deliverables from the CHEERIO project included:

1. [LIC Program Evaluation Qualitative Research Study](#) (Ipsos Reid, 2013)
2. [LIC Financing Pilot Program Design for Residential Buildings in Ontario](#) (Dunsky Energy Consulting, 2013)
3. [Overview of Recent Amendments to Ontario Regulation 586/06 - Local Improvements on Private Property by Agreement](#) (Aird & Berlis LLP, 2013)
4. [LIC Primer - Using Local Improvement Charges to Finance Residential Energy Upgrades](#) (Sustainable Alternatives Consulting, 2013)
5. [LIC FAQ Series](#) (Sustainable Alternatives Consulting, 2013)

Additional information on the CHEERIO study can be found at <http://www.cleanairpartnership.org/cheerio>

In particular, the report from Dunsky Energy Consulting, [LIC Financing Pilot Program Design for Residential Buildings in Ontario](#), is recommended reading for those with an interest in LIC programs.

What We Learned – Pros and Cons from Focus Group Research

To test the potential appeal of a hypothetical LIC home retrofit financing program, the CHEERIO project carried out focus group research with owners of older homes (homes built before 1990) in Toronto, Durham Region, and Guelph. This research was summarized as follows:

- Though residents are interested in undertaking energy efficient retrofits in the home, the question of definitive savings makes it difficult to make the initial investment. This is the main barrier to undertaking energy retrofits in the home.
- There were varied levels of interest in the use of LIC financing from participants. Though some saw the LIC financing as an interesting way to perform retrofits to the home, many of the program's drawbacks (discussed below) ultimately lessened their interest.

Pros

In terms of benefits, the focus group research summarized these as follows:

- Provides the ability to conduct energy updates in their home without incurring upfront costs.
- Helps guide homeowners through the process with information and resources.

- A home energy evaluation is a useful step for everyone whether or not they ultimately decide to undertake the loan.
- The existence of the program has the potential to raise awareness for energy efficiency and greenhouse gas reductions to our environment in general

Cons

In terms of perceived drawbacks and recommendations for improvement, the focus group research summarized this as follows:

- The cost savings associated with the improvements cannot be guaranteed, only estimated. This is a key barrier. Furthermore, they believe many outside variables, such as rising energy prices, could impact their ability to pay back the program.
- It could take decision-making away from homeowners, especially if the program prescribes the approved contractors and energy advisors the homeowner must hire.
- Homeowners were worried that a LIC staying with the home rather than the homeowner will discourage prospective home buyers who do not want to be “saddled” with the LIC. Residents want clear information on how exactly the LIC is transferred upon sale of the home.
- Homeowners in all markets were questioning why the City/Region would embark on this program. There was also some discomfort with the City/Region acting as a bank for work on their house.
- The City/Region being privy to any changes in your home was of concern to some homeowners. They were not comfortable with the City/Region having this information and feared it could result in their property taxes going up.
- Homeowners had concerns that there could be too many parties involved in the process of this program. Homeowners want definitive information about who will be held accountable if there are any disputes among the stakeholders in this program, and a clear point of contact who will manage the process and can address questions and concerns.
- Providing several options in each aspect of the program is of utmost importance to homeowners. The program must be flexible in order for it to be attractive. Homeowners want to pick which contractors to use and the rate and term length of the loan.

What Has Worked In Other Jurisdictions

The CHEERIO project reviewed many of the currently operating Property Assessed Clean Energy (PACE) programs in the US, as well as Halifax Nova Scotia’s new SolarCity program, and Vancouver’s Home Energy Loan Program. Some of these programs focussed on prescribed measures, such as solar PV panels or solar hot water heaters, which can be easier to implement. Others programs focussed on broader, “deep retrofits”, which can be more complicated to administer but can provide greater benefits. Some of these PACE programs have been successful, while others (notably Vancouver’s program) have been less successful.

The following summarizes the key lessons from the experiences, positive and negative, learned from these existing LIC financing programs:

- **Know Your Audience:** The more your target market is defined and their needs understood, the better the program can respond to the market and the greater the chances for success.
- **Sell Hard:** Successful programs will need to devote sufficient marketing resources and form partnerships with respected players in the community to effectively promote and communicate the program benefits to property owners.

- **Keep it Simple:** For participants, the program must have a clear and simple application process. For contractors and trades-people, the program must be easy to access, and allow them to introduce their clients to the LIC financing as a marketing tool.
- **Be Attractive:** The program must be attractive to the participants, offering them flexible terms and conditions, easy to follow processes, clear value-added and an appealing scope of eligible measures and projects.
- **Require energy audits when it is sensible:** Certified energy auditors can play a valuable role as advisors to the property owners. However, the additional cost and procedures associated with the energy audits can create a barrier to participating in the program.
- **LIC financing can work, but it isn't always easy:** Don't assume that everyone is eagerly anticipating the use of LICs for retrofits. Evidence shows that LIC financing works best when it is designed as part of a larger energy efficiency strategy that includes cash incentives, community-based marketing, and strong partnerships with the construction, financial, utilities, and building management industries.

Sources of Financing

The CHEERIO project concluded that the ideal financing model for a municipality (for a LIC Program) is to obtain seed money to cover the program administration set-up costs, and then to establish access to a guaranteed low-interest source of program funds. Ongoing administration fees can then be recuperated through participant fees to the extent necessary.

As noted in the Dunsky report for CHEERIO, research on the legal implications of LIC financing was completed simultaneously with the development of the program's design. It was found that there are no specific legal barriers to using municipal debt to support LIC financing programs.

The Dunsky report also noted that the ideal sources and characteristics of funding for an LIC financing program have a number of key characteristics. The following is an edited excerpt from this report, summarized in order of their priority, with the first being the most important to the program success.

- **Low interest rates:** Because the LIC financing program is designed to be cost-neutral to the municipality, it must pass along all of its borrowing costs to the participant. Thus the lower the rate paid by the municipality, the lower the rate charged to participants.
- **Long-term fixed rates:** LIC financing to participants typically follows a 10, 15 or 20 year repayment schedule with a fixed interest rate throughout. Thus it is ideal for a municipality to access funds that have a fixed rate for terms of the same duration as the LIC financing offered to participants.
- **Access according to need:** Accessing funds as needed can greatly reduce the costs and risk to the municipality.
- **Simple to access:** The administrative procedures for accessing the program funds should not be too onerous, and there should be the option to return to the source of funds to cover program needs. In order to facilitate this, many US based programs employ third-party bond agents or engage professional financing arrangement services to repackage the LIC assessments into asset-backed securities.
- **Flexible repayment options:** LIC financing programs typically allow participants to repay the remaining balance on their LIC assessment at any time during the LIC repayment term. Thus, if a large portion of participants chose early repayment, it would be desirable for the municipality to have the same option before its lender.

Infrastructure Ontario (IO) was identified as potentially offering the most suitable source for program funds to support LIC financing programs, given its low, long-term interest rates that they offer to municipalities. The following table summarizes the potential source of funding for a LIC program:

	One-time access (Set-up Funds)		Recurring access financing				
	FCM grant	Utility or government grants	Municipal revolving funds ⁷	Application and administration charges	Municipal Bonds	Private capital (banks)	Infrastructure Ontario Loan
Administrative Funds (depend somewhat on program volume)	•	•	•	•	•		•
Program Funds (directly dependent on program volume)	•		•		•	•	•

Source: LIC Financing Pilot Program Design for Residential Buildings in Ontario (Dunsky Energy Consulting, 2013)

LICs for Commercial Buildings

The CHEERIO project concluded that commercial properties are also eligible to use LICs, and many of the issues associated with using LICs on commercial properties are likely to be the same as for using LICs for multi-unit residential rental properties (MURB). However, the approach for promoting the use of LICs for commercial properties is likely to be the different.

The CHEERIO project also provided examples how LIC financing could be applied to multi-unit rental apartment buildings. Given that apartment buildings have similar commercial mortgage requirements as commercial (office and retail) buildings, the approach proposed for apartment buildings could be applied to commercial buildings as well. The main conclusions from the CHEERIO project for multi-unit rental apartment buildings were:

- **Targeted participants and eligibility requirements within the MURB sector:** Programs typically target buildings with higher energy savings potentials that have sufficient equity to carry the LIC financing commitments.
- **Eligible measures should balance positive cash flow with whole-building retrofits that go farther than existing programs may facilitate:** Among the key benefits of LIC financing is its ability to support major capital investments at fixed interest rates over long durations.
- **Program requirements for contractor qualification and selection:** Most US commercial PACE programs have a level of quality assurance or pre-qualification for the contractors involved in carrying out the energy saving measures. A few basic requirements can help ensure that the projects meet the predicted savings targets and that the LIC financing carries lower risks.
- **Sources of funds accessed by the municipality to finance the programs:** The sources of funds available to a MURB LIC program follow those closely available to single family residential programs, with a few key additions; most notably private financing negotiated and provided directly to the property owners.
- **Program administration and financing terms:** MURB owners are more conditioned to management practices, financing arrangements and incentive programs. MURB LIC financing programs may include additional application requirements such as mortgage lender consent and a detailed energy audit.

Part B – City of Toronto’s Home Energy Loan Program (HELP) and High-Rise Residential Improvement Strategy (HiRIS)

London, like other Ontario municipalities in the CHEERIO project, has been observing these pilot programs (launched in January 2014), as summarized in the table below.

	HELP	Hi-RIS
Target Markets	Single Family Houses	Multi-Residential Buildings
Participation Targets	Approximately 1,000 homes	Approximately 10 buildings
Program Leads	Environment & Energy	Tower & Neighbourhood Revitalization, SDFA
Pilot Term & Funding	3 years (2014-2016), \$10 million	3 years (2014-2016), \$10 million
Retrofit Improvements Supported	Building envelope improvements, mechanical systems (including lighting systems) and water conservation improvements	
Financing Mechanism	<ul style="list-style-type: none"> • Enabled by Local Improvement Charge regulation (O. Reg 596/06) • Low-interest loans with 5, 10, 15 & 20 year payment terms • Payments via special charge on property tax bill 	

Source: City of Toronto (November 2015)

Home Energy Loan Program (HELP)

The City of Toronto’s HELP pilot involves building envelope improvements, mechanical systems and water efficiency upgrades, such as furnace/boiler replacement, insulation upgrades, window replacement, and low-flow toilets. Complete details on Toronto’s pilot program can be found on LiveGreen Toronto’s [website](#).

The following summarizes the administrative aspects of their pilot program:

- A single, “one-window” program to cover natural gas, electricity and water conservation, including access to grants and incentives offered by Enbridge Gas and Toronto Hydro;
- An on-line application form that includes pre-screening applicants to confirm no outstanding property tax payments owed to the City in the last five years, as well as evidence of mortgage lender consent;
- The City will not pre-qualify contractors or procure contractors to perform energy assessments or install retrofit improvements. The homeowner will use the funds disbursed by the City to pay contractors directly.
- The City is not responsible for the work quality of any contractors hired in connection with HELP and assumes no liability for the works undertaken.
- Retrofit funding was sourced from the City's Working Capital Reserve to establish a discretionary 'Local Improvement Charge Energy Works Reserve Fund'.
- Interest rates for LICs that reflect the City’s current return on its investment portfolio;
 - 2.5% for 5-year term
 - 3.75% for 10-year term
 - 4.5% for 15-year term
- An estimated operating cost that totals \$1.4 million gross and \$0 net over three years, with operating costs being offset by \$753,000 (about 55%) in external funding support (e.g., utilities, Ontario Power Authority, Natural Resources Canada) and \$660,000 (about 45%) recovered from Program participants through the LIC rate

structure (an administration charge of 2% of the LIC value); and

- An increase of two temporary staff positions in their Environment & Energy Division to support marketing and administration.

The City of Toronto started off in mid-2014 with a marketing approach focussed on four neighbourhoods with inefficient, older building stock, above-average home ownership, mixed-income neighbourhoods, and an engaged neighbourhood community. As of April 30, 2015, they expanded eligibility to participate throughout Toronto.

Program uptake as of October 31, 2015 was as follows:

- 339 applications have been received
- 186 funding offers have been offered to homeowners (19% of 1,000 home target)
- 87 retrofits have been completed or are underway (9% of target)
- \$1.5 million has been committed to date (15% of available funding)

For the projects undertaken to date, the average project value has been \$14,000, with ranges between \$3,000 and \$54,000. Participants have received on average around \$1,400 in incentives from utility companies, with project payback times around 10 to 12 years on average.

The one major hurdle that the HELP pilot has experienced to date has been with their lender consent process. About 80 percent of applicants to date have mortgages, and about half of these applicants have been unable to obtain lender consent because they have mortgage default-insurance from Canada Mortgage and Housing Corporation (CMHC). CMHC has signalled to lenders that they will not insure any LIC arrears on a given property, as described in the following communication to City of Toronto staff:

"CMHC is aware of the City of Toronto Energy Retrofit Pilot Program, and has had general discussions with City Council members pertaining to how the loan may impact a lender's security especially in the case of mortgage default. CMHC has no specific policy with respect to the type of loan described. While it is recognized that borrowers may borrow from a variety sources and their properties may be subject to liens in a variety of contexts, the approved lender is responsible for loan administration and maintaining the priority of the mortgage security. As such, to the extent that the outstanding balance of the City's loan would take priority to the CMHC insured mortgage whether by way of arrears of taxes or as secured by a lien registered upon default, such amounts would not be recognized as eligible borrower's charges in the event of a claim under CMHC's insurance."

Source: City of Toronto (November 2015)

As a result, lenders' practice to date has been to deny consent for HELP applications for any client with CMHC-insured mortgage insurance, which tend to be middle-income home owners (i.e., the target market for the HELP program.)

It is important to note that according to available information other mortgage insurers - Genworth and Canada Guarantee - will cover LIC arrears within the scope of their mortgage insurance.

City of Toronto staff plan to study options to overcome the lender consent barrier, as well as options for improving program marketing and increasing the application uptake rate.

High-Rise Residential Improvement Strategy (HiRIS)

Similar to HELP, the HiRIS pilot involves building envelope improvements, mechanical systems and water efficiency upgrades, such as furnace/boiler replacement, insulation upgrades, window replacement, and low-flow toilets. This program is offered as part of Toronto's broader [Tower Renewal Program](#) by their Tower & Neighbourhood Revitalization Unit. Complete details can be found on the City of Toronto's [website](#).

The administrative aspects of the HiRIS pilot program are similar to those used for HELP, with the following exceptions:

- The interest rates offered are slightly different, and include an option for a 20-year term:
 - 2.5% for 5- year term
 - 3.75% for 10-year term
 - 4.25% for 15-year term
 - 4.5% for 20-year term
- Property owners are not allowed to apply for rent increases for the building improvement made under HiRIS.
- Buildings with multiple owners, such as condominium buildings, are not eligible to participate in the program for practical reasons (difficulty obtaining consensus).
- Administration of the pilot program is administered with existing Tower & Neighbourhood Revitalization Unit staff, with the reallocation of about 0.5 full-time equivalents of existing staff time towards the HiRIS pilot program.

Program uptake as of October 31, 2015 was as follows:

- Eight applications have been received
- Eight funding offers have been offered to building owners (80% of target)
- Two retrofits have been completed or are underway, benefitting 800 apartment units
- \$3.5 million has been committed to date to the two retrofits (35% of available funding)

For the projects undertaken to date, the average project value has been \$1.7 million, with ranges between \$1.3 million and \$2.1 million. Participants have experienced average energy use reduction of 28% percent to date, with project payback times less than the 15-year term of the LIC, making these project net-positive from a LIC repayment perspective. Building envelope upgrades and window & door replacements were the primary improvement undertaken.

The two buildings retrofitted to date are also within defined Neighbourhood Improvement Areas, which means that the 800 households benefitting so far from the retrofits are lower-income households.

The HiRIS program has experienced similar CMHC-related hurdles with their lender consent process with two other building property owners. As with HELP, City of Toronto staff plan to study options to remove the lender consent barrier for multi-unit residential rental buildings.

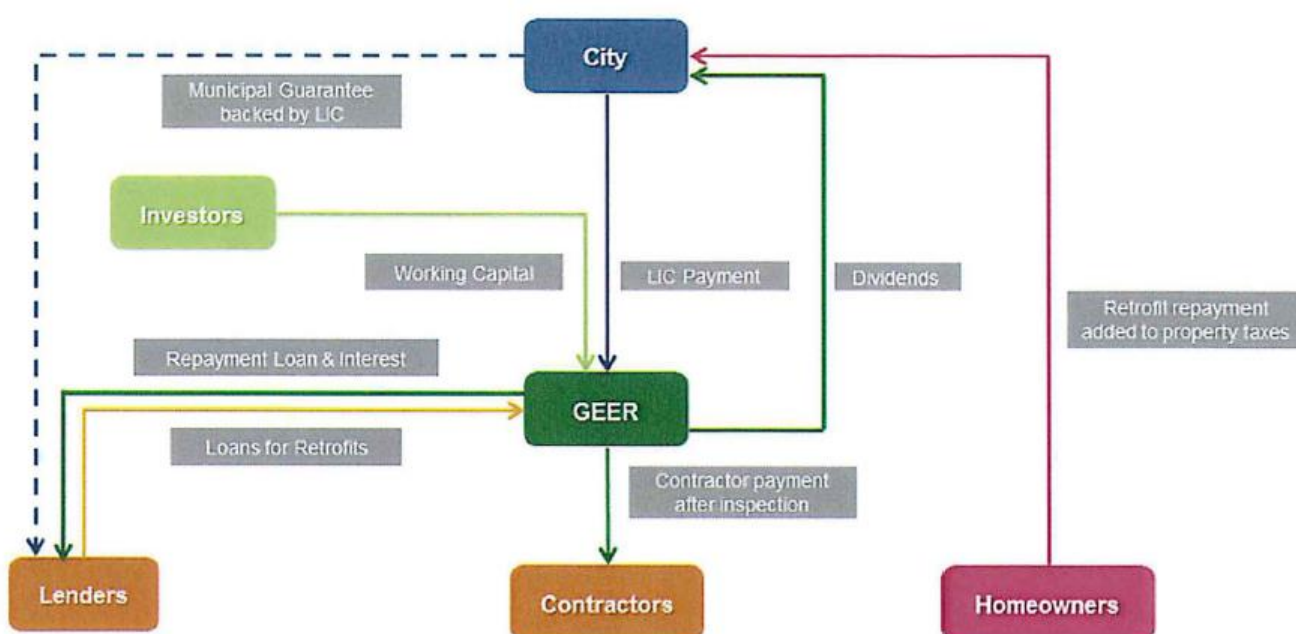
Part C – Guelph Energy Efficiency Retrofit Strategy (GEERS)

The approach that Guelph is proposing for the use of LICs for home retrofits is fundamentally different from the approach taken in Toronto. Guelph’s approach was driven by Guelph-specific results from the *LIC Program Evaluation Qualitative Research Study* undertaken by Ipsos Reid in 2013 for CHEERIO, which indicated that the Guelph focus group preferred a program structured around pre-approved contractors and products. This differs from the overall conclusions from Toronto and Durham region, which showed an overall preference for homeowner choice in contractors and products used for retrofits.

As a result, the proposed structure for the GEERS program revolves around the creation of a stand-alone GEER service organization that assesses and selects pre-approved renovation contractor(s) and associated product provider(s) (e.g., window supplier, etc.) for home energy retrofits. The service organization would use its ability to “bulk buy” services and products from its pre-approved contractors and suppliers to offer lower costs for home retrofits.

What is not known at this time is how inclusive or exclusive this process will be for contractors and product suppliers. The proposed GEERS program would involve the creation of a Strategic Implementation Network (SIN) of contractors and suppliers that are leaders in their product category. The GEER service organization would negotiate with these SIN suppliers to develop specifications, standards, and price ranges for services and products.

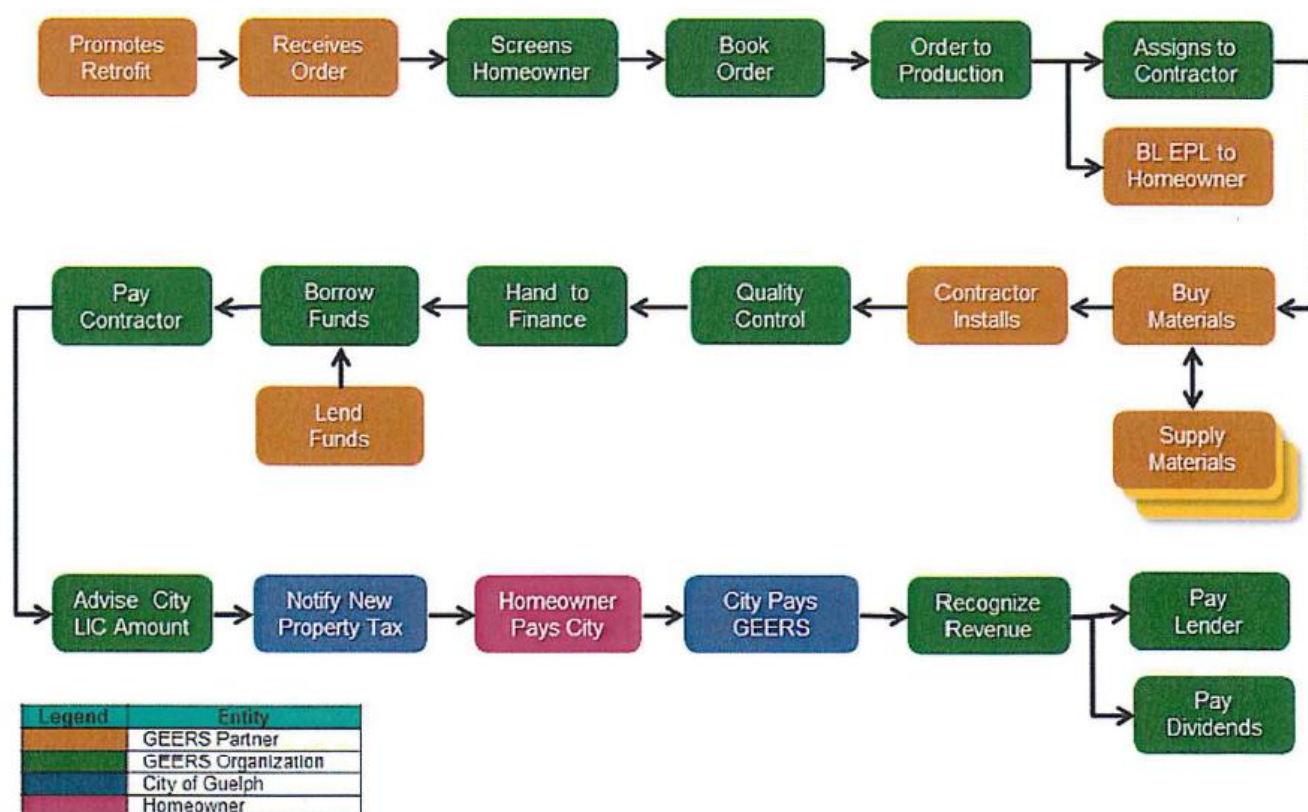
Funding for the service would be provided by private-sector investors and lenders, with loans guaranteed by the City of Guelph. The following flowchart illustrates the proposed flow of funds between program participants.



Source: City of Guelph, September 2015

City of Guelph staff have estimated that the proposed stand-alone GEER service organization would require a staff of 10 to 12 FTEs and an annual payroll of around \$1.3 million per year. The proposed goal is to renovate 80 percent of Guelph’s existing housing stock by 2031 through the GEERS program – a rate of about 900 to 2,900 homes per year.

The flowchart below outlines the business process for a LIC applicant.



Source: City of Guelph, September 2015

In addition to building envelope, furnaces, and air conditioning equipment, the proposed GEERS program would also allow for the following to be included within the scope of LIC work:

- Re-roofing
- Solar PV and thermal energy systems
- Electric vehicle charging equipment
- Ground-sourced heat pumps
- Water conservation (rainwater harvesting);
- Stormwater measures (permeable paved surfaces)

Additional details on the proposed GEERS program are provided in the [Agenda](#) of the September 8th meeting of Guelph's Infrastructure, Development and Enterprise Committee. City of Guelph staff received Council approval to continue the detailed design of the GEERS program, and to report back in the first quarter of 2016.

Part D – LICs for Commercial Buildings – Multi-organization Feasibility Study Under Development

The City of London, City of Guelph and Durham Region have provided \$5,000 and in-kind staff time to support a project (feasibility study) being undertaken by Sustainable Alternatives Consulting Inc., supported by several other organizations including the Canadian Real Estate, Green Building Finance Consortium, Energy Services Association of Canada and Association Energy Profiles Energy Profiles. At this time, the City of Mississauga is an observer of this project. The project team has been pursuing funding from third-parties such as senior levels of government and agencies such as the Independent Electricity System Operator.

AS part of the feasibility study, the project's goals are:

- to clarify authority for using LICs to finance energy, water, and stormwater upgrades for commercial, industrial, and/or institutional properties;
- to identify options that could permit municipalities to implement LICs for commercial buildings; and
- to ascertain authority for, feasibility of, and a framework for using LIC financing in support of district energy system components.

Phase I of the project would focus on clarifying the authority for LICs for commercial, industrial, institutional buildings, and district energy system components. In addition, Phase I will also study existing US PACE programs for commercial buildings as well as examining market demand.

Municipalities' authority to utilize the LICs will be ascertained from legal, finance, and accounting perspectives. Issues covered will include:

- viability for using LICs on commercial buildings, with comments on bonusing, and confirming that LICs are not debt;
- viability for using LICs on industrial buildings to support measures to address process energy retrofits as well as building energy retrofits;
- viability for using LICs for stormwater management measures, including green roofs, rainwater harvesting, greywater reuse and low impact development; and
- viability for using LICs for the expansion of district energy systems.

Depending upon the outcome of Phase I, Phase II may include providing municipalities with a framework for how LICs may be used on commercial buildings, and what measures could be eligible within this framework.

Results to Date

The project team has not secured sufficient third-party funding to proceed with all components of Phase I at this time.

Several meetings have been held to establish a framework for the project including preparation of background research and meetings with key stakeholders. The project team is using the CHEERIO work as a springboard for the current project.

Part E – On-Bill Financing

Ontario's Long-Term Energy Plan, issued December 2013, proposed that the Ontario Ministry of Energy work towards making "on-bill financing" (financing through electricity and natural gas utilities) for building retrofits available by 2015. There are currently no details as to how such a program would work in Ontario. One important difference between the use of on-bill financing and LICs is that on-bill financing will not have the LIC's benefit of being transferable to a new property owner upon sale.

At the November 2, 2015 meeting of the CHEERIO participants, Ministry of Energy staff did provide some clarification on this proposed measure. Specifically, the Ministry of Energy proposed to revise regulations so that utility companies – electricity distribution companies like London Hydro and natural gas distribution companies like Union Gas – have the ability to offer on-bill financing for energy conservation measures should they wish to do so.

Both London Hydro and Union Gas are working on the next round of conservation programs, and it is not known at this time whether they are considering the use of on-bill financing for future conservation programs.