



Call for Applications
for the development of
pre-commercial clean-energy projects
and technologies



BRITISH
COLUMBIA



SUSTAINABLE DEVELOPMENT
TECHNOLOGY CANADA

TECHNOLOGIES DU DÉVELOPPEMENT
DURABLE CANADA

Two Funding Agencies. One streamlined application process.

British Columbia's Innovative Clean Energy Fund (ICE Fund) and
Sustainable Development Technology Canada (SDTC)

**2017 - 2020 Joint Call for Applications
for the Development of Pre-Commercial Clean Energy Projects and Technologies**

Guide and Instructions

Table of Contents

A.	Introduction	4
A.1	The Funders	4
A.2	Call for Applications.....	5
A.3	Scope of this Applicant Guide.....	5
B.	Eligibility	5
B.1	Eligible Applicants.....	5
B.2	Consortium Requirement	6
B.3	Eligible Projects.....	6
	Eligible Project Categories	6
	Eligible Project Term	6
	Eligible Stages of Development	7
	Nexus to British Columbia	7
	Previously Funded Projects.....	7
C.	Terms of Funding	7
C.1	Total Funds Available under Call	7
C.2	Funding Structure	7
C.3	Eligible and Ineligible Costs	8
C.4	When can Eligible Expenses be Incurred.....	8
C.5	Reporting	9
D.	Submission and Process Details.....	9
D.1	Period during which Applications will be Accepted	9
D.2	Number of Applications.....	9
D.3	Phase 1 Application Process	9
D.4	Timelines.....	10
E.	Screening and Evaluation Criteria.....	10
E.1	Screening Criteria	10
E.2	Evaluation Criteria	11
E.3	Note on Application Quality	13
F.	Application Checklist.....	13

F.1	Applicant and Project Eligibility Checklist.....	13
F.2	Application Checklist	13
G.	Intellectual Property	14
H.	Confidentiality.....	14
I.	Legal Notices	15
J.	Contact Information.....	15

A. Introduction

A.1 The Funders

ICE Fund

British Columbia's Innovative Clean Energy Fund (“**ICE Fund**”) is designed to support the B.C. government's energy, economic, environmental and greenhouse gas reduction priorities and advance B.C.'s clean energy sector. Since 2008, the ICE Fund has committed approximately \$97 million in funding to support pre-commercial clean energy technology projects, clean energy vehicles, research and development, and energy efficiency programs.

Successful ICE Fund partnerships have included universities, First Nations, municipalities and many emerging clean tech companies across British Columbia. Technology demonstrations have included bioenergy, solar, ocean wave and tidal, geoexchange, desalination, energy management, smart grid and waste-to-energy.

The ICE Fund supports B.C.'s Climate Leadership Plan which outlines 21 actions leading to the creation of up to 66,000 green jobs over the next ten years, and reducing net annual greenhouse gas emissions by up to 25 million tonnes below current forecasts by 2050.

SDTC

Sustainable Development Technology Canada (“**SDTC**” and together with the ICE Fund, the “**Funders**”) is an arm's-length foundation created by the Government of Canada. SDTC works to advance the development and pre-commercial demonstration of clean technology projects in Canada. Since its creation in 2001, SDTC has allocated \$950 million to 330 projects that address issues related to climate change, air quality and clean water and soil. SDTC invests in Canadian companies that, through their innovative technologies, contribute positively to Canada by creating quality jobs, driving economic growth and protecting the environment.

SDTC's objectives are to:

- Increase the pool of available sustainable development technologies
- Fast track technologies to market
- Build private sector partnerships / leverage funding
- Reduce development, market and financial risk
- Build a critical mass of sustainable development technology developers

A.2 Call for Applications

Innovations in clean energy projects create energy efficiencies and solutions that lead to lower greenhouse gas emissions, healthier communities and cleaner environment. This collaboration to support the development and demonstration of pre-commercial clean energy projects and technologies in British Columbia enables the Funders to provide entities with a one-window approach to accelerate the investment, development and commercialization of new technologies that will reduce greenhouse gas emissions and create jobs for Canadians.

Therefore, the Funders have partnered to accept applications (“**Call**”) from Canadian private sector entities for funding of innovative clean energy technology development, demonstration and commercialization projects focused on greenhouse gas reduction technologies, energy efficiency, and conservation. The private sector entities are required to develop a project consortium with non-related partners, which may include entities such as potential customers, technology co-developers, key supply chain partners and academic institutions. Further details are provided below.

A.3 Scope of this Applicant Guide

This Phase 1 applicant guide (“**Phase 1 Applicant Guide**”) provides information about the Funders and the first stage of the funding process. The funding process comprises of two stages: the “Application” stage (“**Phase 1**”) and the “Proposal” stage (“**Phase 2**”). This Phase 1 Applicant Guide provides information about Phase 1 only. Information specific to Phase 2, which addresses the preparation and evaluation of Proposals, will only be available to Applicants who are successful at Phase 1 and are invited to move onto Phase 2 and submit a Proposal.

Note: Questions for the Funders about Phase 1 that are not fully addressed in this Phase 1 Applicant Guide can be sent to applications@sdtc.ca and icefund@gov.bc.ca under the subject heading: ICE-SDTC Phase 1 Questions. Through this contact, inquiries will be directed to appropriate personnel within the ICE Fund and SDTC to address their questions.

B. Eligibility

B.1 Eligible Applicants

Any Canadian private entity or organization is eligible to be an applicant (“**Applicant**”) and submit applications (each, an “**Application**”) for funding of Projects under this Call.

The Funders may, in their sole discretion, determine whether an entity or organization is eligible or ineligible to apply under this Call.

B.2 Consortium Requirement

In order to be eligible to submit an Application under this Call, an Applicant must form a consortium for the Project under the Application comprised of the Applicant and at least one non-related partner entity (each such partner organization, a “**Consortium Partner**”) who has committed to providing cash and/or in-kind contributions to the Project. There are no Canadian residency requirements for Consortium Partners. An entity is considered related to the Applicant if the entity and the Applicant have significant common purposes and substantial common membership. Consortium Partners may include entities such as potential customers of the Applicant, technology co-developers and academic institutions. For example, the Applicant could be a Canadian technology developer and the Applicant’s Consortium Partner could be a Canadian or international customer validating the technology in British Columbia. The decision as to whether an entity qualifies as a Consortium Partner is in the sole discretion of the Funders.

B.3 Eligible Projects

This section outlines the eligibility requirements for Projects under this Call. Notwithstanding any of the requirements set out below, the Funders retain the sole discretion to deem a Project as ineligible.

Eligible Project Categories

Clean energy projects and technologies that reduce greenhouse gas emissions and that fall within the mandates of both the ICE Fund and SDTC are eligible.

ICE Fund’s mandate:

British Columbia’s ICE Fund is designed to support the British Columbia government’s energy, economic, environmental and greenhouse gas reduction priorities and advance British Columbia’s clean energy sector.

SDTC’s mandate:

Sustainable Development Technology Canada (SDTC) is an arm’s-length foundation created by the Government of Canada to promote sustainable development and support projects that develop and demonstrate new technologies to address issues related to climate change, air quality and clean water and soil. SDTC invests in Canadian companies that, through their innovative technologies, contribute positively to Canada by creating quality jobs, driving economic growth and protecting the environment.

Eligible Project Term

The maximum length of funding requested for a Project under an Application is **five (5) years**.

Eligible Stages of Development

The Project under an Application must, at the time of application, be at one of the following stages of development:

- **Prototype (TRL 4 – 5):** At this stage of development, the technological components have been integrated and the concept has been proven and technology has achieved either limited or full capability prototype validation in simulated operational environment.
- **Field Pilot (TRL 6):** At this stage of development, a prototype system or small-scale pilot is ready to be field tested in a relevant environment.
- **Commercial Scale Demonstration (TRL 7):** At this stage of development, a technology is ready to demonstrate commercial viability. Projects in this category include commercial scale demonstration of actual system prototypes in a relevant environment.

Nexus to British Columbia

The Project under an Application must take place within British Columbia.

Previously Funded Projects

Projects or portions thereof that have previously received funding from the ICE Fund and/or SDTC or under this Call are not eligible to receive further funding for that Project under this Call. However, a new Project that builds on and sufficiently advances a previously-funded Project is eligible for funding under this Call.

C. Terms of Funding

C.1 Total Funds Available under Call

The total funding available under this Call is expected to be over **\$40 million** (Canadian Dollars), subject to the discretion of the Funders and the availability of funds.

C.2 Funding Structure

Generally, SDTC's contribution will not exceed 33% of the Eligible Project Costs of a Project.

Generally, the ICE Fund will not fund more than 33% of the Eligible Project Costs or \$3 million per Project, whichever is lower. However, the ICE Fund may at its sole discretion contribute additional funding to a Project to accelerate what it considers to be high potential technologies.

The total funding for each Project from both Funders will not exceed 67% of Eligible Project Costs.

The total funding for each Project from both Funders will not, when aggregated with other Government Funding committed to the Project, exceed 75% of Eligible Project Costs. "**Government**

Funding” includes funding from the ICE Fund, SDTC, other Canadian government funds whether federal, provincial or municipal, and Canadian Scientific Research and Experimental Development Program credits generated from Project activities.

Projects that receive less than 75% of their Eligible Project Costs from Government Funding and which have funding contributions from the Applicant and/or other Consortium Partners that demonstrate a suitable level of shared financial commitment and investment in the Project will be given preference.

Note: Applicants will need to justify the amount of funding requested from the Funders. The Funders may choose at their sole discretion to award project funding for less than the requested amount.

C.3 Eligible and Ineligible Costs

Funding under this Call will be for cash and in-kind eligible expenses incurred by the Applicant and Consortium Partners (“**Eligible Costs**”).

In general, Eligible Costs include goods, services, professional and technical costs required to plan and conduct Project activities, the cost of capital items that have no residual value beyond the scope of the Project, and the depreciation cost of capital items that have a residual value beyond the scope of the Project.

Note: The majority of Eligible Project Costs (>50%) must be incurred in Canada, and at a minimum, an amount of Eligible Project Costs equal to the funding from the ICE Fund for the Project must be incurred in British Columbia.

Eligible Costs, whether cash or in-kind, must be actual, auditable, at-cost expenses incurred in support of the Project by the Applicant and Consortium Partners. For example, lost revenue associated with taking a particular manufacturing line for the purpose of the Project does not qualify as an actual expense.

In-kind contributions from Consortium Partners are defined as Eligible Costs for which the Consortium Partner has not been compensated or reimbursed. Consortium Partners may also be reimbursed by the Applicant for their costs provided that no profit is generated, however, these expenses are considered cash costs to the Applicant, not an in-kind contribution. Discounted market rates from Consortium Partners do not qualify as an at-cost expense unless the Consortium Partner can demonstrate (to an auditable standard) that the cost reported is cost-recovery without profit margin.

C.4 When can Eligible Expenses be Incurred

Eligible Expenses must be incurred after the date that Contribution Agreements with the Funders are executed. However, in the event that the Project is required to start prior to the execution of

the Contribution Agreements, an Applicant can request a pre-contract “Project Start Date”. The pre-contract Project Start Date must be after the date on which the Applicant is notified that the Project has been **approved by the Funders** (all costs incurred prior to this date will be considered ineligible). Prior written consent from the Funders is required to recognize the pre-contract Project Start Date.

Applicants are advised that if a Contribution Agreement is not executed for any reason, costs incurred will not be reimbursed by the applicable Funder and under no circumstances will disbursements be made prior to execution of the Contribution Agreements.

C.5 Reporting

All Projects are required to comply with progress, annual, metrics and post- completion reporting, as detailed in the Contribution Agreement(s). This includes reporting against milestones and reporting on the use of funds. Templates will be provided.

D. Submission and Process Details

D.1 Period during which Applications will be Accepted

Applications in response to this Call will be accepted on a **rolling basis** between April 10, 2017 and March 31, 2020.

D.2 Number of Applications

There are no restrictions on the number of Applications that can be submitted by any Applicant under this Call. However, each Application must be in relation to only one project.

D.3 Phase 1 Application Process

In order to apply to this Call, interested Applicants must contact ICE Fund and/or SDTC to receive instructions for submission of an Application through the on-line Portal managed by the Funders. The Application must be in English or French.

Partial or incomplete submissions will not be accepted. Submissions not made in English or French will not be accepted.

The Application will first be reviewed by two internal business reviewers based on the screening and evaluation criteria outlined in Section E below. Both reviewers must approve the Project in order for the review to move onto the next step.

The next step is a technical review conducted by two internal technical reviewers also based on the screening and evaluation criteria outlined in Section E below. If at least one of these two technical

reviewers approves the Application for intake, the Applicant will be invited to make a presentation to the Funders. A presentation template will be provided in advance to the Applicant. The presentation slides themselves will be reviewed by one internal technical reviewer and two internal business reviewers. Approvals from two of these reviewers will be required before the Applicant is invited to make a presentation via a video conference session.

The video conference session will provide an opportunity for discussion between the Applicant and the Funders. The video conference session will be evaluated by a combination of seven technical and business reviewers. Approvals from the majority of the seven reviewers are required in order for the Applicant to be invited to move onto Phase 2 and submit a Proposal. Both the presentation slides and the video conference session will also be reviewed based on the evaluation criteria outlined in Section E below. Applicants will be notified as to whether or not they are invited to move onto Phase 2 and submit a Proposal shortly following their video conference session. The reviewers will be a combination of SDTC and ICE Fund representatives.

Applicants who are not invited to proceed in the process, and who wish to receive feedback on their Application can set up a short debrief phone call with the Funders.

Further information regarding Phase 2, including evaluation criteria and timelines, will be made available at the time Phase 2 invitations are made.

D.4 Timelines

Depending on the internal funding cycle of the Funders, and the date of submission of an Application it is expected that between six to eight months are typically required from the initial submission of the Application through to final approval of funding by the Funders. After final approval of funding request, Applicants will need to negotiate and sign a contribution agreement (“**Contribution Agreement**”) with each of the Funders.

E. Screening and Evaluation Criteria

E.1 Screening Criteria

An Application may be screened out immediately (i.e. the Application will not be reviewed) based on one or more of the following factors:

- The Application is not written in English or French;
- The Application is not sufficiently comprehensible or easy to read;
- The Application is incomplete and/or does not provide sufficient information for a proper evaluation;
- The proposed Project does not meet the eligibility criteria;
- The Applicant does not meet the eligibility criteria; and

- The proposed Project carries substantial risk of detrimental side effects (e.g. environmental impacts).

The decision to screen out an Application is solely at the discretion of the Funders.

E.2 Evaluation Criteria

The following criteria will be used to evaluate Projects during Phase 1:

Criterion	Description
Strength and Innovation of the Clean Energy Technology	Applications will be evaluated based on the strength of the clean energy technology involved, including: <ul style="list-style-type: none"> • The scientific basis for the technology; • The expected technology advancement over the course of the Project; • How innovative the technology or application of technology is; and • The strength of the Applicant’s intellectual property and the intellectual property strategy for maintaining a sustainable advantage over competitors
Consortium Strength	Applications will be evaluated based on the strength of the project consortium, including existing and potential relationships with clean energy technology adopters, customers, and other partners. Strength of a Consortium Partner will be measured by a Consortium Partner’s financial and non-financial commitments to both the Project and post-Project commercialization of the technology.
Management and Team Capacity	Applications will be evaluated based on how well-suited and committed the project team is to carry out the proposed work, including the management and technical capacity of the Applicant.
Budget and Co-Funding	Applications will be evaluated based on the budget and financing for the proposed Project, including how well developed and realistic the budget is, and the Applicant’s ability to obtain financing for the project and technology development.
Project Scope and Plan	Applications will be evaluated based on how well developed, achievable, and impactful the scope of work and work plan are.

Market and Value Proposition	<p>Applications will be evaluated based on the opportunity for commercialization and market adoption of the technology, including:</p> <ul style="list-style-type: none"> • Value proposition to end-users; • Competitiveness with existing commercial technologies/processes; • The market size and market value associated with the technology and its products; and • The commercialization plan and expected pathway for commercial deployment and market adoption in British Columbia and Canada, with deployment priority in British Columbia. • Potential for economic development and job growth in British Columbia and Canada from the Project and from the commercialization plan.
Greenhouse Gas Reduction and other Clean Energy Co-Benefits Potential*	<p>Applications will be evaluated based on the potential for the clean energy projects and technologies to deliver significant and sustainable reductions in greenhouse gas emissions, including:</p> <ul style="list-style-type: none"> • The greenhouse gas reductions per unit of technology output/throughput; • The immediate greenhouse gas emissions reductions upon project completion; • The greenhouse gas reductions that would result from commercial-scale deployment of the proposed technology in British Columbia; • The broader potential for greenhouse gas emissions reductions throughout British Columbia, Canada, and the rest of the world from widespread adoption of the proposed technology; • Clean energy co-benefits in the areas of clean air, water and soil; and • Energy efficiency and conservation benefits.

*** Note on Energy Efficiency and Conservation, Greenhouse Gas Emissions Reductions, other Environmental Benefits, and Commercialization**

The Applicant must demonstrate how the proposed Project will lead to greenhouse gas emissions reductions, energy efficiency and conservation, and other environmental benefits, commercialization, and economic growth. All Projects will ultimately be evaluated based on their potential to result in significant, sustainable emission reductions, energy efficiency and conservation and/or environmental benefits, and economic growth in the province of British Columbia and across Canada and globally through commercialization activities. Preference will be given to Applications with broad deployment and growth potential, including global expansion opportunities.

In the event that a Project is successful at the Phase 1 Application stage, Applicants will be required to submit energy efficiency and conservation calculations, detailed greenhouse gas emissions reduction calculations, environmental benefits calculations, and a detailed commercialization plan as part of the Proposal submission in Phase 2. A list of documents and information required for this evaluation will be provided in Phase 2.

Funded Applicants will also be required to report on energy efficiency and conservation benefits, emissions reductions, other environmental benefits, and enterprise growth resulting from the Project.

E.3 Note on Application Quality

Success at the Phase 1 Application stage depends on the quality of the Application and presentation submitted. Only the highest quality Applications will be invited to submit Proposals and move onto Phase 2. In this regard, “quality” means both the quality of the proposed Project relative to the evaluation criteria and the quality of the written application materials (clarity, completeness, etc.). The Funders wish to emphasize that this is a highly competitive process.

F. Application Checklist

F.1 Applicant and Project Eligibility Checklist

The following checklist is provided as a guideline for Applicants to assess eligibility:

- Canadian private entity
- At least one non-related party as Consortium Partner
- Must be a clean energy project or technology demonstration that reduces greenhouse gas emissions in British Columbia and falls within the mandates of both the Funders
- Economic and market development benefits in Canada and British Columbia from the Project and from potential commercialization
- Length of funding for the Project of <5 years
- Technology Readiness Level 4-7 at start of Project
- Project must take place in British Columbia
- Project has not received previous funding from either Funder

F.2 Application Checklist

The following checklist is provided as a guideline for Applicants to assemble a high quality Application:

- Clear and sustainable technology advantage
- Strong customer value proposition (solves a key challenge for customers)
- Clear Intellectual Property ownership
- Well-defined Intellectual Property strategy
- Significant, verifiable and sustainable greenhouse gas emissions reductions; energy efficiency and conservation benefits; and/or other environmental benefits
- Large market potential
- Market pull Consortium Partner(s)
- High capacity management team
- Capital raised to date

-
- Identified milestones in the demonstration
 - Project Budget defined

G. Intellectual Property

Intellectual property will be addressed through Contribution Agreements between the Funders and each successful Applicant, and will be specific to the circumstances of each project. However, a few general principles apply:

- Background intellectual property (patents, copyright, software) and third-party technology remains with its original owner(s).
- The Funders retain rights to the project results, including without limitation the technical data, reports, analysis, and discussion.
- Project technology (based on patent disclosures) developed as a part of the co-funded activities will be owned by the successful Applicant. However, successful Applicants will be expected to use and/or make the technology available through reasonable commercial terms for the benefit of British Columbia and Canada.

H. Confidentiality

Each Funder shall keep confidential all information that is protected, confidential, privileged or proprietary in nature disclosed to them by the Applicant during Phase 1 which, when in written form, has been clearly marked as confidential at the time of disclosure and when in oral form, has been clearly identified as confidential at the time of disclosure and is then followed by written confirmation within 7 days, except information which:

- Is part of the public domain;
- Becomes part of the public domain other than as a result of a breach of these provisions;
- The Funder is required to disclose pursuant to applicable laws or any rule or regulation of any government entity of competent jurisdiction;
- Is already known or available to the Funder or independently developed by the Funder;
- Was received in good faith from an independent person who was lawfully in possession of such information free of any obligation of confidence;
- Is aggregated and used for purposes related to statistical analysis and reporting in a manner that does not identify individual Applicants; or
- Is agreed upon by the Applicant to be acceptable for release, including information provided in sections of the Application indicated as non-confidential.

Notwithstanding the above, Applicants hereby acknowledge that the federal *Access to Information Act* (R.S.C., 1985, c. A-1) and the British Columbia *Freedom of Information and Protection of Privacy Act* (R.S.B.C. 1996, c.165) may apply to all information and records provided by the Applicant to the Funders and to any information records which are in the custody or under the control of the Funders.

I. Legal Notices

- a) The Funders may at any time withdraw, suspend, cancel, terminate, amend or alter all or any portion of this Call, including but not limited to the Application requirements, the Application selection and review process and the Application eligibility criteria.
- b) The Funders reserve the unqualified right to accept or reject any or all Applications for any reason. The Funders are not required to accept the highest ranked Applications nor are they required to accept any Applications recommended for advancement to Phase 2 by the applicable evaluators.
- c) Applications that do not comply with the requirements described in this Phase 1 Applicant Guide may be rejected in whole or in part or not considered by the Funders. The Funders reserve the unqualified right to accept or reject a non-compliant Application.
- d) This Call is an invitation only. It is not a funding offer and the submission of an Application does not create a contract or agreement of any kind between the Funders and the Applicant.
- e) Neither the Funders nor any of the Funding Parties will have any liability whatsoever to any Applicant or any Consortium Partners, or any of them, in connection with this Call or any Application prepared in response to it.
- f) The Funders take no responsibility for the accuracy of the information supplied in this Phase 1 Applicant Guide or during this Call by the Funders, or any of their directors, officers, employees, representatives, consultants, project advisors and agents and servants.

J. Contact Information

Questions for the Funders about Phase 1 that are not fully addressed in this Phase 1 Applicant Guide can be sent to applications@sdtc.ca and icefund@gov.bc.ca under the subject heading: ICE-SDTC Phase 1 Questions. Through this contact, Applicants will be directed to appropriate personnel within the ICE Fund and SDTC to address their questions.