



# Clean Transportation System - Research & Development Program

## APPLICANT'S GUIDE

### 1. Overview

In 2016, the transportation sector was the second largest source of GHG emissions, accounting for 25% (173 Mt CO<sub>2</sub> eq) of total national emissions. Between 1990 and 2016, GHG emissions from the transportation sector grew by 42%.

Technology has an important role to play in reducing the emissions from transportation, and helping Canada meet its GHG reduction commitments under Paris Agreement on Climate Change, and in the Pan-Canadian Framework on Clean Growth and Climate Change.

As part of this commitment, Transport Canada established the Clean Transportation Research & Development Program – to fund projects that advance new clean technology innovations, practices or research in the marine, rail or aviation modes.

### 2. Program Objectives

The Program's objective is to provide funding for projects that will help improve the environmental performance of Canada's transportation system, specifically in the rail, marine and aviation modes.

### 3. Eligible Recipients

Eligible recipients include:

- Provinces and territories, including provincially-owned and territorially-owned entities
- Municipalities, including Municipality-owned entities, and local and regional governments
- Indigenous groups, communities, organizations and development corporations
- Public sector organizations
- Not-for-profit private sector organizations
- For profit private sector organizations
- Canada Airport and Transit Authorities (excluding Canadian Port Authorities)

- Academia
- International organizations (e.g. International Civil Aviation Organization, International Maritime Organization)
- Foreign states and foreign state entities (e.g. foreign departments of transportation, Federal Aviation Administration)
- Individuals

#### 4. Available Funding

The total funding for the CTS-RD Program is **\$2,400,000\*** over 4 years. Funding will be provided as grants to support projects focused on the following transportation modes:

- Funding of up to **\$250,000** per year under the **Marine** transportation sector;
- Funding of up to **\$250,000** per year under the **Rail** transportation sector; and
- Funding of up to **\$100,000** per year under the **Aviation** transportation sector.

The maximum amount for a grant project cannot exceed \$100,000.

Recipients may be reimbursed up to 50% of eligible expenditures.

Projects should begin upon approval by TC, and must be completed by March 31, 2022.

*\* Total funding allocated under this call for proposals will be based upon the number of eligible projects submitted and their respective funding requirements. Depending on demand, a portion of funding could be reserved to support future call for proposals, or innovative transfer payment programs, e.g. competition/prizes through Impact Canada.*

#### 5. Eligibility Assessment Criteria

##### 5.1 Eligible activities include:

Eligible activities must **contribute to the reduction, measurement or reduced intensity of air pollutants and/or greenhouse gas emissions**. The funding will be to support the following eligible activities:

- Research and knowledge-sharing related to the development, evaluation, or testing of emission-reducing "clean" transportation technologies or other solutions.
- Development of technologies or methodologies to improve the measurement of transportation-related emissions;
- Development, testing, demonstration, deployment and/or installation of innovative clean technologies in Canada;

***Note:** the eligible activities listed above may include planning, design and evaluation, and the preparation, construction, improvement, installation and rehabilitation of assets. As well as the transport of construction materials and equipment (e.g. site preparation, assemblage and construction of lab apparatus, rehabilitation of a vessel for research use, transport/installation of equipment onto a vessel that is required to undertake research).*

## **5.2 The applicant must demonstrate the following in the proposal that:**

- the project will directly contribute to the Clean Transportation System; Research & Development Program's objectives (as described in Section 2);
- the project's activities are part of an existing program that supports research and other related activities, as well as support the eligible activities as described in Section 5.1;
- the project's activities are central to the primary mandate of the eligible organization, (or in the case of an individual, that the individual is affiliated with an organization whose primary mandate is to conduct such activities);
- the project activities to be undertaken will advance knowledge, technology innovation, development or adoption that contributes to reducing or measuring emissions, or reducing emission intensity
- the project has established a clear methodology, project plan and timeline for reporting, including major milestones, as well as a plan to disseminate the results broadly; and
- they have the knowledge, expertise and capacity required to complete the project.

## **6. Eligible project duration and approvals**

- All projects must be completed by March 31, 2022.
- Single-year (12 month) and multi-year projects are eligible.
- **TC does not issue advanced payments.** As a result, the applicant must demonstrate that they have sufficient cash flow available to complete the project.
- The applicant must identify all sources of project funding in their proposal (e.g., in-kind, third party). Letters from partner organizations that confirm financial support should be attached to the proposal.
- Projects may incur reimbursable eligible expenditures once approved and confirmed in writing by TC.

## **7. Eligible Expenditures**

Eligible expenditures include:

- Staff salaries and benefits;
- Professional services (e.g. accounting, auditing, consulting, etc.);

- Translation costs;
- Expenditures related to the preparation, construction, improvement, installation and rehabilitation of assets (e.g. improvements/modifications to vessels, vehicles and facilities)
- Purchase or lease of assets, technology, equipment and supplies;
- Licenses and permits;
- Rents, leases and insurance;
- Expenditures for Indigenous consultations, specifically project-related consultation activities pursuant to the Crown's legal duty to consult, which may include expenditures associated with meetings, travel costs, preparation of consultation materials, honoraria payments for Indigenous person, communication and translation costs;
- Administrative expenditures up to **15%** of total project costs (including general administration, expenditures, rent, insurance, office equipment rental and membership fees);
- Travel expenditures (including the cost of accommodations, vehicle rental and kilometric rates, bus, train, airplane or taxi fares, allowances for meals and incidentals);
  - **Note: Travel and per diem expenses cannot be more than the rates and allowances outlined in the [Travel Directive of the National Joint Council](#).**
- Other expenditures that are, in Transport Canada's opinion, considered to be direct, reasonable and incremental for the successful implementation of the project and have been approved in writing, prior to being incurred.

The above eligible expenditures may, in certain circumstances, include cash-equivalent expenditures associated with in-kind contributions. These expenditures may take the form of:

- Goods, services or assets consumed by the recipient for which costs are incurred and no cash is exchanged.
- Donations of goods, services or assets to the recipient, for which no costs are incurred and no cash is exchanged.

**Note:** *In-kind contributions received from a third party are considered donations and may form part of the applicant's share toward the total eligible expenditures of the project, but are not eligible for reimbursement.*

## 8. Ineligible Expenditures

Certain expenditures are not eligible for funding and therefore will not be considered in the calculation of the total eligible expenditures of the proposed project, including:

- Costs incurred before the funding approval date or after the final claim date;

- Expenditures for Provincial Sales Tax and Goods and Services Tax, or the Harmonized Sales Tax, where applicable, for which the recipient is eligible for a rebate, and any other costs eligible for rebates;
- The cost of purchasing land and/or buildings, including associated real estate and other fees;
- Financing charges and interest payments on loans;
- Expenditures which have been reimbursed under other federal statutes or programs.

## **9. Merit Selection Criteria**

TC will assess all grant applications to determine if they meet the Eligible Assessment Criteria (as described in Section 5). If eligible, the proposed project will then be assessed against the Merit Selection Criteria identified below.

Application templates are available upon request and must be used to apply for funding.

### **9.1 Applicants must provide the following information:**

#### **Relevance of the Project**

How closely the proposed project relates to the Clean Transportation Research & Development Program's objectives, as described in Sections 1 and 2.

#### **Applicant's relevant experience and capacity**

Relevant experience and capacity relates to how well the applicant is able to complete the proposed project in terms of resources, personnel and expertise. More specifically, TC will consider the applicant's:

- Mandate and/or experience and expertise
- Demonstrated commitment based on past or current projects
- Institutional, management/organizational structures, financial controls and other support available to successfully deliver the proposed project

#### **Quality of the proposal**

The quality of the proposal refers to the degree to which the planned activities, schedule, budget, targeted results, roles and responsibilities are clear, realistic and consistent with the proposed project's objectives. TC will assess whether the proposed project has:

- Clearly stated goals, objectives and outcomes
- A realizable project plan, concrete deliverables, budget and timelines

- A detailed risk analysis and mitigation strategy
- An experienced and qualified project delivery team with roles and responsibilities clearly established, including a qualified Project Manager.

### **Value for money**

The Applicant’s proposal should demonstrate an efficient use of resources, including funding, to achieve the expected outcomes.

### **9.2 For each sector, please indicate the project category (PC) that applies.**

*Note: Projects may identify more than one project category. Consideration will be given to proposals that address more than one category.*

#### **Marine Projects must include one or more of the following project categories (PC):**

**PC 1: Vessel Retrofits:** including hull or propeller retrofits to improve vessel efficiency (i.e. material and/or coating, structural changes, etc.)

**PC 2: Infrastructure:** including the use of new materials, light-weighting and durability

**PC 3: Emission Reductions:** including projects focusing on reducing greenhouse gas (GHG) and criteria air contaminant (CAC) emissions, such as CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub>

**PC 4: Autonomous Vessels:** including all proof of concepts regarding the technology and various applications

**PC 5: Alternate Propulsion Methods and Fuels:** including mechanical changes to existing diesel-electric technology, as well as alternative approaches to powering vessels, and improvements to existing fuels (LNG, biofuels, electrification, fuel cells, etc.)

**PC 6: Energy Recovery:** capture, transformation and reutilization of energy losses (i.e. noise, vibration, heat, etc.) to reduce overall vessel energy requirements

All Projects must keep in mind cost consideration and marine applicability. Secondary effects on socio-economy, safety, environment and life at sea shall be included. Model development related to topics mentioned above is accepted.

#### **Rail projects must include one or more of the following project categories (PC):**

**PC 1: Locomotive systems:** including mechanical changes to existing diesel-electric technology, as well as alternative approaches to powering locomotives

**PC 2: Data Management:** including the use of networked communications and monitoring systems to decrease stops and wait times

**PC 3: Infrastructure:** including the use of new materials in rail and tie applications and improvements to switching controls

**PC 4: Railcars:** including projects focusing on reducing frictional losses at the wheel-rail interface and using advanced material to lighten cars

**PC 5: Fuels:** including improvements to existing and alternative fuels

**PC 6: Optimizing Railway Operations:** including operator behavior, use of long trains, and rail yard efficiencies

**Aviation Projects must include one or more of the following project categories (PC):**

**PC 1: Emissions Reduction:** contribute to reduction, measurement or improvement of the intensity of GHG and/or air pollutant emissions from the aviation sector

**PC 2: Technical improvements in aircraft or aircraft engine design:** contribute to the improvement of design and/or function that leads to reduction in GHGs and/or critical air contaminants

**PC 3: Infrastructure / Operational improvements:** contribute to improvement in aviation infrastructure / operations that lead to reduced emissions from the sector

**PC 4: Development of aviation biofuels:** advance the development and deployment of alternative aviation fuels within the Canadian context

**PC 5: Improved scientific understanding:** of aviation emissions and impacts (environmental and human health).

### 9.3 Additional criteria

Priority may be given to projects that:

- contribute to the overall improvement of the Canadian transportation system by advancing innovative clean technologies, knowledge or practices that can be used by other modes of transportation.
- can reasonably be expected to contribute to reducing, measuring or reducing the intensity of GHG and/or air pollutant emissions from the transportation sector, at a reasonable cost
- establish technology, knowledge or practices that can be used by others
- leverage the participation from other public and private entities
- will provide other associated benefits, including:
  - other environmental benefits
  - time saving, and operating cost reductions
  - enhanced integration, systems efficiency and/or system capacity management
  - productivity/innovation improvements within the transportation system
  - improved transportation system safety

- include a plan to disseminate research findings to industry and academia
- appropriately identify potential risks

## 10. Notification

Once the project proposal has been evaluated, TC will inform the applicant as to whether or not they have been selected for funding. TC reserves the right to accept or reject any project proposal.

## 11. Service Standards

In an effort to continually improve our level of service, and to maintain a transparent process, TC has established service standards.

- Our goal is to provide applicants with written acknowledgement of receipt of their application and/or project proposal within 10 business days of the application deadline date.
- Our goal is to issue payments within 20 business days following the notification to the recipient that the requirements related to payment, as outlined in the funding agreement, have been fulfilled.

**Note:** If the program cannot meet the above standards, TC will advise recipients in a timely manner.

## 12. Funding Agreements

### 12.1 Grant agreements

A funding agreement signed by both the recipient and Transport Canada is required to receive the Program funding. The following sections highlight some of the key areas of the grant agreement under the Program.

### 12.2 Letter of funding approval for eligible activities

Eligible applicants will receive a letter of funding approval. This letter will indicate when the eligible expenditures become eligible for reimbursement under the Program.

### 12.3 Project scope and agreement

- Only eligible expenditures incurred after the date *indicated in the letter of funding approval* will be eligible for reimbursement.
- Payments will be made as established in the grant agreement.
- The maximum amount of total government funding cannot exceed 100% of total eligible expenditures.



**Note:** Reimbursements will be made to the applicant as a lump sum payment, and only for costs incurred.

#### **12.4 Annual reports**

For multi-year projects, the recipient will be required to provide an annual report. Recipients will be required to report on the results achieved, to ensure that that it continues to align with the objectives of the Clean Transportation Research & Development Program (Section 1 & 2). This will also assist TC to determine continued eligibility where a grant is paid by instalments.

#### **12.5 Final reports**

When the project is complete, recipients will be required to submit a final report. The final report includes a summary of project results that have been achieved. Under the funding agreement, TC must receive the final report before we provide final payment.

#### **12.6 Other funding agreement clauses**

##### **Official languages**

All recipients must respect the [Official Languages Act](#) when delivering a project funded under the Program. Linguistic requirements may apply to projects depending on their scope (national, regional or local), or on the specificity of the regions and targeted audiences of projects. TC will work with successful recipients to determine how this applies to their projects.

### **13. How to apply**

The following sections list the documents required to submit a project proposal.

Application templates are available upon request and must be used to apply for funding.

Applicants will submit a completed project proposal which must include the following:

1. Title of project and executive summary
2. Applicant information:
  - a. legal name of the organization
  - b. name and position of the primary contact for applicant organization
  - c. mailing address for all correspondence
  - d. contact information such as office phone/fax numbers, email/Internet address, etc.

3. Organizational profile:
  - a. type of organization
  - b. organizational structure and governance
  - c. history of the organization
  - d. mandate of the organization
  - e. organizational activities
4. Project management personnel
  - a. Each project must have a designated project manager; please include proof of their qualifications and contact information (if different from applicant organization)
5. Declarations:
  - a. conflict of interest questionnaire
  - b. declaration by applicant organization attesting to the accuracy of the project proposal and the commitment of the organization to carry out the project signed by an authorized agent
6. Project description:
  - a. project eligibility information
  - b. location of project delivery
  - c. proposed start and completion dates
  - d. major activities for the project
  - e. project work plan
  - f. project budget
  - g. partners and contributions
  - h. risk assessment and mitigation measures
7. Communications plan, if applicable
8. Letters of support, including financial support
9. Legal documentation of applicant organization
10. Budget information (as per eligible expenditures in Section 7) – To be added as an annex, see budget template

## **14. Submitting your application**

### **Application deadline**

Project proposals must be received no later than **August 24, 2018**.

Project proposals received after this date will not be considered for funding.

**Note:** All project proposals must be signed, complete, accurate, comprehensive and presented using the templates provided. All applicants **must provide legal documentation confirming their organization is a legal entity** (i.e. letters of patent, certificate of incorporation or other such legal documents). Missing or incomplete information will slow the processing of the application and may result in its rejection.

An application package may be submitted by email or by mail, at the applicant's discretion.

**Email:**

An electronic application package must be in MS Word, MS Excel or PDF format. Send the application to:

[TC.CTSRD-STERD.TC@tc.gc.ca](mailto:TC.CTSRD-STERD.TC@tc.gc.ca)

**Mail:**

A signed hard copy may be sent by mail, and must be received in this office by the application deadline.

To maintain the transparency and fairness of the selection process, no extensions can be granted.

Mail applications to:

Clean Transportation System (R&D)  
Transfer Payments Program  
Transport Canada  
330 Sparks St., Place de Ville – Tower C (AHSB)  
Ottawa, ON K1A 0N5

Transport Canada will confirm receipt of project proposals.