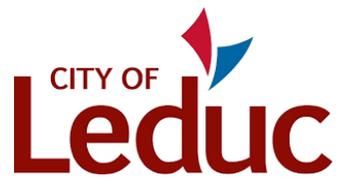


# Clean Energy Improvement Program: Market Study and Program Overview for the City of Leduc

September 30, 2020



Municipal  
Climate Change  
Action Centre

A partnership of



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# 1 Clean Energy Improvement Program

## 1.1 Introduction

This report was developed in collaboration between the Municipal Climate Change Action Centre (“MCCAC”) and the City of Leduc. It will be used as a resource for the bylaw adoption process for the Clean Energy Improvement Program (“CEIP” “Program”) and for related funding applications. This report includes details on the design and forecasted uptake for the Program; identifies opportunities to access financing and grant funding; and outlines the administrative processes for CEIP in the City of Leduc.

## 1.2 Clean Energy Improvement Program in Alberta

The Clean Energy Improvement Program is a financing program designed to make residential and non-residential energy efficiency and renewable energy upgrades more accessible. CEIP leverages an innovative financing solution known as Property Assessed Clean Energy (“PACE”), which allows property owners to access flexible, long-term financing through their municipality. Repayment is facilitated through an added charge to the participant’s regular property tax bill.

*Bill 10: An Act to Enable Clean Energy Improvements* was passed June 6, 2018. The Act authorizes municipalities to complete a borrowing to finance projects and recover costs through the municipal property tax system. The attendant regulation (Clean Energy Improvements Regulation) came into force on January 1, 2019. Energy Efficiency Alberta (“EEA”) is named in the regulation as the province-wide administrator of the Clean Energy Improvement Program<sup>1</sup>. On June 11, 2020, however, the Government of Alberta announced that EEA will be dissolved on September 30, 2020 and that provincial administration of CEIP will be transferred to the Municipal Climate Change Action Centre (MCCAC), including technical EEA staff and program infrastructure to ensure continuity in program development.

The MCCAC was established in 2009 by the Alberta Urban Municipalities Association in partnership with the Rural Municipalities of Alberta and the Government of Alberta. The MCCAC has over ten years of experience administering energy efficiency and renewable energy programs to municipalities across Alberta, including, the Alberta Municipal Solar Program<sup>2</sup> and the Recreation Energy Conservation Program<sup>3</sup>, making it well-positioned to administer CEIP.

As the provincial administrator for CEIP, the MCCAC supports municipalities from the outset of the process. The MCCAC provides support to municipalities through the bylaw adoption process by developing technical materials and delivering presentations to build capacity within their organization. Once the CEIP bylaw is adopted, the MCCAC leads the development of the Program to meet the needs of each municipality through the detailed program design phase; this includes developing all required program materials (e.g. agreements, Terms and Conditions, marketing materials) and program infrastructure (e.g. application intake mechanism, data warehousing, contractor network). As the program administrator, the MCCAC provides full program delivery services, including application and

<sup>1</sup> On June 11, 2020, the Government of Alberta announced that EEA will be dissolved on September 30, 2020, and provincial administration of the CEIP program will be transferred from EEA to the Municipal Climate Action Centre ([www.MCCAC.ca](http://www.MCCAC.ca)).

<sup>2</sup> <https://mccac.ca/programs/alberta-municipal-solar-program/>

<sup>3</sup> <https://mccac.ca/programs/recreation-energy-conservation-program/>

payment processing, contractor network management, quality assurance process, and evaluation of program performance.

EEA was a Government of Alberta agency established in 2017. EEA ran over 20 energy efficiency and renewable energy programs for industrial and commercial businesses, non-profits, institutions, and households, and developed a comprehensive province-wide contractor network, with over 1,600 installation contractors and energy professionals. Through the transition of the provincial administration of CEIP, the MCCAC inherited EEA's contractor network and past program data which was used in the development of this report.

### 1.3 City of Leduc CEIP Program

The City of Leduc has shown strong environmental leadership over the past several years through initiatives to keep the environment even cleaner and more biodiverse for many years to come. The City of Leduc developed a GHG Inventory<sup>4</sup> and GHG Reduction Action Plan (2019)<sup>5</sup> that builds on commitments made in the Draft Municipal Development Plan (2020)<sup>6</sup>, the Environmental Plan (2012)<sup>7</sup>, and the Weather and Climate Readiness Plan (2014)<sup>8</sup>.

- The City's Draft Municipal Development Plan encourages Leduc's built form to become more energy efficient and reduce GHG emissions, by promoting measures such as retrofitting existing homes and businesses, and use of solar, wind and other renewable energy sources.
- The City's Environmental Plan recommends actions to partner with the Government of Alberta and supporting organizations to help offer local residents incentives to support energy efficiency activities in their homes, and develop an education and outreach campaign to encourage local residents to be energy wise consumers. Other recommended actions include evolving local bylaws, standards, and planning practices to support energy efficiency and sustainability.
- The City's Weather and Climate Readiness Plan is about improving the capabilities of our citizens, infrastructure, economy, environment, and institutions to plan for, cope with, and respond to the impacts of climate change, so that the City of Leduc will remain a vibrant community.

The City's GHG Reduction Action Plan (2019) details how an achievable and practical GHG reduction target was built from the bottom up using cost effective actions as its basis. Following a detailed engagement process and considering budgetary restraints, Council approved the City's overall GHG reduction target. Development of Leduc's plan took into account the views of residents, business and community representatives, stakeholder groups, civic staff and City Council, and the Leduc Environmental Advisory Board (LEAB).

Even though the low scenario target (for three per cent GHG reduction) was recommended at the time, medium and high scenario actions (for five per cent and nine per cent GHG reduction, respectively) were retained in the plan to provide the opportunity for the City to implement them if budget becomes available over the next ten-year period.

<sup>4</sup> <https://www.leduc.ca/sites/default/files/Leduc%20Final%20GHG%20Inventory%20Report%20%28Mar%2031%29.pdf>

<sup>5</sup> <https://www.leduc.ca/sites/default/files/2019%20-%20GHG%20Report%20-%20FINAL%20web.pdf>

<sup>6</sup> <https://www.leduc.ca/sites/default/files/Attachment%201%20Bylaw%20No.%201057-2020%20w%20Schedule%20A%20Attached.pdf>

<sup>7</sup> [https://www.leduc.ca/sites/default/files/FINAL\\_environmental-plan\\_March-2012\\_0.pdf](https://www.leduc.ca/sites/default/files/FINAL_environmental-plan_March-2012_0.pdf)

<sup>8</sup> <https://www.leduc.ca/sites/default/files/Weather%20and%20Climate%20Readiness%20Plan.pdf>

Property Assessed Clean Energy (PACE) was one of the recommended actions identified in the high reduction scenario. It was identified to be an action that could be implemented at low or no cost to the City and have a big impact in GHG reductions. Through modeling, PACE was identified to have a cost ratio of 1.0 and an estimated GHG reduction of approximately 474,950 tCO<sub>2</sub>e.

The City developed a corporate and community GHG inventory and forecast with 2015 as its baseline year. The City of Leduc emitted approximately 0.42 megatonnes (Mt) of GHG emissions in 2015. Corporate GHG emissions represent four per cent of the total, whereas community GHG emissions constitute 96 per cent. The majority of GHG emissions are from the commercial and institutional sector (34 per cent), followed by: residential (26 per cent), transportation (25 per cent), solid waste (seven per cent), and industrial (seven per cent). With the residential and commercial sectors being the majority of community GHG emitters in Leduc, it is evident that PACE will provide an important and viable role in significantly reducing GHG emissions in Leduc.

On February 11, 2019, City Council unanimously carried a motion to direct administration to submit an Expression of Interest to PACE Alberta. This confirmed the City of Leduc's interest in having a PACE program delivered to its constituents when it becomes available in Alberta.

The Clean Energy Improvement Program provides an exciting and local opportunity for the City of Leduc to make energy efficiency and renewable energy upgrades more affordable and accessible to property owners. As per the 200+ survey responses received as part of the GHG Reduction Action Plan Stakeholder Engagement:

- Lowering energy bills was rated as one of the top benefits of a GHG reduction plan (70 per cent rated this result, as “more important”, that is four or better out of a scale of eight), as well as lower GHG emissions (65 per cent rated more important).
- The top rated GHG reduction actions for residents and businesses included improving energy efficiency (85 per cent agree) and using renewable energy (54 per cent agree).
- Using renewable energy” received a fair number of neutral responses (31 per cent neutral) which may indicate the respondents need more information on costs and upgrade opportunities before having a positive or negative opinion.

#### 1.4 Addressing Barriers

CEIP is designed to address barriers that impact the adoption of energy efficiency and renewable energy technologies, including:

Barrier	Clean Energy Improvement Program
High upfront cost of upgrades	<ul style="list-style-type: none"> <li>▪ Full project cost (up to \$50,000) can be financed through CEIP.</li> <li>▪ Incidental costs – expenses indirectly related to the upgrade but required for successful execution – are eligible for financing (up to 15% of the total project capital cost).</li> </ul>
Homeowners concerned they will not realize the financial benefits of the upgrades if they move	CEIP loans are tied to the property, not the homeowner. Repayment is facilitated through an added charge to the property tax bill. Upon property sale, the CEIP loan will remain on the property and be transferred to the new homeowner who will benefit from the energy savings associated with the upgrade.
Information gaps (e.g. determining which upgrades to target).	<ul style="list-style-type: none"> <li>▪ Homeowners can access educational materials on the benefits of energy efficiency and renewable energy retrofits through the program.</li> <li>▪ CEIP requires homeowners to complete an EnerGuide Home Energy Evaluation to identify upgrade opportunities.</li> </ul>

**1.5 PACE in Other Jurisdictions**

In the development of the CEIP program design, MCCAC engaged PACE program administrators across Canada to share key learnings on program development and implementation, including the City of Toronto’s HELP program, Halifax’s Solar City, and Clean Foundation’s Clean Energy Financing program.

The MCCAC has also been in contact with residential and commercial PACE administrators in the U.S. to gather information on program design and lessons learned in Colorado (CO C-PACE), Connecticut (Connecticut Green Bank C-PACE), California’s PACE Loss Reserve Program, and Minnesota (MinnPACE).

A summary of the key learnings from each of the programs is provided in Appendix A.

## 2 Baseline Market Information

### 2.1 Housing Stock and Homeowners in the City of Leduc

The City of Leduc is a small community in central Alberta, located approximately 30km south of the City of Edmonton. According to Statistics Canada's 2016 Census Profile<sup>9</sup> the population of Leduc was just under 30,000 with 12,264 private dwellings.

Statistics Canada's 2016 Census Profile also provides insight into the housing stock in the City of Leduc.<sup>10</sup> Most of those private dwellings are single detached homes (64 per cent) with the remaining housing stock (36 per cent) made up of semi-detached houses, row houses, duplexes, or apartments. Figure 1 shows the range of dwelling types for the housing stock in the City of Leduc. The majority of the private households are owner occupied (74 per cent). Half (49 per cent) of the building stock was constructed in 2000 or earlier. Figure 2 shows the range of construction years for the housing stock in the City of Leduc. The City of Leduc's population increased by 43 per cent from 2006 to 2011<sup>11</sup> and 24 per cent from 2011 to 2016, which corresponds to the increased housing being built from 2006 to 2016.

Leduc's housing stock includes a mix of older housing (built before 2000) and newer housing (built 2001 and later). The older housing stock is a strong candidate for CEIP. Older homes likely require a suite of upgrades; homeowners looking to complete these deep retrofits can benefit from the low interest and long repayment term of the Program. The newer housing stock still holds great opportunities for participating in CEIP. Equipment such as furnaces and hot water heaters typically have a lifespan of 12 to 20 years and opportunities for increased insulation and air sealing will likely be present in many homes. Homeowners investing in energy efficiency retrofits and renewable energy equipment for old or new housing will not only save money in utility and maintenance costs but will increase the value of their home.

<sup>9</sup> <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4811016&Geo2=CD&Code2=4811&SearchText=leduc&SearchType=Begins&SearchPR=01&B1=All&TABID=1&type=0>

<sup>10</sup> <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4811016&Geo2=CD&Code2=4811&SearchText=leduc&SearchType=Begins&SearchPR=01&B1=All&TABID=1&type=0>

<sup>11</sup> <https://www12.statcan.gc.ca/census-recensement/2011/as-sa/fogs-spg/Facts-csd-eng.cfm?LANG=Eng&GK=CSD&GC=4811016>

Figure 1. Total occupied private dwellings in the City of Leduc in 2015 by type of dwelling (StatsCan 2016 Leduc Profile).

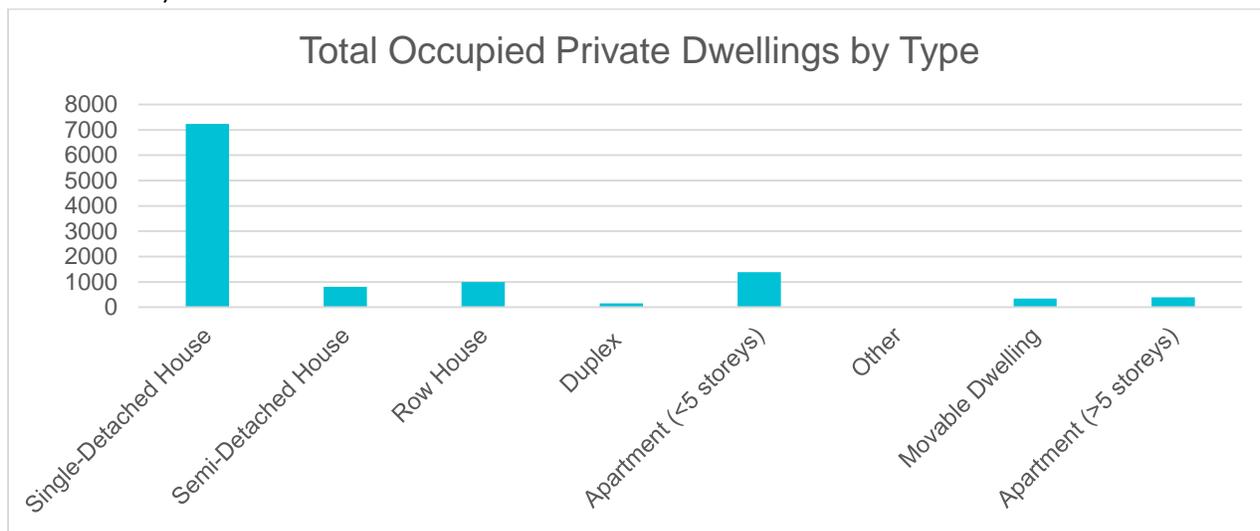
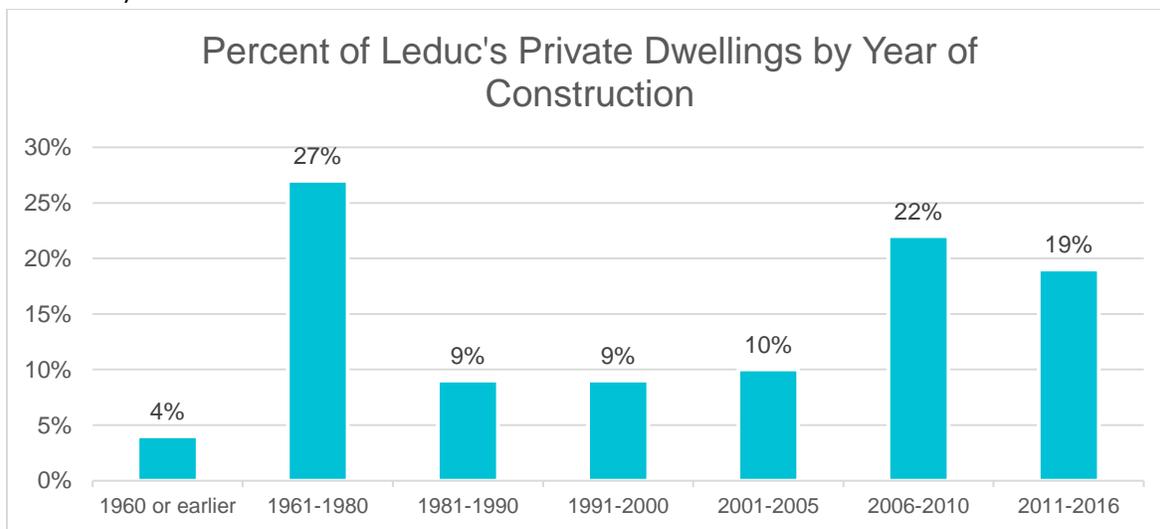


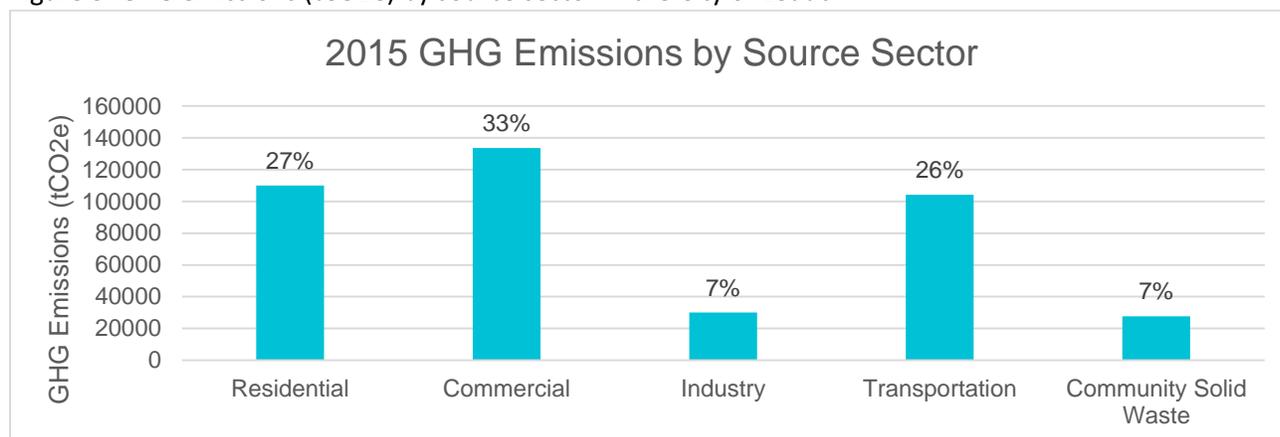
Figure 2: Percent of the City of Leduc’s private dwellings by year of construction in 2015 (StatsCan 2016 Leduc Profile).



## 2.2 City of Leduc Greenhouse Gas Inventory

The City of Leduc completed a Greenhouse Gas Inventory Report in 2019, which detailed the GHG emissions for City-owned facilities and buildings, as well as all other industrial, commercial, and residential buildings in the community. The report found that the GHG emissions from residential buildings in Leduc was over 110,010 t CO<sub>2</sub>e and energy usage was over 1,234,650 GJ; this represents 26 per cent of the overall GHG emissions of Leduc. Figure 3 shows the amount of GHG emissions by source sector in Leduc.

Figure 3. GHG emissions (tCO<sub>2</sub>e) by source sector in the City of Leduc.



Natural gas dominates the energy consumption in residential buildings at 76 per cent, with the remaining 24 per cent of energy consumption from electricity. The highest contributor of GHG emissions in the residential housing stock was electricity in single detached homes (46.1 per cent), with natural gas in single detached homes second (36.8 per cent). Apartment electricity and natural gas make up 7.6 per cent of the residential GHG emissions, closely followed by ground orientated dwellings (duplexes, row houses, townhouses) at 9.5 per cent.

The results of this report highlight the opportunity in the residential sector and the commercial sector for GHG emission reductions and energy savings. Commercial and residential buildings make up 60 per cent of the community GHG emissions in Leduc. Energy efficiency programs, such as CEIP, can be used as tools for municipalities to reduce the energy consumption of their community building stock as well as increase the resiliency of the buildings in their community. CEIP offers a wide range of upgrades to reduce both electricity and natural gas consumption in buildings.

For residential buildings, the NRCan Home Energy Evaluation will identify a range of energy savings options for the homeowner and the evaluation report will indicate the opportunities for the greatest energy savings potential. CEIP allows homeowners to finance projects with low to no upfront cost which encourages homeowners to pursue deeper retrofits and realize deeper emissions reductions.

Commercial and institutional buildings present a significant opportunity for GHG emission reductions as commercial projects tend to be larger and have a greater GHG reduction impact than residential projects. Projects completed through CEIP will also reduce operation and maintenance costs for the building owners and increase the value of the property.

### 2.3 Leduc's Participation in EEA Programs

The City of Leduc residents have participated in EEA incentive programs over the last three years, including the Home Energy Plan Program<sup>12</sup> (HEP), Home Improvement Rebates Program<sup>13</sup> (HIR), and the Residential Solar Program<sup>14</sup> (RSP). There were 406 energy efficiency retrofit projects completed through the HIR and HEP programs whose average reported cost was just over \$6,000. Plus, 21 solar projects

<sup>12</sup> <https://efficiencyalberta.ca/residential/home-energy-plan>

<sup>13</sup> <https://efficiencyalberta.ca/residential/home-improvement>

<sup>14</sup> <https://efficiencyalberta.ca/renewables>

were completed by residents through the Residential Solar Program, with an average project cost of just under \$18,000.

Project Type	Number of Projects in Leduc	Average Project Cost in Leduc
Residential Energy Efficiency Retrofits	406	\$6,319
Residential Solar Projects	21	\$17,789

The average province-wide cost of a residential energy efficiency retrofit (through HEP and HIR) was \$5,434, and \$23,000 for residential solar (through RSP). The City of Leduc averaged over 16 per cent higher costs for energy efficiency retrofit projects, and 22 per cent lower costs for solar projects. Participation levels in all three of EEA's programs (HEP, HIR and RSP) shows interest from City of Leduc residents in energy efficiency and renewable energy programming, and also demonstrates the availability of contractor and energy advisor capacity to complete projects.

In addition, renewable energy projects, like solar PV, are ideal for financing programs as they are large-scale projects with higher upfront costs and longer payback periods when compared to energy efficiency retrofits. CEIP removes the barrier of needing to pay the large upfront costs and provides the homeowner with long repayment terms with a low interest rate. Leduc residents' participation in EEA's RSP shows interest in renewable energy projects, and CEIP's attractive financing terms may generate even more interest.

### 3 Residential Stream: Anticipated Outcomes and Program Budget

The MCCAC analyzed previous EEA program data (e.g. participation data and reported project costs) and program data from other PACE programs in Canada to forecast uptake and economic benefits for Leduc’s CEIP program over a four-year period.

#### 3.1 Program Uptake and Budget

##### 3.1.1 Anticipated Number of Projects

As mentioned above, Leduc residents completed 427 energy efficiency and renewable energy projects through EEA’s programs over the past three years. This equates to approximately 142 projects completed per year; however, this participation rate was associated with rebate programs exclusively. As the PACE financing model is new to the Alberta market, and rebates may not be available (and if they are, they will unlikely match incentive levels available in past EEA programs), it is anticipated that the participation rate will be considerably lower for CEIP. Accounting for lower participation levels (compared to EEA incentive programs), the total forecasted uptake for the Program over four years is 113 projects.

The MCCAC also assumed that uptake would increase over time as residents and contractors familiarize themselves with the Program (see table below for the yearly number of projects). Moreover, based on EEA’s past program data, and discussions with PACE program administrators in Canada, it is expected that approximately half the applications will be energy efficiency projects, and the other half renewable energy (primarily solar photovoltaic).

##### 3.1.2 Anticipated Project Investment

The project investment has been forecasted to determine the anticipated capital required to finance projects in the Program. The MCCAC’s research shows PACE programs usually see deeper retrofit projects being completed when compared to traditional rebate programs. Toronto’s HELP program (2014-2016) had an average project cost of just over \$16,000 with the majority of upgrades being windows and doors, heating systems, and insulation<sup>15</sup>. Low cost but high impact air sealing was often tacked on to other projects to increase potential energy savings. Toronto’s HELP program has seen consistent increases in the project sizes as the program has been in market; in 2018, the reported average project costs increased to \$17,400<sup>16</sup> and in 2019 increased to \$22,000<sup>17</sup>. Halifax’s Solar City program (2016-2017) saw an average project cost of just over \$20,000 for solar photovoltaic installations<sup>18</sup>; Halifax also saw an increase in project size over time, with the average project costs increasing to just over \$26,100 in 2019<sup>19</sup>.

The MCCAC used a combination of data from Toronto and Halifax’s programs, and EEA’s past programs, to estimate the average project cost per year (provided in the table below).

Moreover, the closure of EEA’s incentive programs in 2020 left a gap in the market, and as a result, demand for CEIP may be higher than anticipated; for example, almost 600 residential solar projects across Alberta were submitted to EEA’s solar rebate program and were declined in the pre-qualification

<sup>15</sup> <https://www.toronto.ca/legdocs/mmis/2017/pe/bgrd/backgroundfile-102272.pdf>

<sup>16</sup> <https://www.toronto.ca/legdocs/mmis/2018/pe/bgrd/backgroundfile-114375.pdf>

<sup>17</sup> <https://www.toronto.ca/legdocs/mmis/2019/ie/bgrd/backgroundfile-134697.pdf>

<sup>18</sup> <https://www.halifax.ca/sites/default/files/documents/city-hall/standing-committees/180201essc111.pdf>

<sup>19</sup> <https://www.halifax.ca/sites/default/files/documents/city-hall/standing-committees/191205essc151.pdf>

stage due to the program closure. To account for the unmet market demand, and the fact that project sizes will increase over time (as shown in Halifax and Toronto), a five per cent increase was added to the average project cost each year. As a result, the total residential project investment is anticipated to be just over \$2.36M over four years.

Project Forecast - Residential	Year 1	Year 2	Year 3	Year 4	Total
Number of Projects	28	30	32	34	<b>124</b>
Average Project Cost	\$17,617	\$18,498	\$19,423	\$20,393	-
Anticipated Project Investment	\$493,276	\$554,940	\$621,536	\$693,392	<b>\$2,363,144</b>

The MCCAC designed the program to include controls to ensure the City of Leduc will not commit to financing above the agreed upon maximum annual financing. The MCCAC and the City of Leduc will have insight into the number of property owners who have pre-qualified for the program. The MCCAC will receive the Project Application forms with anticipated financing needs for the project which must be approved prior to any financial commitment from the City. The MCCAC will closely monitor the estimated financing amounts to ensure no project is approved that will cause the annual financing to exceed the cap.

### 3.1.3 Anticipated Number of Program Contractors

The MCCAC forecasted the number of contractors that are anticipated to register, on-board, and be trained to participate in the Program. As noted in Section 8.1 below, 110 contractor network members have provided services in the Leduc region through the provincial programs. The MCCAC assumed at least one third of those trade allies would register to participate in CEIP in Year 1, and an additional 54 contractors would be onboarded to the program over the next three years (including contractors that service commercial properties). To ensure that participants can gain multiple quotes from contractors, there will not be a limit on the number of contractors that can participate in the Program.

The MCCAC forecasted a higher number of contractors on-boarded in the first two years as the Program is new to the market and increased recruitment efforts will be required.

	Year 1	Year 2	Year 3	Year 4
Total CEIP Contractors able to service Leduc property owners (cumulative)	25	50	64	78

### 3.1.4 Program Administration Cost

An estimated program administration budget was developed for the City of Leduc's Program (see table below). The budget is based on the forecasted number of applications and on-boarded contractors in the first four years of the program. Administration costs are anticipated to decrease each year as start-up costs and contractor recruitment and on-boarding requirements decrease.

The MCCAC's administration budget includes a variety of services, including contractor management (engagement, recruitment, and training), development and management of the application infrastructure, application processing, marketing and communications support, website management, reporting and quality assurance processes.

While the MCCAC will be leading all major implementation services, the City of Leduc municipal staff will be supporting certain elements of the program, including ensuring the participant is in good standing with the municipality, levying and collecting the Clean Energy Improvement Charge, and collaborating with the MCCAC on marketing and communications.

Program Forecast	Start-Up	Year 1	Year 2	Year 3	Year 4	Total
MCCAC Program Administration Cost	\$29,900	\$118,800	\$114,500	\$114,800	\$118,700	<b>\$496,700</b>
Leduc Program Administration Cost	\$15,700	\$37,300	\$33,800	\$34,700	\$35,800	<b>\$157,300</b>

If the City of Leduc applies to the Federation of Canadian Municipalities (“FCM”) Community Efficiency Financing (“CEF”) program, the first four years of administration costs, including program start-up, can potentially be offset through the CEF grant. To note, the CEF program has additional requirements (e.g. performance reporting) that will increase MCCAC’s administrative costs by an estimated \$26,000; the City of Leduc would also incur a small amount of additional administrative costs. Additional administration costs resulting for the CEF program, however, can be recovered through the CEF grant. A requirement of the FCM program is to include a 10% contingency for all costs included in the grant application; the contingency costs will be added to the FCM grant application and are not included in the table above.

After the grant support ends, Program administrative costs will be passed down to the participants (which is common practice in PACE programs). The CEIP legislation allows the municipality and program administrator to collect a Program Administration Fee from participants (a maximum of 5 per cent of project costs).

### 3.2 Program Environmental and Economic Benefits

The City of Leduc expects the Program to reduce GHG emissions in the community, deliver energy bill savings to program participants, and contribute to job creation and local economic growth. The anticipated outcomes of the Program over a four-year period are:

Program Forecast	4-Year Forecast	Description
Total Investment (\$M)	\$2.4	Total loan amount of all projects including the cost of materials, labour and other costs (e.g. permits).
Lifetime Savings (\$)	\$1.9	The aggregated energy bill savings from all completed projects over the lifetime of the installed upgrades. This includes the cost of carbon associated with natural gas savings. Savings are expressed in terms of today's (2020) dollars, though they are realized over the duration of each project.
Job Creation (job-years) <sup>20</sup>	35	Job creation accounts for direct and indirect jobs as calculated using economic multipliers. One job-year represents 1.0 Full Time Employee for a single year. Indirect jobs include those created due to additional spending in the economy (e.g. energy bill savings causing additional spending elsewhere in the economy).
GDP Added to the Economy (\$M) <sup>21</sup>	\$17	GDP added to the economy includes direct and indirect spending as calculated using economic multipliers. Direct spending includes all investment associated with materials and labour of upgrade projects. Indirect and induced spending includes that of industries down the energy efficiency product supply chain and spending associated with project savings such as additional employment and related spending in the broader economy.
Estimated Lifetime (years)	19	The estimated lifetime of projects is calculated using a weighted average of each upgrade's individual lifetime. The weighting factor is set by the upgrade's respective contribution to a project's total energy savings.
Lifetime GHG Emissions Reductions (tCO <sub>2</sub> e)	14,527	Lifetime GHG emissions reductions are calculated using energy savings (kWh and GJ) multiplied by respective emissions intensity factors and the upgrade lifetime.
Estimate Annual Electric Savings (kWh)	556,384	Energy savings are estimated based on typical composition of projects, including a representative mix

<sup>20</sup> Efficiency Canada, "The Benefits of Energy Efficiency as Economic Stimulus – A Review," March 2020; Dunskey Energy Consulting, "The Economic Impact of Improved Energy Efficiency in Canada," April 3, 2018, [https://cleanenergycanada.org/wp-content/uploads/2018/04/TechnicalReport\\_EnergyEfficiency\\_20180403\\_FINAL.pdf](https://cleanenergycanada.org/wp-content/uploads/2018/04/TechnicalReport_EnergyEfficiency_20180403_FINAL.pdf).

<sup>21</sup> Efficiency Canada, "The Benefits of Energy Efficiency as Economic Stimulus – A Review"; Dunskey Energy Consulting, "The Economic Impact of Improved Energy Efficiency in Canada."

Estimate Annual Gas Savings (GJ)	7,134	of lighting, heating, whole building <sup>22</sup> and solar PV upgrades.
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<sup>22</sup> Whole building upgrades includes insulation, windows and improvements to air tightness and weather protection.

## 4 Commercial Stream: Anticipated Outcomes and Program Budget

The MCCAC recommends that the City of Leduc's CEIP bylaw enables both residential and commercial projects. The commercial stream can launch at least one year after the residential component to allow the City and the program administrator (MCCAC) to test program processes on smaller-scale residential projects and make adjustments before introducing complex commercial projects.

### 4.1 Commercial Stream Opportunity

There is significant opportunity in the City of Leduc's commercial sector for GHG reductions. Commercial buildings in Leduc contribute 33 per cent of the City's community GHG emissions<sup>23</sup>. Targeting commercial buildings with large retrofit projects will lead to deeper GHG reductions (relative to residential projects), provide considerable cost savings to commercial property owners, and will help Leduc reach its sustainability goals.

Launching the commercial stream of CEIP will not only achieve energy cost savings and GHG reductions, but also position the City of Leduc as a national leader in PACE programming. Canadian PACE programs have only been introduced into the residential market; a small number of Alberta municipalities, including Leduc, will be among the first to launch a commercial stream. In the United States, however, commercial PACE programs are well established. Thirty-seven states in the U.S. have PACE enabling legislation, with over 45 active commercial PACE programs and an additional ten programs in development. Commercial PACE programs in the U.S. have achieved over \$1.5B in cumulative investment in the past ten years in almost 2,500 projects.<sup>24</sup>

From a program administration perspective, commercial PACE programs are typically more cost-effective (relative to the residential stream) due to the lower application volumes and higher impact projects. The Program Administration Fee collected from commercial projects (which is required to cover City of Leduc and MCCAC administration costs) will be able to cover a sizable portion of the administration costs for the Program, creating a sustainable and cost-effective program long term.

### 4.2 Commercial Program Financing and Administration

#### 4.2.1 Managing Intake

Commercial PACE projects are often considerably larger in scale than residential projects. In order to effectively manage program uptake, financing requirements and administration costs, program controls will be put in place to limit intake to a small number of high impact projects. It is recommended the City place an upper limit on the annual amount of capital available to commercial properties. For example, a limit of \$600,000 may be available to commercial properties in Year 1, growing to over \$1M in Year 4 as the program is established and trusted in the market.

<sup>23</sup> <https://www.leduc.ca/sites/default/files/Leduc%20Final%20GHG%20Inventory%20Report%20%28Mar%2031%29.pdf>

<sup>24</sup> <https://pacenation.org/pace-market-data/>

	Year 1	Year 2	Year 3	Year 4	Total
Total Annual Financing	\$600,000	\$800,000	\$1,000,000	\$1,200,000	<b>\$3,600,000</b>
Average Cost per Project	\$200,000	\$200,000	\$200,000	\$200,000	-
Number of Projects	3	4	5	6	<b>18</b>

#### 4.2.2 Administration Costs

The CEIP legislation allows the program administrator and the municipality to collect up to five per cent of the project cost as an administration fee (the Program Administration Fee). The fee is charged to the Program participant. Given commercial projects will be lower volume, but larger in scale (relative to residential projects), it is anticipated that most of the administration costs associated with a commercial program could be covered through the fee. Based on the project financing example provided in section 4.2.1, the following table outlines the Program Administration Fee that would be collected each year.

	Year 1	Year 2	Year 3	Year 4	Total
Total Annual Financing	\$600,000	\$800,000	\$1,000,000	\$1,200,000	<b>\$3,600,000</b>
Program Administration Fee (5%)	\$30,000	\$40,000	\$50,000	\$60,000	<b>\$180,000</b>

### 4.3 Program Environmental and Economic Benefits

Using the project financing example provided in section 4.2.1, the anticipated outcomes of the commercial stream of the Program over a four-year period are as follows:

Program Forecast	4-Year Forecast	Description
Number of Anticipated Projects	18	Number of successful applications anticipated throughout the four-year program period.
Total Investment (\$M)	\$3.6	Total loan amount of all projects including the cost of materials, labour and other costs (e.g. permits).
Lifetime Savings (\$)	\$6.8	The aggregated energy bill savings from all completed projects over the lifetime of the installed upgrades. This includes the cost of carbon associated with natural gas savings. Savings are expressed in terms of today's (2020) dollars, though they are realized throughout each project.

Job Creation (job-years) <sup>25</sup>	53	Job creation accounts for direct and indirect jobs as calculated using economic multipliers. One job-year represents 1.0 Full-Time Employee for a single year. Indirect jobs include those created due to additional spending in the economy (e.g. energy bill savings causing additional spending elsewhere in the economy).
GDP Added to the Economy (\$M) <sup>26</sup>	\$25	GDP Added to the Economy includes direct and indirect spending as calculated using economic multipliers. Indirect and induced spending includes that of industries down the energy efficiency product supply chain, and additional spending by the economy as a consequence of new business and money saved.
Estimated Lifetime (years)	16	The estimated lifetime of projects is calculated using a weighted average of each upgrade's lifetime. The weighting factor is set by the upgrade's respective contribution to a project's total energy savings.
Lifetime GHG Emissions Reductions (tCO2e)	44,277	Lifetime GHG emissions reductions are calculated using energy savings (kWh and GJ) multiplied by respective emissions intensity factors and the upgrade lifetime.
Estimate Annual Electric Savings (kWh)	4,179,591	Energy savings are estimated based on the typical composition of projects, including a representative mix of lighting, heating, whole building <sup>27</sup> and solar PV upgrades.
Estimate Annual Gas Savings (GJ)	9,158	

<sup>25</sup> Efficiency Canada, "The Benefits of Energy Efficiency as Economic Stimulus – A Review," March 2020; Dunskey Energy Consulting, "The Economic Impact of Improved Energy Efficiency in Canada," April 3, 2018, [https://cleanenergycanada.org/wp-content/uploads/2018/04/TechnicalReport\\_EnergyEfficiency\\_20180403\\_FINAL.pdf](https://cleanenergycanada.org/wp-content/uploads/2018/04/TechnicalReport_EnergyEfficiency_20180403_FINAL.pdf).

<sup>26</sup> Efficiency Canada, "The Benefits of Energy Efficiency as Economic Stimulus – A Review"; Dunskey Energy Consulting, "The Economic Impact of Improved Energy Efficiency in Canada."

<sup>27</sup> Whole building upgrades includes insulation, windows and improvements to air tightness and weather protection.

## 5 Project Financing

### 5.1 Securing Financing

Provincial legislation states that the borrowing made by a municipality for CEIP does not count against the debt limit or debt service limit of the municipality. The legislation does not state or limit where a municipality can borrow the capital. The City of Leduc is exploring two options for securing financing: borrowing through a third-party lender, and funding opportunities available through the Federation of Canadian Municipalities (FCM).

The key considerations for Leduc around securing financing are the interest rate and carrying costs of the loan. To ensure the Program does not place undue financial stress on the municipality (or the participant if costs are passed along), Leduc will be seeking a source of financing that balances low interest rates and low carrying costs.

To reduce the potential for additional interest costs, the City of Leduc will consider accepting applications prior to completing the borrowing to ensure payment periods and amounts align. Another consideration may include accessing funds from FCM each pay period and placing a limit on the projects that can be approved based on the amount of funds accessed between to reduce the potential for additional interest costs.

#### 5.1.1 Borrowing Through a Third-party Lender

The City of Leduc may borrow the capital required for the program from their local bank or credit union. A line of credit would be secured which would only be used when projects are completed, minimizing the carrying costs.

The FCM's Community Efficiency Financing (CEF) program offers two main opportunities to municipalities around PACE financing: a partial loan guarantee to de-risk investments made by third parties; and a loan for the full borrowing needs of the program. If the City of Leduc decides to use a third-party lender, the CEF partial loan guarantee option would offer several key benefits. It serves as a credit enhancement tool that can help secure a more competitive interest rate with a third-party lender. In addition, for PACE-type loans, such as CEIP, property owners are required to obtain consent from their mortgage provider to participate. Mortgage providers will be more inclined to provide consent if they know a guarantee is in place to cover CEIP loans in default scenarios (see Appendix A for more information on mortgage consent). The credit enhancement stream also includes the opportunity to access grant funding through the CEF program.

#### 5.1.2 Borrowing through the Federation of Canadian Municipalities

As mentioned above, FCM's CEF program has an option where it provides a loan for the full capital requirements of a PACE program with an accompanying grant. The loan is offered at a competitive interest rate (anticipated to be between two and three per cent), with an extended loan term (up to 30 years). This option, however, does have a few constraints. Municipalities must draw down from their CEF loan in lump sums – as opposed to the project-by-project basis using a line of credit – resulting in carrying charges if uptake is slower than forecasted. Moreover, CEF loans cannot be repaid early, which may also result in carrying charges. For example, if a participant takes out a 25-year CEIP loan, decides to

pay it off early (which is permissible under Alberta legislation), the City of Leduc will need to loan the funds to another project or carrying charges will be incurred.

### 5.1.3 Other Considerations for FCM Financing

The MCCAC recommends the City of Leduc engage FCM to confirm the terms and conditions of the loan and partial loan guarantee opportunities, identify any barriers accessing FCM funds, and identify prerequisites for applying to the CEF program. The CEF program is new and FCM has been willing to find flexible solutions to allow municipalities to access the program.

## 5.2 Maximum Financing Amount

The maximum financing that can be accessed for a single project is limited by two factors: (1) the property owner's current annual property tax payment, and (2) the Program financing limits for residential, commercial and farmland properties. The financing limit determined in the CEIP regulation is \$50,000 for residential projects, \$1.0M for commercial projects, and \$300K for farmland. The lesser of these two limits is the maximum financing amount available for a project. The City of Leduc may choose to place a lower limit per property type in the Leduc CEIP bylaw.

The annual payment for the Clean Energy Improvement Charge is determined by taking the final project cost (and the program administration fees if applicable) and dividing by the term of the Clean Energy Improvement Charge. The existing annual property tax amount (i.e. the amount of tax most recently imposed on the property) must be greater than or equal to the participant's annual payment towards their Clean Energy Improvement Charge.

### 5.3 Interest Rate

The interest rate for CEIP is determined by the City of Leduc and is based on the source of capital accessed by the City. The Clean Energy Improvement bylaw will outline the maximum rate of interest for the Program. The interest rate will be fixed over the term of the CEIP loan and will be included in the Clean Energy Improvement Agreement between the participant and the City of Leduc. The interest rate will be determined once a lending source is confirmed.

### 5.4 Term

The maximum term of the Clean Energy Improvement Charge is equal to the effective useful life (EUL) of the upgrades completed in the project. The EUL reflects the anticipated lifespan of the upgrade in years. For single upgrade projects the maximum term is equal to the EUL of that upgrade. For projects involving multiple upgrades with differing EULs, a weighted average based on energy savings is determined to establish a single EUL for the project. The weighted average EUL is based on an individual upgrade's contribution to the project's lifetime energy savings.

The participant may select a shorter term upon signing the Clean Energy Improvement Agreement provided the annual payment towards the Clean Energy Improvement Charge does not exceed the existing property tax payment. Property owners can pay the remaining amount on the Clean Energy Improvement Charge at any time without being subject to a penalty.

### 5.5 Sale of Property

If the property owner offers their property for sale, they are required to disclose the existence and the contents of the Clean Energy Improvement Agreement to the prospective purchasers of the property

and the realtor (if applicable). If the property is sold, the Clean Energy Improvement Agreement must be appended to the contract of sale. If the property is transferred, the Clean Energy Improvement Agreement must be provided to the person the property is transferred to. The property owner and purchaser may negotiate the Clean Energy Improvement Charge be fully paid by the current property owner before the sale of the property.

### **5.6 Program Flow of Funds**

The funds for financing projects will flow from the City of Leduc, to MCCAC, and then to the contractor. Once the installation is completed and verified, MCCAC pays the contractor directly. Appendix B provides an overview of the program flow of funds.

## 6 Program Overview

### 6.1 Program Application Process

The following section outlines the process from participant pre-qualification through to recording the Clean Energy Improvement Charge on the property. MCCAC is the primary point of contact for participants, contractors, and energy advisors as they progress through the Program. A flow diagram of the process is included in Appendix C.

#### 6.1.1 Step 1: Pre-Qualification

The property owner completes the Pre-Qualification Form, to provide required information on the property and the property owner(s) and submits it to the MCCAC. No project information is collected at this time. When the MCCAC receives the Pre-Qualification Form, it is sent to the City of Leduc, initiating the review process. Leduc and the MCCAC each have specific criteria to review.

If all pre-qualification requirements are met, the MCCAC issues a Pre-Qualification Notice to the participant outlining next steps.

Pre-Qualification Criteria	
<b>MCCAC Review</b> <ul style="list-style-type: none"><li>• Satisfactory evidence that the applicant is the owner of the property</li><li>• Satisfactory evidence that the property is insured</li><li>• Current on mortgage payments (if applicable)</li><li>• All registered property owners acknowledged the program terms and conditions</li></ul>	<b>City of Leduc Review</b> <ul style="list-style-type: none"><li>• Confirm the property is located in the City of Leduc</li><li>• Check the assessment class of the property to ensure it is eligible for the Program</li><li>• Applicant is in good standing with respect to payment of municipal taxes</li></ul>

#### 6.1.2 Step 2: Project Application

Once the Pre-Qualification step is complete, residential participants will schedule an NRCAN Home Energy Evaluation to assess upgrade opportunities, then select a qualified contractor to design their project. Commercial participants may be required to complete an energy audit prior to contacting a qualified contractor. A list of all eligible upgrades will be listed on the CEIP website. The list of eligible upgrades is in Appendix D. Participants are required to use MCCAC's list of qualified contractors to select a contractor, NRCAN Energy Advisor, and energy auditor. If a participant wishes to use a service provider that does not belong to the contractor network, the service provider must complete the contractor network onboarding process.

Once upgrades are selected, the contractor completes a Technical Worksheet on behalf of the participant, which includes detailed information on the proposed upgrade(s) and a breakdown of eligible costs associated with the upgrade(s). The participant completes the Project Application Form and collects the Technical Worksheet (and additional supporting documentation if required) from the contractor and submits it to MCCAC.

MCCAC reviews all information submitted with the Project Application. If approved, MCCAC will send a Project Approval Notice to the participant, via email, which confirms project approval, and the approved financing amount. A copy of the *Clean Energy Improvement Agreement* and the *Project Agreement* will

also be provided for review and signature. In addition, the contractor(s) receive a notice that the project is approved and that they must sign the *Project Agreement* before the project commences.

### *Program Agreements*

The participant is required to enter into two separate agreements before completing any upgrades: *Clean Energy Improvement Agreement* and the *Project Agreement*. Both agreements must be signed by all property owners.

- The *Clean Energy Improvement Agreement*, between the participant and the City of Leduc, sets out the terms and conditions of Program participation, including the financing terms, disclosure requirements in the event of property sale and estimated project costs and completion date.
- The *Project Agreement* is a tri-party agreement between the MCCAC, the participant and the contractor. It defines the scope of the project and sets out the terms relating to the contractor's installation of the upgrades. For projects that involve upgrades completed by separate contractors, separate *Project Agreements* are required for each contractor.

When all agreements are fully executed, the MCCAC sends a notification to the participant and contractor(s), via email, that installation of the upgrade(s) may begin. This notification will include executed copies of both agreements.

#### 6.1.3 Step 3: Project Installation and Contractor Payment

Residential upgrades must be completed within six months of execution of the Clean Energy Improvement Agreement and commercial projects within one year. Once all approved upgrades are completed, residential participants must have a post retrofit NRCan Home Energy Evaluation completed.

For contractor payment, the participant submits an Upgrade Completion Form to the MCCAC, which is a streamlined document confirming the installation of the upgrade(s) and final costs. The contractor provides the participant with the required supporting documentation, including the revised Technical Worksheet.

Provided all information is accurate and complete, the MCCAC will send the Upgrade Completion Form to the City of Leduc to notify them that an upgrade is complete and will request payment. The City of Leduc will then transfer funds to the MCCAC, and the MCCAC will reimburse the contractor(s) directly.

Residential participants may include an invoice for the Home Energy Evaluation costs with the Upgrade Completion Form. Payment will be made to the Energy Advisor or directly to the participant if the evaluation was paid out of pocket.

#### 6.1.4 Step 4: Clean Energy Improvement Charge

The total Clean Energy Improvement Charge recorded on the property is the sum of the final project cost, as approved by the MCCAC, and any program administration fee as determined by the City of Leduc and the MCCAC. Once complete, the City of Leduc will record the charge on the participating property. Projects completed by December 31 will be recorded on next year's tax roll and included on the property tax assessment in May.

The participant repays the cost of their project over time through the Clean Energy Improvement Charge added to the property's tax bill. The outstanding balance may be paid at any time, penalty-free.

## 6.2 Project Quality Assurance and Program Evaluation

### 6.2.1 Project Quality Assurance

The MCCAC will conduct quality assurance and quality control (QA/QC) site visits to verify installations and engage with and solicit feedback from participants and contractors. The QA/QC process will help to develop key learnings about the Program.

The MCCAC will conduct site visits for up to 10 percent of all completed projects in the City of Leduc per year. Projects will be randomly selected for site visits; however, projects may also be selected for specific scenarios (e.g. technical application issues, participant concern, high-profile project, new contractor).

### 6.2.2 Program Evaluation

The primary objectives of the program evaluation are to verify the accuracy of Program records, ensure the Program is functioning as intended, and identify opportunities for improvement. The evaluation will be conducted annually, though some activities may be conducted mid-year to provide more timely feedback.

## 6.3 Additional Program Considerations

### 6.3.1 Home Energy Evaluation Exemptions

Under provincial CEIP regulation, property owners are not required to complete an NRCAN Home Energy Evaluation to participate in the Program. Given that the City of Leduc is applying to the Federation of Canadian Municipalities' CEF program, and that CEF requires Home Energy Evaluations, the Program is designed to meet this requirement. However, under certain circumstances, evaluations may impact participation in the Program, and therefore the MCCAC recommends exemptions to be considered. The same technical requirements required for each upgrade will apply regardless of whether a Home Energy Evaluation is required. The following cases may be considered for exemptions:

- Emergency equipment replacements that require a quick turnaround. Examples of upgrades where this applies include replacement of furnaces and other space heating equipment, and water heaters.
- Alternative energy installations including solar photovoltaic, and combined heat and power projects, as these are not typically part of a Home Energy Evaluation.

### 6.3.2 Role of Incentives

#### *Home Energy Evaluation Incentives*

The MCCA recommends the City of Leduc consider offering incentives for NRCAN Home Energy Evaluations. The evaluation may impact uptake as some homeowners will see the evaluation as a time-consuming, costly first step to enter the Program. Leduc may be able to access grant funding for incentives through the Federation of Canadian Municipalities' CEF program. Strategies can be put in place to ensure the incentives are being utilized to promote Program participation, while minimizing the number of applications looking to take advantage of the evaluation without the intent of completing upgrades, for example:

- The incentive amount covers the majority of the cost of the energy evaluation, as opposed to the total amount. This ensures that those who are accessing the incentive are still making a financial investment in the evaluation and are more likely to move forward with a project.

- The incentive may only be paid out when the participant completes a project through the Program. This strategy will help mitigate those who may be looking for a low-cost energy evaluation but have no intention of participating in the Program.

### *Equipment Incentives*

Most jurisdictions with PACE programs also have incentives available for the installation of eligible upgrades either from the municipality, the province, or a utility. Based on MCCAC's discussions with other jurisdictions (Appendix A), incentives help drive uptake by attracting people to the Program by reducing the total cost of their project. Currently there are no incentives for energy efficiency or renewable energy upgrades for the residents of the City of Leduc. The CEIP financing tool is new to Alberta, and Albertans may be cautious to participate at first. Introducing the Program with incentives for the first four years will help establish the Program in the province and build market confidence. Leduc may be able to access grant funding through Federation of Canadian Municipalities' CEF funding stream for incentives for equipment. To ensure incentives are used strategically the following may be implemented:

- The incentive amount does not need to cover a significant portion of the project, just enough to attract people to the Program.
- If there is a specific upgrade that is popular in the Program, the incentive can be transitioned away from that upgrade and added to other upgrades that need additional support in the market.

## 7 Marketing Strategy

### 7.1 Market Communication and Engagement Approach and Objectives

Accessing affordable financing is one of the largest barriers that property owners face when making a decision to invest in energy efficiency and renewable energy upgrades. Individuals may not have the money to pay the costs up front or are worried about selling their property before getting their investment back. With an estimated average cost of upgrades being over \$20,000, financing upgrades is appealing, if not required. The Clean Energy Improvement Program provides homeowners with an innovative financing tool to make it easier to pay for energy efficiency upgrades and renewable energy installations. The Program's design provides participants with a financing tool with a competitive interest rate and flexible terms.

The CEIP Marketing Strategy will build awareness of the Program in the City of Leduc and support ongoing activities required for Program visibility in the market.

The City's CEIP marketing plan will balance contractor recruitment, and meaningful program participation, with the presumed desire to offer a phased approach to public marketing in the near term. In this way, the Program achieves participation goals while applying continuous improvement practices to program delivery. As a result, we also raise the profile of the City of Leduc as leaders as they aim to achieve their environmental, sustainability, and governance goals.

### 7.2 Participant Experience

How participants engage with the Program is pivotal to its success. The objective is to provide a customer-centric, easy to navigate experience for contractors and property owners who engage with the Program. The MCCAC expects to deliver a high-touch engagement with both contractors and Program participants via targeted communication to pre-qualified leads; implement a streamlined application process; and support municipality-led community engagement.

### 7.3 Target Audience by Campaign Phase

The MCCAC will support the City of Leduc with a targeted, phased approach to ensure the Program reaches forecasted participation rates:

- Phase 1: Launch to pre-qualified leads, and friends and family of local supporters. Tactics in this phase will include targeted emails, phone calls and information sessions.
- Phase 2: Geo-targeted digital efforts, traditional local media, and events will target homeowners based on segmentation from EEA's 2019 brand research and neighbourhood housing stock information. Messaging will highlight the features and benefits of energy efficiency and renewable energy technologies. Those who interact with the MCCAC's social media and website will be re-targeted with complementary messaging to help guide them through the process.

Throughout the process, the MCCAC and the City of Leduc will continually work to identify challenges and opportunities in the customer journey, then optimize the campaign and/or process to stay relevant and attractive. Analysis of all marketing efforts will occur monthly.

## 7.4 Messaging

Messaging to participants and contractors will highlight that, “CEIP is an affordable and flexible way to pay for energy efficiency and renewable energy upgrades for your home. With low interest rates and approval based on mortgage and property tax payment history, you can finance larger or more complex projects at a competitive interest rate and flexible terms.”

## 7.5 Marketing Key Performance Indicators

Marketing metrics will track and evaluate the customer experience and identify opportunities for improved market segmentation, targeting of marketing efforts, improved customer experience, minimized attrition, etc. (E.g. social media engagement, website actions, newsletter subscriptions, earned media presence, etc.). Participant conversion KPIs include, but are not limited to:

- Conversion rate of new participants by marketing channel; attrition rate
- Achieving customer experience objectives such as satisfaction rate, Program completion time, per cent of incomplete projects and incoming calls and emails.

## 7.6 Competitive Evaluation Summary

Even if municipalities implement the maximum Program Administration Fee (5% of the total project cost) and a high interest rate, more often than not, CEIP will be more competitive from both a cashflow (monthly repayment) and overall carrying cost perspective. It is more attractive because it does not impact credit rating and requires less administrative hoops than a traditional personal or business loan.

Given the criteria for issuing a CEIP loan is different than any other option available (aside from paying cash – no credit check, risk analysis), they stand on their own in the financing category.

## 7.7 Marketing and Communication Tactics

Tactics	Details
Websites	<p>MCCAC website includes:</p> <ul style="list-style-type: none"> <li>• General program information</li> <li>• Integrated Application forms</li> <li>• Streamlined project processing</li> <li>• Lead generation form (newsletter/program email subscribers)</li> </ul> <p>City of Leduc website features:</p> <ul style="list-style-type: none"> <li>• Program information</li> </ul>
Municipality-led community engagement	Local events with MCCAC support (e.g. virtual or in-person information sessions)
Owned Platforms	<p>MCCAC and City of Leduc Digital Assets:</p> <ul style="list-style-type: none"> <li>• Social media</li> <li>• Blog posts</li> <li>• Direct email 'drip' campaigns</li> </ul>
Earned Media	<ul style="list-style-type: none"> <li>• Work with local media to highlight City of Leduc CEIP launch; and later to highlight feature projects</li> </ul>
Paid Advertising	<p>Traditional:</p> <ul style="list-style-type: none"> <li>• Print (advertorial)</li> <li>• Events (at local arenas)</li> </ul> <p>Digital:</p> <ul style="list-style-type: none"> <li>• SEO (update website copy)</li> <li>• Search engine marketing</li> <li>• Digital display campaign (look-alike audiences, retargeting campaign)</li> </ul>

Marketing creative samples are provided in Appendix E.

## 7.8 Stakeholder Engagement Activities

The City of Leduc engaged the public and key stakeholders to gather their perspectives and input on their 2019 GHG reduction plan. Engagement activities included:

- Communication through a paid print and digital advertising,
- A dedicated section on the City of Leduc website and a brochure,
- Written feedback through an engagement hub and online survey,
- Education and input through a Climate Mitigation Express workshop,
- Ongoing input through the Leduc Environmental Advisory Board (LEAB) GHG Reduction Sub-Committee,
- Stakeholder engagement workshop, and
- A public open house.

Based on the online survey results (247 respondents) lowering energy bills was rated as one of the top benefits of a GHG reduction plan (70 per cent rated this result, as “more important”, that is 4 or better out of a scale of 8), as well as lower GHG emissions (65 per cent rated more important).

The majority of respondents also agreed with the proposed actions residents and businesses could take to reduce GHG emissions. Some of the top rated GHG reduction actions for residents and businesses included improving energy efficiency (85 per cent agree) and using renewable energy (54 per cent agree).

Residents provided 94 comments on the engagement boards available at key locations including the library, the civic centre and the Leduc Recreation Centre. Identified themes were consistent with the online survey results and included waste management, active transportation, and energy efficiency and conservation.

In addition to collecting resident and business input, 12 stakeholders representing a variety of different organizations attended workshops to offer their perspectives. Overall, the feedback from the stakeholder workshop was positive as they supported the majority of the GHG reduction actions proposed, including PACE.

Support of the GHG reduction plan and a desire to take actions further emanated from input at the public open house. Through the public open house evaluation forms and in conversation with the facilitators, no opposition to the GHG reduction action plan was expressed. The majority of comments wanted the action plan to go further in reducing GHG emissions. Based on the evaluation forms, support for the nine per cent GHG reduction target was 83% with the remaining responses supporting the five per cent reduction target. PACE was one of the recommended actions identified in the nine per cent GHG reduction target.

Additional stakeholder engagement activities will take place as the CEIP bylaw is developed and the program is launched. As per the Municipal Government Act, the CEIP bylaw adoption process must include a public hearing and advertisement period prior to the second and third reading. This public hearing provides property owners and contractors to comment on the bylaw and provide feedback to the City. Amendments to the bylaw may be made based on the collected feedback.

Prior to the launch of the program engagement sessions will be held with contractors and property owners in the City of Leduc to introduce the program to the community. These sessions will educate the participants on the program processes, eligibility requirements, and upgrade requirements.

## 8 Contractor Network

The provincial regulation<sup>28</sup> requires that the CEIP administrator establishes and updates a list of qualified contractors and posts the list on the Program website. It is therefore important for MCCAC and the City of Leduc to ensure availability of qualified contractors at Program launch. To achieve this, the City of Leduc has elected to leverage MCCAC’s contractor network (originally developed and managed by Energy Efficiency Alberta to support its programs).

MCCAC’s contractor network is designed to recruit, screen for specific membership or Program criteria, on-board, train, support, and enable product and service providers (e.g. electricians, energy auditors, HVAC technicians) to actively participate in CEIP. It is also designed to help build the technical capacity of professionals working in the energy efficiency and renewable energy field in Alberta. Contractors are critical to the success of PACE programs as they are on the front lines engaging customers directly and delivering energy efficiency and renewable energy products and services. Using an established, pre-qualified network of contractors will allow Program participants to connect with professionals trained to deliver high quality projects.

### 8.1 Contractor Participation in Past EEA Programs

More than 1,000 participating contractors have supported over 250,000 energy efficiency projects in EEA’s past programs, both in the residential, commercial, and industrial sectors. Contract network members take participants from an energy audit (or assessment of equipment) to project implementation, supporting a wide variety of projects, including lighting retrofits, HVAC, water heating, windows, and furnaces. Contractor network members can also support incentive applications by providing necessary technical information as required by programs, as well as cost estimations, and most importantly, the installation of equipment.

The following table provides an overview of the size of the Contractor network province wide.

Customer Base	Type of Business	Total Trade Allies as of August 31, 2020
Residential	Contractor and installers; all measure types (companies that complete installations of residential energy efficiency measures)	596 member companies
	Service Organizations and Energy Advisors (certified NRCAN Home Energy Evaluators)	15 Service Organizations (with ~45 Energy Advisors)
	Solar PV installers; design and consulting	23 member companies
Commercial & Industrial	Design and consulting; professional services	79 member companies
	Contractor and installer	78 member companies
	Distributor	9 member companies
	Solar PV installers; design and consulting	37 member companies

<sup>28</sup> [https://www.qp.alberta.ca/documents/Regs/2018\\_212.pdf](https://www.qp.alberta.ca/documents/Regs/2018_212.pdf)

The Contractor network is established in the City of Leduc, with 110 organizations having completed projects in past EEA residential incentive programs.

The following table provides an overview of the size of the Contractor network serving the City of Leduc.

Customer Base	Type of Business	Total Trade Allies as of August 31, 2020
Residential	Contractor and installers; all measure types (companies that complete installations of residential energy efficiency measures)	110 member companies
	Service Organizations and Energy Advisors (certified NRCAN Home Energy Evaluators)	6 Service Organizations
	Solar PV installers; design and consulting	16 member companies
Commercial & Industrial	Design and consulting; professional services	2 member companies
	Contractor and installer	49 member companies
	Solar PV installers; design and consulting	16 member companies

It is also important to note that over 50,000 residential projects were completed in Edmonton and surrounding area by participating contractors. Currently there are more than 571 contractors that service Edmonton. It is anticipated that many of these contractors would travel to Leduc (approximately 30km away) and support residents with their energy efficiency or renewable energy projects. As new programs launch and engagement and recruitment efforts increase, the Contractor network is anticipated to grow. Using EEA’s contractor data, specific types of trade allies can be targeted to drive participation and enable successful outcomes for CEIP.

## 8.2 Contractor Recruitment and Engagement Strategy

Although the City of Leduc will attract contractors from Edmonton, it is important to have an ongoing high-touch recruitment campaign targeting new and existing Contractor network members already living and working in the community. The goal is to enable respected contractors to support CEIP participants to a high degree of customer satisfaction. An overview of the contractor network recruitment and marketing strategy is included in Appendix F.

## 9 Implementation Strategy

### 9.1 Resourcing

#### 9.1.1 City of Leduc

The City of Leduc's program administration responsibilities are centered around ensuring the participant is in good standing (with the municipality) and levying and collecting the Clean Energy Improvement Charge. The following table provides an overview of the City of Leduc staff required for the Program and a description of their role.

Staff Required	Role of the Staff Member(s)
Chief Administrative Officer	<ul style="list-style-type: none"> <li>• Provide oversight on program development and delivery</li> </ul>
Manager, Financial Planning & Budgets	<ul style="list-style-type: none"> <li>• Verification of the Clean Energy Improvement Charge amount included in the Clean Energy Improvement Agreement</li> <li>• Transfer funds to MCCAC for contractor payment</li> <li>• General oversight of the Lead Revenue Services responsibilities</li> </ul>
Manager, Environment & Environmental Project Manager	<ul style="list-style-type: none"> <li>• To provide general oversight on program development and delivery</li> <li>• To provide updates to leadership and Council on program progress</li> <li>• To provide MCCAC with signed Clean Energy Improvement Agreement</li> <li>• Liaison between MCCAC staff and City of Leduc staff</li> </ul>
Lead, Revenue Services & Tax Specialist	<ul style="list-style-type: none"> <li>• Review of applicant's property tax/utility/etc. payment history</li> <li>• Recording the Clean Energy Improvement Charge on the participant's tax roll and manage repayment through the property tax system</li> <li>• Provide MCCAC with notification that the Clean Energy Improvement Charge was placed on the participant's tax roll</li> </ul>
Communications Officer	<ul style="list-style-type: none"> <li>• Collaborate with MCCAC to ensure marketing and communications strategy and tactics are tailored to the community</li> </ul>

#### 9.1.2 Municipal Climate Change Action Centre

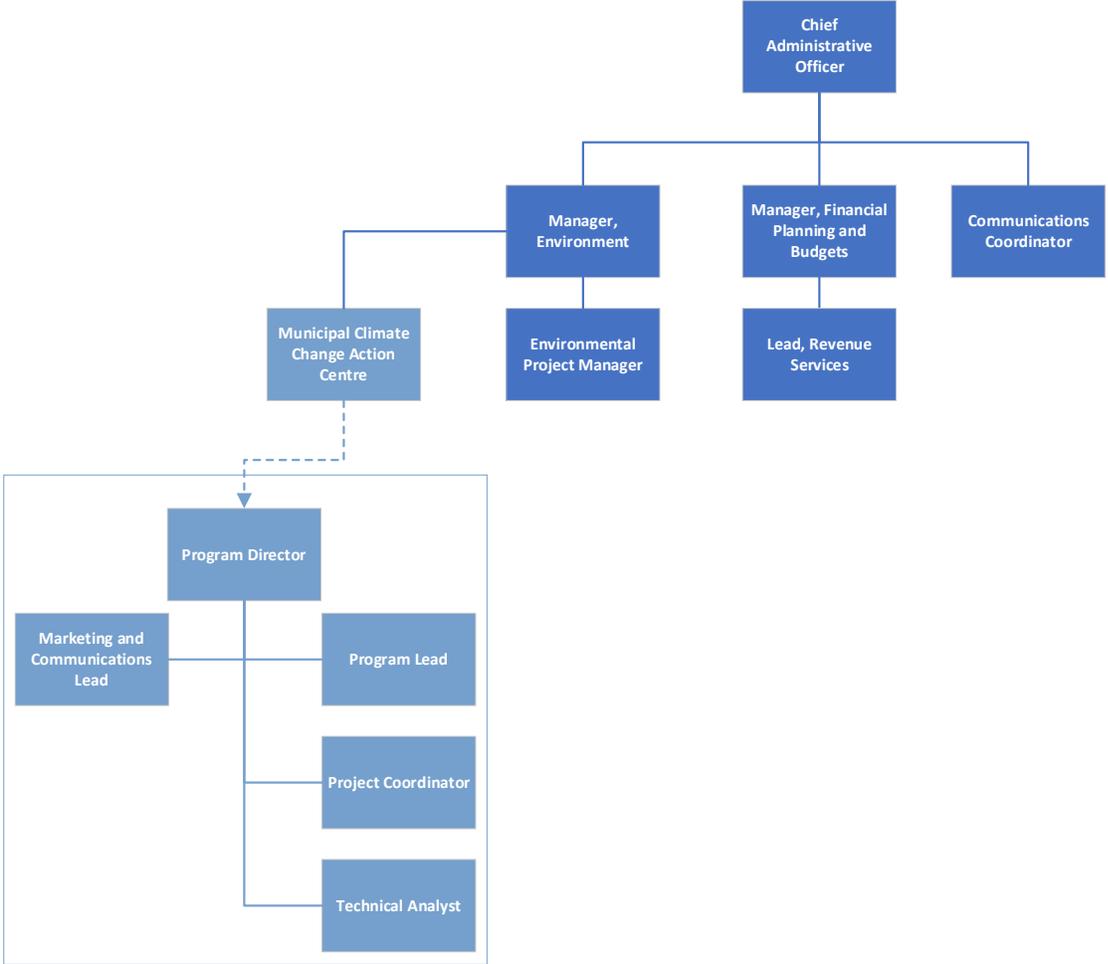
The MCCAC is the administrator of the Program and the main point of contact for participants, contractors, and energy advisors participating in the Program. The following table provides an overview of MCCAC staff required for the Program and a description of their role.

Staff Required	Role of the Business Unit
<ul style="list-style-type: none"> <li>• Program Director</li> <li>• Program Lead</li> <li>• Project Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>• Application review and approval</li> <li>• Facilitation of program agreement execution</li> <li>• Customer inquiries and issues management</li> <li>• Liaison between Leduc's staff and MCCAC staff</li> <li>• Track and report on program performance and monitor KPIs</li> </ul>
<ul style="list-style-type: none"> <li>• Marketing and Communications Lead</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and execute marketing and communications plans and strategies</li> <li>• Monitor program uptake and adjust marketing tactics accordingly</li> <li>• Participant inquiries and issues management</li> </ul>

<ul style="list-style-type: none"> <li>• Technical Analyst</li> </ul>	<ul style="list-style-type: none"> <li>• Support technical review of applications as required</li> <li>• Provide oversight for tracking and calculations of program performance data</li> <li>• Manage program evaluation, measurement, and verification</li> <li>• Manage the Contractor network and lead recruitment, engagement, and management of trade allies participating in CEIP</li> </ul>
<ul style="list-style-type: none"> <li>• Back-end services</li> </ul>	<ul style="list-style-type: none"> <li>• Support for IT issues and management</li> <li>• Supporting financial services including invoicing and payment processing</li> </ul>

### 9.2 Reporting Structure

Figure 4. Reporting structure for the Clean Energy Improvement Program between the MCCAC and the City of Leduc.



### 9.3 Implementation Timeline

Figure 5. Implementation timeline for the City of Leduc’s Clean Energy Improvement Program. Please note that quarters are in calendar year.



## Appendix A: Jurisdiction Review

### Part 1- MCCAC's Review of PACE Programs Across Canada

#### 1) City of Toronto HELP Program

- Toronto's program offers financing for energy efficiency improvements, solar PV, solar hot water, geothermal, EV charging, and battery storage.
- Over 200 projects (2014 – 2019)
- Program eligibility:
  - All of the property owners on title consent to participate in the program
  - Property tax and utility payments to the City are in good standing
  - Participant obtains written consent from their mortgage lender (if applicable)
- Rebates currently available through the Province of Ontario, City of Toronto, and Enbridge, for water heaters, insulation, windows, and range from \$50 to \$1,500.

#### 2) Halifax Solar City Program

- Halifax's program is only solar technologies (electric, hot air, hot water)
- Over 800 projects (2013 – 2020)
- Program eligibility:
  - All residential taxes are paid in full as well as any other fees and charges which are invoiced separately through the tax account (i.e. false alarms, unsightly premises, curbside garbage pickup, deferred regional development charge, etc.).
  - Solar pilot program (SLC) and/or LIC (road improvements, sewer and/or water installations) must either be paid in full or are being paid per the annual billing cycle or other authorized payment plan and are up to date.
  - Requires mortgage consent in the agreement, but does not require proof.
- Rebates currently available through Efficiency Nova Scotia for solar PV, for up to 25% of the eligible system costs or up to \$6,000.

#### 3) Clean Foundation – Clean Energy Financing Program (Nova Scotia)

- Regional administrator who runs the program for seven municipalities/districts (Town of Amherst, Town of Bridgewater, District of Barrington, Municipality of Cumberland, District of Digby, District of Lunenburg, District of Yarmouth).
- Clean Foundation requires a 1:1 debt to savings ratio (cost of the clean energy upgrades, program fees, and cost of borrowing must be less than or equal to the estimated energy savings over the financing period).
- Over 50 projects completed
- Program eligibility:
  - All of the property owners must consent to participation in the program
  - The property has been in good standing with respect to municipal taxes, rates, or charges
  - The residence is in a participating municipality
  - Note: The District of Lunenburg and the Town of Amherst also require a credit check for each homeowner
- Rebates currently available through Efficiency Nova Scotia, for home and water heating systems that range from \$150 to \$2,500. Rebates are also available for solar PV through Efficiency Nova Scotia for up to 25% of the eligible system costs or up to \$6,000.

Topic/Issue	Key Learnings from Toronto, Halifax, and Clean Foundation
Mortgage Consent	<ul style="list-style-type: none"> <li>• Consultation with mortgage providers is an important to step to address the issue; however, due to the fact that PACE loans take priority over mortgages in default situations, and PACE is likely seen as a competing financing product, mortgage providers have disincentives to provide consent.</li> <li>• The Toronto program developed over fifty contacts with mortgage providers and obtaining consent continues to be an issue for the program.</li> <li>• Two main approaches to mortgage consent identified: active vs passive</li> </ul> <p>Active Approach</p> <ul style="list-style-type: none"> <li>• Active approach requires homeowners to get consent from the mortgage provider and submit proof of consent to the program administrator (City of Toronto model).</li> <li>• Active approach has impacted uptake in the Toronto program; approximately 1/4 participants have dropped out due to issues related to mortgage consent.</li> </ul> <p>Passive Approach</p> <ul style="list-style-type: none"> <li>• Passive approach requires homeowners to get consent from the mortgage provider, but proof is not required (Halifax Solar City and Clean Foundation model).</li> <li>• Programs using the passive approach have seen greater uptake (e.g. over 800 projects in Halifax program vs 200 projects in Toronto program); while mortgage consent is not the sole reason for the difference, Toronto confirmed that it is an important factor.</li> <li>• Neither the Halifax Solar City or the Clean Foundation have had any reported issues from participants or mortgage lenders after participation in the program.</li> </ul> <p>Additional Considerations</p> <ul style="list-style-type: none"> <li>• Collaborate with program administrators across Canada and FCM to engage with the Canadian Bankers Association and mortgage lenders at a national scale.</li> <li>• Utilize a loan loss reserve (e.g. FCM’s Credit Enhancement Stream) to address default/payment priority concerns of mortgage lenders.</li> </ul>
Advancement of funds pre-installation	<ul style="list-style-type: none"> <li>• It is common for contractors to request down payment for work prior to completing a renovation.</li> <li>• If requested, the Toronto program provides up to 30 per cent of the total loan to the participant at time of agreement signing. Clean Foundation provides deposit payments directly to the contractor if requested and authorized by the participant.</li> <li>• Providing down payment options improves program equity (as some participants may not have funds on hand for down payments), may encourage participants to complete multiple retrofits through the program, and likely increases contractor participation.</li> <li>• For both administrators, the risk of fund advancement repayment is perceived as low as the participant is already in a contract with the municipality, and if the project is not completed, the municipality can levy the down payment amount on the property tax.</li> </ul>

	<ul style="list-style-type: none"> <li>• The Toronto program and the Clean Foundation noted there have been no issues to date related to funds advancement.</li> <li>• Conversely, the Halifax Solar City program does not provide down payments. Contractors must complete the project before any funds are released. Halifax administrators said their approach has not had a noticeable impact on uptake; however, they have had contractors decide not to participate in the program.</li> </ul>
Participant & Contractor Experience	<ul style="list-style-type: none"> <li>• Streamlining the documentation submission requirements for both the contractor and participant is necessary for a good program experience (e.g. asking for similar information that would be provided by contractors to residents outside the program).</li> <li>• Online portals with too many steps or requirements can create a barrier to entering the program for participants. <ul style="list-style-type: none"> <li>○ One administrator switched from using an online portal to a more streamlined format with downloadable PDFs directly on their website.</li> <li>○ All administrators indicated the importance of creating program forms that are simple and easy to navigate.</li> </ul> </li> <li>• Participant protection measures are important, but a balance needs to be met to not sacrifice uptake unnecessarily.</li> </ul>
Role of Incentives	<ul style="list-style-type: none"> <li>• Incentives can play an important role in attracting people to the program website where they then discover information on financing options.</li> <li>• Program administrators noted that information on incentives should be easily found on the financing program’s website. <ul style="list-style-type: none"> <li>○ Some program administrators are not involved in the application/integration of incentives; others allow participants to note their expected incentive and reduce their financing amount; and others complete the incentive application for the participant.</li> </ul> </li> <li>• Incentives help reduce the cost of the project for the participant, which may increase uptake and may increase the number or size of the projects the participant is willing to take on.</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>• Social media and radio ads have been shown to be successful marketing tools</li> <li>• Town halls and information sessions prior to program launch are important to get participants and contractors familiar with the program.</li> </ul>

## Part 2- Additional PACE Programming Research

In Summer 2020, Guidehouse was contracted to complete a jurisdictional scan of PACE programs across North America to support CEIP program design. Guidehouse is a consultancy firm that provides expert knowledge for clients in industries such as energy, sustainability and infrastructure. Guidehouse conducted interviews with six PACE administrators (Halifax: Halifax Solar City; Clean Foundation: Clean Energy Financing; Toronto: HELP; California: PACE Loss Reserve Program; Colorado: CO C-PACE; Connecticut: Connecticut Green Bank C-PACE; and Minnesota: MinnPACE). A summary of the key findings is provided below. Please note, the results and recommendations of the research below was completed by a third party and does not necessarily reflect the views of the MCCAC or the City of Leduc.

The research conducted by Guidehouse found that most programs do not set aside specific funds for marketing the program, but marketing is a key component to increasing awareness and driving demand for PACE programs. In the first years of their programs, administrators found that the most effective approach to marketing was traveling around the region (i.e., Province) to engage with municipalities and contractors through in-person workshops and meetings. These events helped to educate municipalities and contractors about PACE and allowed participants to voice any questions or concerns. Due to COVID-19, most workshops have recently transitioned to a virtual format, but administrators believe that in-person sessions are more effective. Additional marketing methods include an easy-to-understand program website and social media, particularly Facebook advertising. Canadian program administrators highlighted that municipalities will likely lack the appropriate resources to market the program sufficiently; therefore, PACE program administrators should strive to provide ample marketing support to the extent possible.

Program administrators consistently indicated that PACE programs should be as simple as possible for homeowners and commercial business owners. Program administrator staff often play an important role in assisting homeowners and commercial business owners through every step of the program. This support can include: ensuring that potential participants understand the eligibility criteria, selecting a contractor, deciding which measures are the best for their property, explaining how the payments will work and what the resulting savings will be on their utility bill, as well as making sure contractors are paid and the project is properly closed. Ensuring a simple and easy process for homeowners and business owners helps resolve barriers that may impede their participation.

To ensure that homeowners and commercial business owners have options to finance a variety clean energy and efficiency measures, the PACE program administrator should ensure that municipalities can lend at sufficient dollar amounts with lending periods that are long enough to meet program savings and payback requirements. The Canadian residential PACE program administrator for the Clean Foundation program recommends \$15,000 as the minimum lending amount at lending terms longer than 10 years to ensure any energy efficiency upgrade or renewable energy measure a homeowner may wish to implement on their property will be eligible.

Contractor recruitment and ongoing engagement is a key component to a successful PACE program, as contractors play an important role in interacting with homeowners and business owners. Some PACE programs publish a list of qualified or experienced contractors as a resource for program participants, but to avoid any risk of responsibility for dissatisfactory work, programs generally take a neutral stance on who homeowners and businesses want to work with for their projects. Contractors listed on the program website often have experience with PACE projects or have undergone PACE training. For projects that involve multiple contractors, the homeowner or commercial business owner is advised to select at least one contractor from that list. Contractors for PACE projects do need to meet minimum

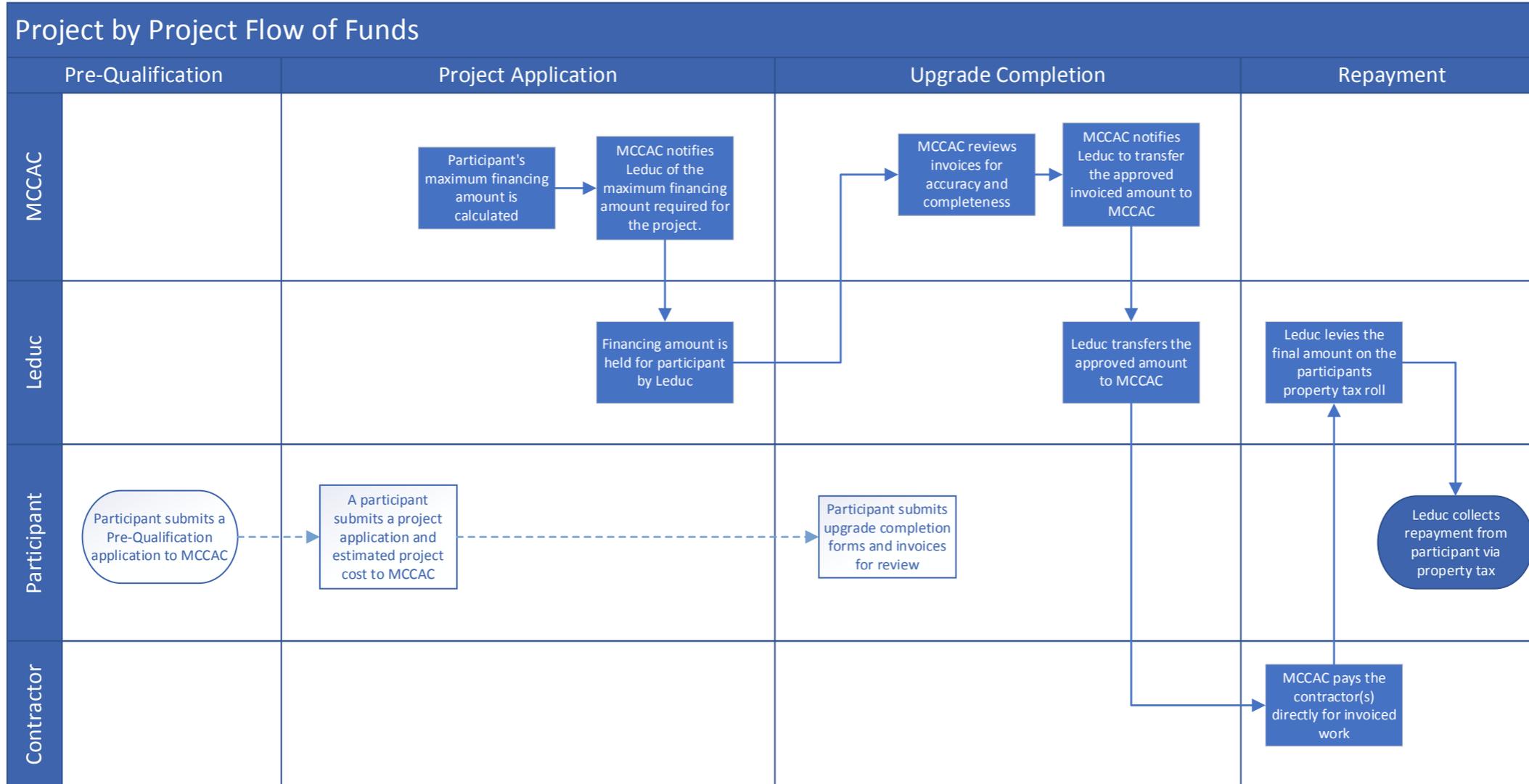
requirements, however, which vary by sector and country. For example, residential programs in Canada require that contractors maintain \$1-2 million in liability insurance and Workers Compensation Board Clearance (WCB).

The most significant barriers to entry indicated by both residential and commercial program administrators were the lack of resources municipalities have to dedicate to the program (e.g., for any marketing or payment processing) and the overall concern municipalities and homeowners/commercial business owners have regarding the risk associated with lending and taking on more debt. PACE program administrators have found that increased education for all stakeholders on how the program works and its benefits is most helpful to mitigate these barriers. Specifically, for municipalities, it has been helpful to share data on the low default rates for other programs (less than one percent), offer support for marketing, and provide tools for processing and ongoing administration of PACE loans. It is also helpful to inform the municipality that, although initial funding is needed for the program, it can eventually be self-sustaining and possibly a source of revenue as more funds are generated through the financing interest rate.

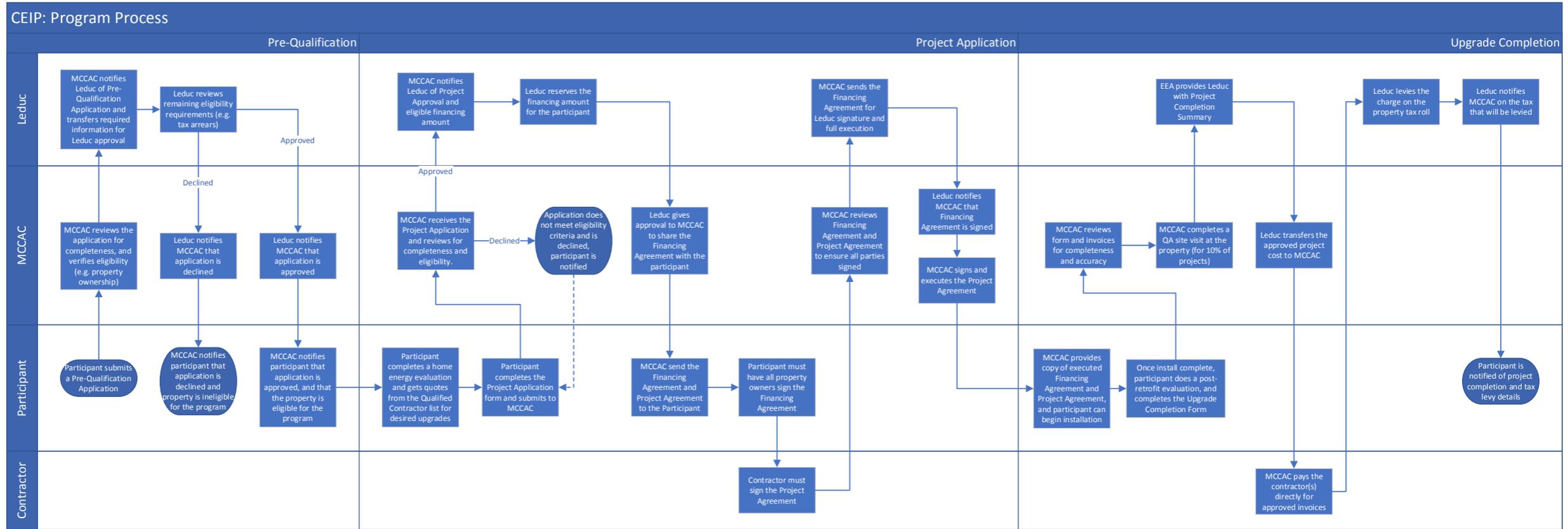
Based on PACE program research and perspectives shared in the interviews, Guidehouse recommends that CEIP consider the following as part of the PACE program design and implementation:

- Engage with municipalities and contractors through in-person workshops and meetings, even before program launch, to educate and obtain buy-in from key stakeholders
- Develop easy-to-understand marketing materials, including a program website and social media, particularly Facebook advertising
- Provide ample marketing support, to the extent possible, to support municipalities and contractors
- Identify strategies and tools (e.g., software) to support municipalities with PACE administration
- Work with municipalities on financing terms (e.g., increasing borrowing limits, extended loan terms) that enable projects to meet program requirements (e.g., energy savings to payment ratio)
- Identify opportunities to streamline the program process and make it easy-to-understand for municipalities, contractors, homeowners and commercial business owners.
- Gather and share data on PACE program successes (e.g., low default rates) to alleviate concerns from stakeholders

## Appendix B: CEIP Program Flow of Funds



# Appendix C: CEIP Program Process Flow Diagram



## Appendix D: Draft Eligible Upgrades List

### Residential Upgrades

Upgrade Name	EUL <sup>29</sup>	Upgrade Type
Photovoltaic solar system and related components	25	Alternative Energy
Solar thermal water heating	12	Alternative Energy
Combined heat and power	15	Alternative Energy
Residential smart thermostat	11	HVAC - Control
High-efficiency central air conditioner	18	HVAC - Cooling
High-efficiency natural gas furnace	20	HVAC - Heating
ECM motor for residential furnace	6	HVAC - Heating
High-efficiency natural gas boiler	25	HVAC - Heating
High-efficiency air source heat pump	16	HVAC - Heating
Air source heat pump replacing natural gas furnace	16	HVAC - Heating
Heat and energy recovery ventilation	18	HVAC - Heating
Pipe and duct insulation	18	HVAC - Heating
Indoor lighting control	10	Lighting - Control
Lighting fixture	15	Lighting - Indoor fixture
General service and specialty lamp	15	Lighting - Indoor lamp
Drain water heat recovery	20	Water - Heating
Tankless natural gas water heater	13	Water - Heating
Heat pump water heater	15	Water - Heating
Attic insulation	20	Whole Building
Wall insulation	20	Whole Building
Crawlspace insulation	20	Whole Building
Rim joist insulation	20	Whole Building
Triple pane low-e window	15	Whole Building
Air sealing (infiltration reduction)	15	Whole Building
Window shading device	15	Whole Building

### Commercial Upgrades

Commercial Upgrade Name	EUL	Upgrade Type
Demand control building ventilation	10	HVAC - Control
Small commercial smart thermostat	11	HVAC - Control
High-efficiency electric air-cooled chiller	23	HVAC - Cooling
High-efficiency unitary air conditioner	15	HVAC - Cooling
High-efficiency natural gas boiler	25	HVAC - Heating
High-efficiency natural gas unit heater	12	HVAC - Heating
De-stratification fan	10	HVAC - Heating
High-efficiency heat pump	15	HVAC - Heating
High-efficiency natural gas furnace	17	HVAC - Heating
Ventilation heat/energy recovery	15	HVAC - Heating

<sup>29</sup> Effective Useful Life

High-efficiency natural gas make-up air furnace	15	HVAC - Heating
Variable speed drive for motors in supply/return fans	15	Motors and drives
Variable speed drive for motors in chilled water pumps	15	Motors and drives
Variable speed drive for motors in hot water pumps	15	Motors and drives
Variable speed drive for motors in cooling tower fans	15	Motors and drives
Pipe and duct insulation	15	HVAC - Heating
Demand control kitchen ventilation	15	Commercial Kitchen - Control
High-efficiency pre-rinse spray valve	5	Commercial Kitchen - Control
Indoor lighting control	8	Lighting - Control
Outdoor lighting control	8	Lighting - Control
Downlight fixture and retrofit kit	9	Lighting - Indoor fixture
Bay fixture and retrofit kit	9	Lighting - Indoor fixture
Troffer fixture and retrofit kit	15	Lighting - Indoor fixture
General service and specialty lamp	15	Lighting - Indoor lamp
Linear LED tube replacing fluorescent tube	9	Lighting - Indoor lamp
Outdoor LED fixture and retrofit kit	15	Lighting - Outdoor fixture
LED exit sign	5	Lighting - Specialty
Automatic door for walk-in freezer	8	Refrigeration - Door
Strip curtain for walk-in freezer	4	Refrigeration - Door
High-efficiency door for reach-in freezer	12	Refrigeration - Door
Automatic door for walk-in refrigerator	8	Refrigeration - Door
Strip curtain for walk-in refrigerator	4	Refrigeration - Door
High-efficiency door for reach-in refrigerator	12	Refrigeration - Door
Refrigerator and freezer LED case lighting	10	Refrigeration - Lighting
Evaporator fan control for motors	13	Refrigeration - Control
Refrigeration economizer	15	Refrigeration - Control
High-efficiency motor for walk/reach-in freezers	10	Refrigeration - Motor
High-efficiency motor for walk/reach-in refrigerators	10	Refrigeration - Motor
Tankless natural gas water heater	20	Water - Heating
High-efficiency natural gas storage water heater	15	Water - Heating
Multi-residential hot water demand control	15	Water - Heating
Drain water heat recovery	20	Water - Heating
Air curtain for overhead doors	15	Whole Building
Air infiltration / sealing and pressurization	15	Whole Building
Building automation system upgrade	15	Whole Building
Commercial insulation	20	Whole Building
High-efficiency window	15	Whole Building

## Appendix E: Marketing Creative

Initial creative concepts developed by MCCAC can be used to streamline content development and can ensure municipalities, such as Leduc, launch their program easily and quickly. Examples of materials developed:

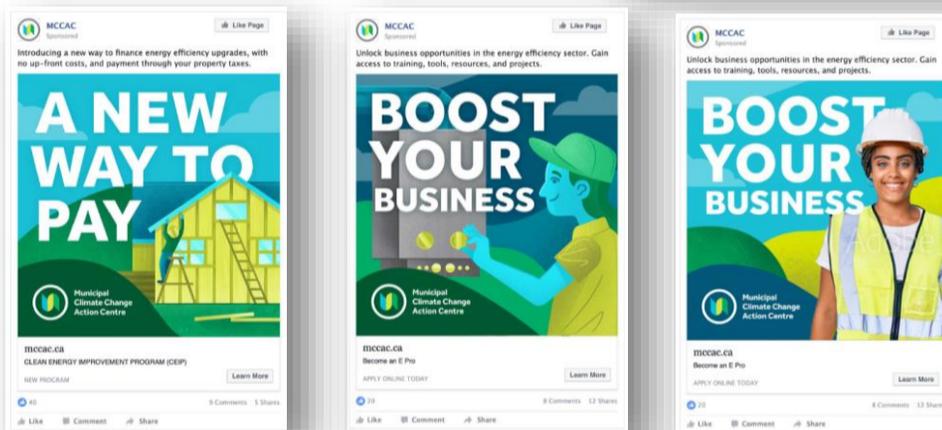
Postcard / Collateral



Example Handout



Social



Digital Display



## Appendix F: Contractor Recruitment and Marketing Approach

It is important to have the right mix of contractors for participants to choose from. Aside from adhering to the Code of Conduct and in good standing with the Better Business Bureau, the following subsets of Contractor network members are required to support Program implementation:

- Service Organizations (and NRCan Energy Advisors): Energy Advisors are employed or contracted by Service Organizations to complete Home Energy Evaluations and are licensed by NRCan. The Service Organization is the contractor network member.
- Contractors with the areas of expertise that can support the installation of eligible upgrades.

The goal of a high-touch recruitment campaign is to on-board new and existing Contractor network members to support CEIP participants to a high degree of customer satisfaction. Contractor recruitment activities for Leduc will be focused and informed by:

- Property owner surveys asking about measures they may be interested in and how they would engage a qualified contractor. This will help narrow down the most in-demand contractor types.
- Reinforcement, or follow-up, events and training sessions after the initial CEIP event to more deeply understand how CEIP fits in with contractors' current sales processes.
- Identifying a local champion to be featured in social media, advertisement or blog posts.
- Identifying and organizing a follow up event at a local spot where target product or service providers usually gather (e.g. local distributor that contractors frequent for supplies).
- Recognizing contractor network members as success stories and project profiles which further promotes involvement in the Program (e.g. number of projects completed, referrals received from participants).
- Celebrating milestones (e.g. number of projects completed in a community).
- Tracking engagement related KPIs to measure which recruitment and engagement strategies are most effective and which lead to project activity.

### Potential Contractor Recruitment Marketing and Communication Tactics

Tactics	Details
Websites	<p>MCCAC website</p> <ul style="list-style-type: none"> <li>• Includes general program information</li> <li>• Lead generation form (newsletter subscribers)</li> <li>• Training materials</li> <li>• Downloadable PDFs for sharing with customers</li> </ul> <p>Leduc website</p> <ul style="list-style-type: none"> <li>• Features program information</li> </ul>
Municipality-led engagement	Coordinated events with distributor and wholesalers and be present on-site
Owned Platforms	<p>Direct outreach:</p> <ul style="list-style-type: none"> <li>• Contacting contractor network members with relevant areas of expertise that have identified relevant service areas in our database via email and/or phone.</li> <li>• Contacting relevant product or service providers that have completed a project in the City of Leduc through an MCCAC program via email and/or phone.</li> <li>• Work with local and provincial association (ECAA, MCAA, SMAA, etc.) eblast</li> </ul>

	<p>Digital:</p> <ul style="list-style-type: none"> <li>• Social media</li> <li>• Blog posts</li> <li>• Direct email campaign to existing trade allies</li> </ul>
Earned Media & Direct Outreach	<p>Earned Media:</p> <ul style="list-style-type: none"> <li>• Work with local media to promote CEIP</li> <li>• Leduc Chamber of Commerce and economic development organizations.</li> <li>• Local industry associations such as the construction associations (e.g. e-newsletters).</li> <li>• Outreach at local industry events.</li> </ul> <p>Direct outreach:</p> <ul style="list-style-type: none"> <li>• One-on-one outreach (phone, email, in-person).</li> </ul>
Paid Advertising	<p>Traditional:</p> <ul style="list-style-type: none"> <li>• Print (advertorial)</li> <li>• Events (at local arenas)</li> </ul> <p>Digital:</p> <ul style="list-style-type: none"> <li>• Search engine marketing</li> <li>• Digital display campaign (look-alike audiences, retargeting campaign)</li> </ul>