

## Community Energy Loan Program Options

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### Introduction

Administration has developed three additional program options, as requested by City Council, for a \$25M community energy loan program that will be offered to single-family residential, commercial, and multi-unit residential (MUR) sectors using Property Assessed Clean Energy (PACE) financing (the Program).

The three additional program options are:

1. Balanced funding split;
2. Residential focus; or
3. Most GHG emission reductions.

### Analysis and Assumptions

Analysis of the options was conducted to compare the total cost, administration fees, loan amount / total number of buildings targeted, GHG reduction estimates, equity considerations, uptake risk, and complexity. A similar analysis was conducted and reported in Appendix 4 - Community Loans Programs and Additional PACE Scenarios Explored of the [Community Energy Loan Programs Report](#) for the original options.

The outcomes of the analysis are provided in the option descriptions below with the benefits for each option.

The assumptions used in the feasibility analysis are:

- Total loan capital of \$25M;
- The Program will be designed to run for three years (2025 to 2028);
- HELP property owners will be eligible for maximum loans of up to \$60,000;
- Average HELP loans are estimated to be \$35,000 per property;
- Commercial and multi-unit residential property owners will be eligible for an incremental capital cost (ICC) of \$240/m<sup>2</sup> to perform energy retrofit measures above the business-as-usual required building upgrades up to a maximum of \$1.5M. Average building size is estimated to be 6,000 m<sup>2</sup> multiplied by the estimated average ICC of \$240/m<sup>2</sup> to identify the maximum eligible loan amount;

- Programs are designed to break-even. Operational costs are included in the total capital cost of the program and will be re-paid either by program participants through administration fees or through external grant funding;
- Operating costs for the program are pro-rated based on the number of loans, including staff and communications;
- Community Efficiency Funding (CEF) grant funds from Federation of Canadian Municipalities (FCM) can be used for operating costs associated with the HELP extension until June 2026, and have been included in the financial analysis;
- The City will apply for grant funds from FCM for the commercial and multi-unit residential (C-PACE) programs (as approved by City Council) but they are not included in the financial analysis as these funds are yet to be confirmed;
- Cost of borrowing capital and cost of lending are equal;
- Loan terms are up to 20 years;
- A one-time administration fee will be charged to participants without any interest and will be paid back over the 20-year loan term;
- HELP assumes an average reduction of 2.5 tCO<sub>2e</sub>/year for each home, based on the existing program's average GHG reductions for homes that achieved 30% reductions in overall energy consumption;
- C-PACE assumes an average of 20% energy reduction per retrofit to calculate GHG reductions;
- Average emissions for multi-unit residential buildings are assumed to be lower (68 kgCO<sub>2 e</sub>/m<sup>2</sup>) than the average emissions for ICI buildings (129 kgCO<sub>2 e</sub>/m<sup>2</sup>)<sup>1</sup>;
- Each program is designed with a cap on the funding for each sector; however, this would be monitored and redistributed if uptake is not successful; and
- Final administration fees and additional equity components (i.e. waived administration fees or rebates) are not included in the analysis, and will be brought forward during final design.

### Equity Considerations

All options will aim to improve equity wherever possible. Considerations that will be used during design could include:

- Income caps;
- Tenant displacement considerations;

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<sup>1</sup> City of Edmonton. Edmonton's Year 6 Building Energy Benchmarking Report (2023). Retrieve from <https://www.edmonton.ca/sites/default/files/public-files/BuildingEnergyBenchmarking-AnnualReport-Year6.pdf?cb=1689648751>

- Split incentives considerations;
- Easy access to debt with no credit checks;
- Waived administration fees (using surplus or grant funds, if available); and
- Rebates and free items (using surplus or grant funds, if available).

## Program Options

### Option 1 – Balanced Funding Split

This option provides a balanced funding split across the single-family residential, commercial, and multi-unit residential (MUR) sectors and would be open to all building owners and property managers. It is assumed that there would be no income or building size cap; however, this would be confirmed during detailed design.

Table 1 provides a summary of the program details for this option with estimates of the GHG emissions reductions, the administration fees, and the number of participants as well as other considerations. Annual GHG reductions are estimated at 2,163 tonnes CO<sub>2</sub>e once all retrofits are complete.

Financial analysis is shown in Table 2, including that HELP would use existing FCM grant funds to cover the first year of operating costs and that, with an administration fee of \$750/participant, the program would generate a small deficit of \$2,100. However, the C-PACE programs would generate revenue of \$108K with an administration fee of 1.6% per participant and would offset the \$2,100 deficit realized from the HELP program. If successful with a FCM grant for C-PACE, administration fees may be reduced or waived.

Table 1. Program Summary of Option 1 – Even Funding Split

	<b>R-PACE (HELP)</b>	<b>C-PACE</b>	<b>C-PACE</b>
<b>Estimated Participants</b>	240 single-family homes	6 MURBs	16 Commercial
<b>Total Loan Capital Required</b>	\$8.6M	\$8.1M	\$8.1M
<b>Average Loan Amount</b>	\$30,000/home	\$240/m <sup>2</sup>	\$240/m <sup>2</sup>
<b>Maximum Loan Amount</b>	\$60,000/home	\$240/m <sup>2</sup> to a maximum of \$1.5M	\$240/m <sup>2</sup> to a maximum of \$1.5M
<b>Annual GHG Reductions (full build-out)</b>	600 tonnes CO <sub>2</sub> e	462 tonnes CO <sub>2</sub> e	1,101 tonnes CO <sub>2</sub> e
<b>Uptake Considerations</b>	Low Risk – extend the existing program participant levels with no scale up of participants.	Moderate Risk – relatively small-scale new program with not many C-PACE programs to benchmark throughout Canada.	High Risk – Relatively large-scale new program with not many C-PACE programs to benchmark throughout Canada.
<b>Administration Fee</b>	2.5% or \$750/participant	1.6% total loan amount	1.6% total loan amount

Table 2. Financial Analysis of Option 1 – Even Funding Split

	R-PACE (HELP)	C-PACE
<b>Revenue</b>	<b>(256,000)</b>	<b>(262,000)</b>
Administration Fees	(180,000)	(262,000)
FCM Grant	(76,000)	TBD
<b>Expenses</b>	<b>258,000</b>	<b>153,000</b>
Program Administration	202,500	108,000
Marketing & Education	23,000	28,000
Liens	21,500	2,000
Contingency	11,000	15,000
<b>Net Cost (Surplus)</b>	<b>(2,000)</b>	<b>109,000</b>

## Pros of Option 1:

- Provides equal funding for all three sectors with equal access regardless of building size or annual income;
- Maintains a high number of single-family residential loans at a similar size as the current version, meaning that the new program will be closer to meeting community demand;
- Second highest potential annual GHG emission reductions (2,163 tonnes CO<sub>2e</sub>) of the three options; and
- Low uptake risk/complexity for large single-family program, with some increased risk/complexity due to the increase in commercial buildings, but likely lower than option 2 & 3.

## Cons of Option 1:

- Targets fewer MURBs than Option 2, which likely face the most barriers for performing energy retrofits;
- Provides less opportunity to embed equity into the program than Option 2 if there are no income or building size caps (to be confirmed during design); however, reduced administration fees and rebates may still be offered to improve equity; and
- Generates the lowest surplus.

Option 2 – Residential Focus

This option prioritizes the MURB sector. Low to moderate income single family residential homes, MURB (including affordable housing MURBs), small and medium-sized commercial buildings (average building size ranging from 250 m<sup>2</sup> to 3000 m<sup>2</sup>) and non-profit organizations would be eligible to participate in this program.

Table 3 provides a summary of the program details for this option with estimates of the GHG emissions reductions, the administration fees, and the number of participants as well as other considerations. Annual GHG reductions are estimated at 1,665 tonnes CO<sub>2e</sub> once all retrofits are complete.

Financial analysis is shown in Table 4, including that HELP would use existing FCM grant funds to cover the first year of operating costs and that, with an administration fee of \$750/participant, the program would generate a deficit of \$10,000. However, the C-PACE programs would generate a revenue of \$199K with an administration fee of 1.6% per participant and would offset the \$10,000 deficit realized from the HELP program. If successful with a FCM grant for C-PACE, along with the surplus, the administration fees may be reduced or waived.

Table 3. Program Summary of Option 2 – Residential Focus

	<b>HELP (R-PACE)</b>	<b>C-PACE</b>	<b>C-PACE</b>
<b>Estimated Participants</b>	100 single-family homes	19 MURBs	6 Commercial
<b>Total Loan Capital Required</b>	\$3.1M	\$19.7M	\$2.2M
<b>Average Loan</b>	\$30,000/home	\$240/m <sup>2</sup>	\$240/m <sup>2</sup>
<b>Maximum Loan Amount</b>	\$60,000/home	\$240/m <sup>2</sup> to a maximum of \$1.5M	\$240/m <sup>2</sup> to a maximum of \$1.5M
<b>Annual GHG Reductions (full build-out)</b>	250 tonnes CO <sub>2</sub> e	1,115 tonnes CO <sub>2</sub> e	300 tonnes CO <sub>2</sub> e
<b>Uptake Considerations</b>	Low Risk – extend the existing program participant levels with no scale up of participants.	High Risk - Relatively large-scale new program with not many multi-unit programs to benchmark throughout Canada.	Moderate Risk – smaller-scale new program with not many C-PACE programs to benchmark throughout Canada.
<b>Administration Fee</b>	2.5% or \$750/participant	1.6% total loan amount	1.6% total loan amount

Table 4. Financial Analysis of Option 2 – Residential Focus

	<b>R-PACE (HELP)</b>	<b>C-PACE</b>
<b>Revenue</b>	<b>(111,000)</b>	<b>(352,250)</b>
Administration Fees	(75,000)	(352,250)
FCM Grant	(36,000)	TBD
<b>Expenses</b>	<b>121,000</b>	<b>153,250</b>
Program Administration	96,000	108,000
Marketing & Education	10,000	28,000
Liens	9,000	2,250
Contingency	6,000	15,000
<b>Net Cost (Surplus)</b>	<b>10,000</b>	<b>(199,000)</b>

Pros of Option 2:

- Targets MURBs including affordable housing MURBs, which are sectors that have known challenges in completing energy retrofits and indicated high interest in participation during engagement; and
- Provides the most social benefits (safety, comfort, and resiliency) to the largest number of residents.

Cons of Option 2:

- Low number of single-family residential loans will be provided, potentially causing community frustration;
- High uptake risk and complexity given the higher number of MUR buildings being targeted;
- Lowest expected annual GHG emission reductions (1,665 tonnes CO<sub>2</sub>e) of the three options;
- May require rebates or incentives such as waived admin fees to incentivize participation; and
- Strict eligibility requirements as it would require an income cap and would not be open to all building owners.

Option 3 – Most GHG Emission Reductions

Option 3 prioritizes the commercial sector and is the best opportunity to decrease GHG emissions. Average emissions are assumed to be higher for commercial buildings than for single-family residential homes and MURBs. Income and building size caps may be utilized for single family and MURBs to improve equity given the small size but are not suggested for commercial buildings.

Table 5 provides a summary of the program details for this option with estimates of the GHG emissions reductions, the administration fees, and the number of participants as well as other considerations. Annual GHG reductions are estimated at 2,794 tonnes CO<sub>2</sub>e once all retrofits are complete.

Financial analysis is shown in Table 5, including that HELP would use existing FCM grant funds to cover the first year of operating costs and that, with an administration fee of \$750/participant, the program would generate a deficit of \$10,000. However, the C-PACE programs would generate a revenue of \$142K with an administration fee of 1.6% per participant and would offset the \$10,000 deficit realized from the HELP program. If successful with a FCM grant for C-PACE, along with the surplus, the administration fees may be reduced or waived.

Table 5. Program Summary of Option 3 – Most GHG Emission Reductions

	<b>HELP (R-PACE)</b>	<b>C-PACE</b>	<b>C-PACE</b>
<b>Estimated Participants</b>	100 single-family homes	3 MURBs	34 Commercial
<b>Total Loan Capital Required</b>	\$3.1M	\$5.3M	\$16.5M
<b>Average Loan</b>	\$30,000/home	\$240/m <sup>2</sup>	\$240/m <sup>2</sup>
<b>Maximum Loan Amount</b>	\$60,000/home	\$240/m <sup>2</sup> to a maximum of \$1.5M	\$240/m <sup>2</sup> to a maximum of \$1.5M
<b>Annual GHG Reductions (full build-out)</b>	250 tonnes CO <sub>2</sub> e	300 tonnes CO <sub>2</sub> e	2,245 tonnes CO <sub>2</sub> e
<b>Uptake Considerations</b>	Low Risk – extend the existing program participant levels with	Low Risk – very small new program with not many C-PACE	High Risk – very large new program with not many C-

	no scale up of participants.	programs to benchmark throughout Canada.	PACE programs to benchmark throughout Canada.
<b>Administration Fee</b>	2.5% or \$750/participant	1.6% total loan amount	1.6% total loan amount

Table 6. Financial Analysis of Option 3 – Most GHG Emission Reductions

	<b>R-PACE (HELP)</b>	<b>C-PACE</b>
<b>Revenue</b>	<b>(111,000)</b>	<b>(350,350)</b>
Administration Fees	(75,000)	(350,350)
FCM Grant	(36,000)	TBD
<b>Expenses</b>	<b>121,000</b>	<b>208,350</b>
Program Administration	96,000	162,000
Marketing & Education	10,000	28,000
Liens	9,000	3,350
Contingency	6,000	15,000
<b>Net Cost (Surplus)</b>	<b>10,000</b>	<b>(142,000)</b>

#### Pros of Option 3:

- Provides the highest environmental benefits of the three options. Expected annual GHG emission reductions of 2,794 tonnes CO<sub>2</sub>e.

#### Cons of Option 3:

- Low number of single-family residential loans will be provided, potentially causing community frustration;
- Targets the fewest number of MURBs, which likely face the most barriers for performing energy retrofits. Limits benefits for multiple residents; and
- Highest complexity and uptake risk as it includes the largest program for the commercial sector (34 buildings).