MUNICIPAL GHG CHALLENGE FUND: Information Webinar

Climate Change Action Plan

Ontario

Ministry of the Environment and Climate Change
September 2017
ONTARIO’S GREENHOUSE GAS (GHG) REDUCTION TARGETS

- Ontario has legislatively enshrined GHG targets as follows:
  - A reduction of 15 per cent by the end of 2020
  - A reduction of 37 per cent by the end of 2030
  - A reduction of 80 per cent by the end of 2050

- In order to reach its 2020 and 2030 targets, Ontario has to reduce greenhouse gas (GHG) emissions by an additional 19Mt by 2020 and an additional 62Mt by 2030.

- Ontario’s Climate Change Strategy (the Strategy), released in November 2015, outlines areas where actions need to take place and identifies the need to:
  - Reduce Emissions from Key Sectors, including Transportation and Buildings
  - Demonstrate Government Collaboration & Leadership
  - Achieve Resource Efficiency & Productivity
  - Support Industry and Innovation
  - Support Adaptation and Resilience
ONTARIO’S CLIMATE CHANGE ACTION PLAN

• On June 8, 2016, Ontario released the Climate Change Action Plan (CCAP) that sets out specific actions, programs and policies to reduce GHG emissions and move toward a low-carbon economy.

• The province recognizes that municipalities play a key role in helping Ontario meet its targets, and CCAP contains specific actions to enable municipal climate change mitigation.

• CCAP contains two funding programs for municipalities:
  • The Municipal GHG Challenge Fund is a competitive, application-based program. The province will fund up to 100% of the eligible costs for GHG emissions reduction projects proposed by municipalities.
  • The Municipal Action Plan Program (MAPP) will be launched in late Fall 2017 to help municipalities to develop or improve their GHG emission reduction plans, inventories and targets. This program will help municipalities become eligible to apply for the subsequent rounds of the Challenge Fund.
MUNICIPAL GHG CHALLENGE FUND: THE BASICS

• Municipalities may request up to $10 million per project.
• The province will contribute up to 100% of eligible costs
  o Higher scores will be given to applicants that leverage funds for up to 50% of eligible costs.
  o Projects currently underway are limited to requesting funding for up to 25% of eligible costs.
• Municipalities may submit more than one application. Municipalities must complete separate applications for separate projects; however, a single project may have multiple sites.
• Municipalities may not stack funding from other CCAP programs funded through the GGRA or GIF (e.g. Ontario Municipal Commuter Cycling Program).
• At least 30% of funded projects will be located in small / rural / northern municipalities (population < 100,000 or areas north of, and including, the districts of Parry Sound and Nipissing).
MUNICIPAL ELIGIBILITY

- Eligible applicants must be Ontario municipality with a council-approved:
  1. Community-wide GHG emissions inventory;
  2. Community-wide GHG emissions reduction targets;
  3. Community-wide strategy/plan to reduce GHG emissions; and,
  4. Up-to-date O.Reg. 397/11 CDM 5-year plans and annual reporting (mandatory for all municipalities).
- These requirements align with Section 4.2.10 of the Growth Plan (2016) which encourages municipalities to develop GHG inventories, targets, and plans.
- Single-tier, lower-tier, and upper-tier municipalities are eligible to apply for funding if they meet the eligibility requirements.
- Municipalities may partner with other municipalities and community groups so long as the lead applicant meets the eligibility requirements.
VERY SMALL MUNICIPALITIES STREAM

• If your municipality has a population of less than 10,000 and does not have a community-wide GHG emissions inventory, reduction targets, and a plan, your municipality may be eligible for the Very Small Municipalities Stream.

• For selected projects in this stream, municipalities would commit to developing plans, targets, and inventories in parallel with the implementation of their GHG reduction project.

• Applicants in this stream would apply using the same application form, but are not required to complete “Section I – Alignment with GHG Planning”.

• Applicants in this stream will be scored out of 90 points, rather than 100.
PROJECT ELIGIBILITY

• **Eligible Projects:** Any kind of municipal project that reduces GHG emissions could be eligible for funding including in the buildings, energy supply, transportation, water, waste and organics sectors. Examples:
  - Renewable energy and energy efficiency retrofits to municipal facilities
  - Creating or expanding low-carbon district energy systems
  - Making energy-efficiency and renewable upgrades to water treatment plants
  - Collecting, processing and treating methane from landfills to produce energy
  - Building or modifying an anaerobic treatment system for municipal organic waste
  - Reducing GHG emissions in existing municipal fleets and transportation network.

• Projects must commence by **March 2019**. Projects that are already currently underway are only eligible if they were initiated after **June 1, 2016**.

• **Ineligible Projects:** Projects that do not directly reduce GHGs are not eligible, such as plans, studies, and research initiatives; education and awareness initiatives; granting programs; projects exclusively focused on adaptation.
EVALUATION CRITERIA

• **Project Focus (10%)** - projects that aim to replace fossil fuels with clean, renewable energy and achieve net zero (or better) emissions buildings, transportation systems, and/or infrastructure.

• **GHG Emissions Reduction Assessment (40%)** - projects that result in significant and cost-effective GHG reductions. Greater weight will be given to projects that yield earlier GHG reductions.

• **Project Co-benefits (10%)** - projects that result in positive co-benefits, including economic, social, environmental, behavioural, innovation, low-income and vulnerable communities benefits.

• **Alignment with Municipal GHG Emissions Planning (10%)** - projects that align with a municipality’s GHG emissions planning; municipalities that have a comprehensive GHG reduction plan that meets/exceeds the province’s 2020, 2030 and 2050 targets.

• **Work Plan and Budget (30%)** projects that have a detailed, feasible work plan to achieve the project outcomes; projects that leverage funds for up to 50% of eligible costs (e.g., through federal/municipal governments, private sector, industry partners)
LEVERAGING

- The province will contribute up to 100% of eligible costs for projects. However, a higher score will be given to municipalities that leverage funds for up to 50% of eligible costs.

- Applicants are required to identify all funding sources in their project budget.

- Applications will be scored out of 100 points, based on the following criteria:
  - Project Focus (10 points)
  - GHG Emissions Reduction Assessment (40 points)
  - Project Co-benefits (10 points)
  - Alignment with Municipal GHG Emissions Planning (10 points)
  - Work Plan and Budget (30 points)

- To encourage leveraging, up to 10 points within the Work Plan and Budget section will be awarded based on the following table:

<table>
<thead>
<tr>
<th>Leveraged Funds</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>10%</td>
<td>2</td>
</tr>
<tr>
<td>20%</td>
<td>4</td>
</tr>
<tr>
<td>30%</td>
<td>6</td>
</tr>
<tr>
<td>40%</td>
<td>8</td>
</tr>
<tr>
<td>50%</td>
<td>10</td>
</tr>
</tbody>
</table>
HOW TO APPLY THROUGH GRANTS ONTARIO

• All applications must be submitted electronically through Grants Ontario at www.grants.gov.on.ca

• If your municipality does not have a Grants Ontario account, you can create one in three steps:

  1. Create your **ONe-key account and ID** here https://www.iaa.gov.on.ca/iaalogin/IAALogin.jsp

  2. Next, register your organization in the **Transfer Payment Common Registration (TPCR) System**.

  3. As soon as you register you will see the Grants Ontario link on your TPCR Main Menu. From here you can **request access to Grants Ontario** and then apply for a grant.

FAQs

1. What does ‘commenced by March 2019’ mean?

The construction phase of the project must begin by March 2019.

2. We have a corporate GHG inventory. Does that meet the eligibility requirements?

No. In order to qualify your GHG inventory, targets, and plan must be community-wide.

3. What is meant by “community-wide”?

A community-wide GHG inventory is a summary of all greenhouse gas emissions produced within a community. At a minimum, a community inventory includes emissions from buildings, transportation and solid waste within a given jurisdiction. A community-wide inventory is broader than a corporate inventory, which focuses solely on greenhouse emissions produced by municipal government operations.

4. I am a group that works with municipalities. Can I apply on behalf of a municipality?

Only incorporated Ontario municipalities are eligible to apply for the Challenge Fund. Municipalities may partner with other municipalities and community groups so long as the lead applicant meets the eligibility requirements.
FAQs

5. Part of the eligibility criteria is that municipalities must be up-to-date on O.Reg. 397/11 CDM 5-year plans and annual reporting. Under Ontario Regulation 397/11. What proof of this do we need to provide?

Municipalities are required to post both their 5-year energy conservation and demand management (CDM) plans and annual energy use and greenhouse gas (GHG) emissions reports on their websites. It is suggested that municipalities provide the links to this as proof of compliance as part of their application.

6. Do municipalities in the very small municipalities stream still have to be up-to-date on O.Reg 397/11 CDM 5-year plans and annual reporting?

Yes. All municipalities must be up to date in order to be eligible.

7. The guidance states that projects currently underway are only eligible if they were initiated after June 1, 2016. What does ‘initiated’ mean?

Projects are ineligible if active work on the project (beyond mere planning) began prior to June 1, 2016. Projects are also ineligible if full funding was secured prior to June 1, 2016.
COMPLETING THE APPLICATION

Once you are logged into Grants Ontario, you can download the application form.

• To see the entire application form, click the “Expand” button.
• To see each section on its own, click the section title.
APPLICANT ELIGIBILITY

Section D establishes applicant eligibility.

- If your answer to question 1 is “No”, you are not eligible to apply.
- If your answer to question 2 is “No” and your municipality has a population of over 10,000, you are not eligible to apply.

<table>
<thead>
<tr>
<th>D - Applicant Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is the lead applicant an incorporated municipal government in Ontario? *</td>
</tr>
<tr>
<td>2. Does your municipality have a community-wide GHG emissions inventory, GHG emissions reduction targets, and a strategy/plan to reduce GHG emissions? *</td>
</tr>
<tr>
<td>3. Is your municipal population: (select one) *</td>
</tr>
<tr>
<td>4. Is your municipality located in Northern Ontario (i.e. all areas north of, and including, the districts of Parry Sound and Nipissing)? *</td>
</tr>
</tbody>
</table>
Section E asks basic information about your proposed project.

- A single project may have multiple sites. For example, a project that involves upgrading equipment at four wastewater treatment plants could be submitted in one application.
- Total funding request should match with your Budget / Work Plan

<table>
<thead>
<tr>
<th>E - Project Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>This section contains all the information about the proposed project.</td>
</tr>
<tr>
<td>1. Project Name (maximum 250 characters) *</td>
</tr>
<tr>
<td>2. Project Start Date: (mm/dd/yyyy) *</td>
</tr>
<tr>
<td>4. Project Summary (maximum 2000 characters) *</td>
</tr>
<tr>
<td>5. Project site(s) (maximum 2000 characters) *</td>
</tr>
<tr>
<td>6. Total Funding Request *</td>
</tr>
</tbody>
</table>
**PROJECT FOCUS**

**Section F** asks basic information about your proposed project.

- You may select more than one target sector.
- You may select only one project focus. The purpose of this section is to determine the extent to which your project aims to replace fossil fuels with clean, renewable energy and achieve net zero (or better) emissions buildings, transportation systems, and/or infrastructure.

<table>
<thead>
<tr>
<th>F - Project Focus (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Scoring out of 100)</td>
</tr>
<tr>
<td>Target Sector (drop down list) *</td>
</tr>
<tr>
<td>Project Focus (select one) *</td>
</tr>
</tbody>
</table>

Please explain the extent to which your project focuses on:
- Net-zero emissions buildings, infrastructure, and transportation systems
- Fuel-Switching (replacement of fossil fuels with lower carbon alternatives)
- Energy Efficiency
- Other methods of emissions reduction (maximum 2000 characters) *
GHG REDUCTION ASSESSMENT

Section G asks for the estimated GHG reduction potential of your project.

<table>
<thead>
<tr>
<th>G - GHG Reduction Assessment (40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Scoring out of 100)</td>
</tr>
<tr>
<td>1. Estimated GHG Reduction Potential</td>
</tr>
<tr>
<td>FY</td>
</tr>
<tr>
<td>Up to March 2021</td>
</tr>
<tr>
<td>March 2021 to March 2031</td>
</tr>
<tr>
<td>March 2031 to March 2051</td>
</tr>
<tr>
<td>After March 2051</td>
</tr>
<tr>
<td>GHG Total</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

2. Describe Methodology used to estimate the total GHG reduction potential (including assumptions, calculations, limitations, references, other criteria and links to key documents and/or tools) (maximum 2000 characters) *

3. Estimated cost per tonne (Total Funding Request ÷ Total GHG Reduction Potential) *


GHG ESTIMATION PRINCIPLES

Completeness
• All the GHG emission changes influenced by the project should be taken into account and quantified. Very small changes in emissions should be at least considered and dismissed if deemed negligible.
• Account for GHG emissions that occur in Ontario only. Emissions occurring outside of Ontario can be included as a co-benefit to support your submission, but should not be included in your GHG estimate.

Additionality
• A GHG estimate should include only the GHG reductions that would not have occurred had the project not been implemented. Use of a baseline scenario is vital, to forecast the GHG emission reductions that would have otherwise occurred.

Transparency
• Sufficient information to allow intended users to make decisions with reasonable confidence.
• Document data sources, quantification methodologies, assumptions, unit conversions, calculation equations, spreadsheets, results and references and send with your application. Be sure to cite your sources and include reports or research articles that support your assumptions.
• **Please send an excel file with your calculation and a word file describing your methodology**
• Allows a reviewer to easily follow how the estimates were developed.

Conservativeness
• Best practice to apply conservative assumptions, values, procedures to ensure planned and actual reductions are not over-estimated.
5 STEP GHG ESTIMATION FRAMEWORK

Step 1: Identification of sources of GHG emissions within the project scope

Step 2: Selection of measurement, calculation or estimation approach/methodology

Step 3: Collection or estimation of activity data

Step 4: Selection of GHG emission factors

Step 5: Application of approach/methodology to activity data to calculate emissions:
GHG ESTIMATION EXAMPLE

Calculate the GHG emission reductions associated with replacing a heating-oil boiler, that provides heat to a large community centre, with a biomass boiler. The existing boiler operates at 75% efficiency and uses on average 296,000 L of heating oil per year. The replacement biomass boiler is expected to have a 20 year useful life. The community centre is within 50 km of the wood chip depot.

STEP 1: Identification of sources of GHG emissions\(^1\) within the project scope

\(^1\)emissions that occur within Ontario

Source of Diagram: US Environmental Protection Agency

Scope 1:
Direct GHG emissions from sources owned or controlled by your municipality.

Scope 2:
Indirect GHG emissions resulting from the generation of electricity, heat or steam purchased by your municipality.

Scope 3:
Indirect GHG emissions from other sources not owned or directly controlled by your municipality, but related to its activities.
Which emissions should you include?

“The province asks that applicants quantify only the direct and energy indirect GHG emissions and reductions associated with the project. Other indirect, or lifecycle impacts can be quantified and will be considered, but are not required.” (Municipal GHG Challenge Fund, Program Guide)

• Scope 1 and 2 emissions need to be included in your estimate (That occur in Ontario)
• Scope 3 emissions can be included but are not required (That occur in Ontario)
Step 1: Identification of sources of GHG emissions within the project scope

Baseline

- **Fossil Fuels**
  - Processing: 0.103 kg CO2e/L
  - In Ontario Processing and Transportation
  - Heating Oil
  - Combustion in boiler
  - Heat

- **Combustion**: 2.762 kg CO2e/L

Project

- **Waste Wood**
  - Production of wood chips
  - Transportation
  - Combustion in boiler
  - Heat

- **Electricity**: 75 kWh per tonne of wood chips
- **Diesel Fuel**: 44L/100 km

---

2. 2017 National Inventory Report, Environment Climate Change Canada
3. NL Agency: Ministry of Economic Affairs, Agriculture and Innovation
4. GHGenius Model
STEPS 2 TO 4 OF GHG ESTIMATION FRAMEWORK:

Step 2: Selection of measurement, calculation or estimation approach/methodology

**Baseline forecast:** What the GHG emissions would have been had the heating oil boiler not been replaced by this project

**Project scenario:** What the GHG emissions will be over the 20 year useful life of the biomass boiler.

**GHG Estimate:** The difference between the emissions from the baseline scenario and the project scenario will be the GHG emissions saved

Step 3: Collection or estimation of activity data

1. The amount of wood pellets needed to provide an equivalent amount of heat as the heating oil displaced:
   - Total Energy Produced by heating oil: $38.8 \text{ MJ/L}^1 \times 0.75 \times 296,000 \text{ L} = 8,614 \text{ GJ}$
   - Total Mass of Wood Chips Required = $8,614 \text{ GJ} \div 0.019 \text{ GJ/kg}^2 \div 0.95 = 477 \text{ tonnes of wood chips}$

Step 4: Selection of GHG emission factors

1. Heating Oil: $2.865 \text{ kg CO2e/L}^3$
2. Wood Chips: 0 - Biogenic emissions
3. Gasoline: $2.701 \text{ kg CO2e/L}^3$
4. Electricity: $0.043 \text{ kg CO2e/L}^3$

---

1. 2017 National Inventory Report, Environment and Climate Change Canada
2. Telmo, C. and Lousada, J., 2011, Heating Values of Wood Pellets from Different Species
### STEP 5: Application of approach/methodology to activity data to calculate emissions

#### Baseline Emissions

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>2030</th>
<th>2031</th>
<th>2032</th>
<th>2033</th>
<th>2034</th>
<th>2035</th>
<th>2036</th>
<th>2037</th>
</tr>
</thead>
</table>

#### Project Case Emissions

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>2030</th>
<th>2031</th>
<th>2032</th>
<th>2033</th>
<th>2034</th>
<th>2035</th>
<th>2036</th>
<th>2037</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation (km)</strong></td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
<td>2,075</td>
</tr>
<tr>
<td><strong>Annual GHG emissions (tonnes)</strong></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

| GHG Reductions (tonnes) | 844 | 844 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 | 666 |

#### GHG Reduction Forecast

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021 to 2030</th>
<th>2031 to 2050</th>
<th>After 2050</th>
<th>Total GHG Reductions (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,532</td>
<td>6,655</td>
<td>4,659</td>
<td>0</td>
<td>13,846</td>
</tr>
</tbody>
</table>

*Note: The baseline GHG emissions are reduced in 2021 to 2037 as it is assumed that the heating oil boiler would have been replaced in 2021 with a new, more efficient heating oil boiler, had the biomass system not been implemented.*
### PROJECT CO-BENEFITS (1)

Section H asks for the anticipated co-benefits of the project.

<table>
<thead>
<tr>
<th>H - Project Co-Benefits (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Scoring out of 100)</td>
</tr>
<tr>
<td>1. Economic Benefits: Will the project have economic development and productivity benefits that contribute to the long-term financial stability and prosperity of the community? Will the project have employment benefits? (maximum 2000 characters) *</td>
</tr>
<tr>
<td>2. Social Benefits: Will the project have social benefits such as improvements to community quality of life, health, safety, community revitalization, and opportunities for public education and awareness? (maximum 2000 characters) *</td>
</tr>
<tr>
<td>3. Environmental Benefits: Will the project generate additional environmental benefits such as improved resilience to climate change; improved air quality; waste reduction; increased recycling/diversion; more efficient use of natural resources; cleaner water; water conservation; and/or wastewater reduction? (maximum 2000 characters) *</td>
</tr>
</tbody>
</table>
PROJECT CO-BENEFITS (2)

Section H asks for the anticipated co-benefits of the project.

4. Behavioural Change Benefits: Will the project expand and/or accelerate the range or adoption of low-carbon choices by individuals, communities and businesses? (maximum 2000 characters) *

5. Innovation, Science and Technology Benefits: Will the project support innovation, research and development of science and technologies, and market transformations that can reduce GHG emissions? (maximum 2000 characters) *

6. Will the project have benefits to low-income and vulnerable communities? (maximum 2000 characters) *
ALIGNMENT WITH GHG PLANNING (1)

**Section I** asks how the project aligns with the community’s GHG planning.

- Note that municipalities in the Very Small Municipalities stream are not required to complete this section.

<table>
<thead>
<tr>
<th>Municipalities with a population of less than 10,000 are not required to complete this section.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Briefly describe your community’s GHG reduction plan and targets. Do your targets meet or exceed the province’s 2020, 2030 and 2050 targets? (maximum 2000 characters) *</td>
</tr>
<tr>
<td>2. How does this project support your community’s GHG reduction plan? (maximum 2000 characters) *</td>
</tr>
<tr>
<td>3. How does your project contribute to your community’s GHG reduction targets? (maximum 2000 characters) *</td>
</tr>
</tbody>
</table>
ALIGNMENT WITH GHG PLANNING (2)

Section I asks how the project aligns with the community’s GHG planning:

• Note that municipalities in the Very Small Municipalities stream are not required to complete this section.

4. How does your project align with an analysis of your community’s GHG inventory? (i.e. why is this initiative a priority above other potential projects in your community) (maximum 2000 characters) *

5. Describe the context of the project. Please explain:
   a. key factors that drove the decision to undertake the project
   b. information on the community or population that will be impacted by the project
   c. how the project is a municipal priority
   d. how the project is supported by or has the potential to influence broad municipal or regional environmental policy, and
   e. governance considerations (e.g. an official community plan). (maximum 4000 characters) *
ATTACHMENT CHECKLIST

✓ Complete Application Form
✓ Budget/Work Plan Template
✓ Copies of community-wide GHG emissions inventory, emissions reduction targets, and community GHG emission reduction plan or equivalent
✓ Commitment to the project from municipal council or a senior municipal authority (e.g. council resolution or letter)
✓ Additional GHG reduction estimates supporting information
✓ Letter of commitment from any other funders (if applicable)
TIMELINES

- The deadline to submit an application is **November 14, 2017**. Late or incomplete applications will not be assessed.

- Successful applicants will be informed in writing by **February, 2018**.

- Funding agreements will be completed before the end of the 2017/2018 fiscal year.
FURTHER QUESTIONS?

- For questions about program requirements, eligibility, and evaluation criteria please email challengefund@ontario.ca

- For support in completing the application, please contact the Grants Ontario Customer Service Line at 416-325-6691 or 1-855-216-3090 M-F, 8:30am-5pm or email GrantsOntarioCS@ontario.ca