

***Canada-British Columbia
BUILDING CANADA FUND
- Communities Component***

Category Specific Supplement:

GREEN ENERGY

***(Supplement to the BCF On-line Program Guide –
Communities Component)***

March 2009

Foreword

This Green Energy Supplement provides an overview of the Canada – British Columbia Building Canada Fund – Communities Component (BCF-CC) and the information necessary to satisfy the requirements needed to apply for Green Energy Infrastructure projects. For each project category a category specific supplement guide has been created.

This **Green Energy Supplement** is to be used in combination with **the Provincial Program Guide**. **These two (2) guides contain the critical information required to successfully complete and submit an application under the Canada - British Columbia Building Canada Fund – Communities Component**. **Further, the Green Energy Supplement and the Provincial Program Guide contain significant references to the following documents:**

1. BCF On-Line Program Guide – Communities Component
2. BCF-CC Program Agreement

These guides and additional program information can be found at:

www.bcbuildingcanadafundcommunities.ca

When you are ready to submit your application, you will submit it electronically using the online application in the Shared Information Management System for Infrastructure (SIMSI), which can be found at:

<https://bcfcc-fccvc.infrastructure.gc.ca/>

To be assigned a username and password to access the SIMSI on-line application system, please forward a request to Infra@gov.bc.ca.

For more information on the BCF-CC program contact:

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Table of Contents

1. Introduction	4
2. Objectives, Subcategories, and Project Outcomes	4
3. Green Energy Mandatory Criteria and Supporting Documents	4
3.1 Engineering Feasibility Study of Options	5
3.2 Business Case	5
3.3 Green Energy Supplement Questions	6
3.4 Value Engineering	9
4. Technical Conditions	10
4.1 Conditions Prior to First Payment/Start of Construction	10
4.2 Conditions Prior to 25% of Eligible Costs	11
4.3 Conditions Prior to 85% Eligible Costs	12
4.4 Conditions Prior to Final Payment	12
5. Contact Information	12
Appendix 1: Green Energy Supplement Form	14
Appendix 2: Application Checklist	16

1 Introduction

This Green Energy Supplement is for applicants who are applying for green energy infrastructure projects under the Canada – British Columbia Building Canada Fund – Communities Component (BCF-CC), and is to be used in combination with the Provincial Program Guide. This supplement provides detailed information which is not contained in the BCF On-Line Program Guide – Communities Component or the Provincial Program Guide, and contains category specific information that **must be reviewed prior to submitting a Shared Information Management System for Infrastructure (SIMSI) on-line application**. It has been created to ensure that applicants understand and meet the requirements needed to complete an application for a **green energy** project. These guides are found at:

www.bcbuildingcanadafundcommunities.ca

This Green Energy Guide contains a **Green Energy Form** (see Appendix 1) that **must be completed** and uploaded on the Document Upload page of the **SIMSI on-line application**. The questions in Appendix 1 and additional required documents identified in this Guide will provide Provincial program staff with the information needed to evaluate applications under the BCF-CC. For more information about SIMSI see pages 9-34 of the BCF On-Line Program Guide - Communities Component.

A checklist has been provided in Appendix 2 to further ensure you have satisfied all requirements.

IMPORTANT NOTE: The information provided in this guide and the required information/documentation provided by the applicant is utilized for project evaluation and will ultimately identify projects to be considered for funding approval. It is highly recommended to carefully read the guides and complete the Green Energy Supplemental Form. An example of this form is found in Appendix 1, the digital version is found on the BCF-CC website:

www.bcbuildingcanadafundcommunities.ca/English/programguide/Pages/default.aspx

2 Objectives, Subcategories, and Project Outcomes

See pages 60 to 61 of the BCF On-line Program Guide for more information about the objectives, eligible subcategories for Green Energy Projects.

3 Green Energy Mandatory Criteria and Supporting Documents

The section discusses category specific mandatory criteria for green energy projects. It is integral that you demonstrate that you have met this criteria either within the application or with supporting documentation. All mandatory and supporting documents must be uploaded to the on-line SIMSI application Document Upload page.

The following list identifies mandatory and supporting documents for green energy projects. These items are further discussed below.

- **All green energy infrastructure applications must include:**
 - An Engineering Feasibility Study of Options (see Section 3.1)
 - A Business Case (see Section 3.2)
 - A completed Green Energy Supplement Form (see Section 3.3 and Appendix 1)
- **For projects over \$15 million**, applicants must complete a Value Engineering analysis (see Section 3.4).

3.1 Engineering Feasibility Study of Options

All green energy projects must be supported by an up-to-date comprehensive engineering feasibility study. Applicants are asked to conduct engineering feasibility studies to ensure that they have considered the options and chosen the best engineering and management solution for the particular issue.

An engineering feasibility study should identify the rationale for the proposed solution and should address capital and life cycle expenditures, annual operating costs, emerging technologies, environmental considerations and societal impacts. A feasibility study should also include drawings or maps showing locations of the project and sufficient details to fully describe the project.

3.2 Business Case

Sections of the SIMSI on-line application require submission of financial information for the proposed project. Each section will be completed to meet requirements of the application. It is important to note that the Project Benefits section in the on-line SIMSI application requires that the applicant upload a “Cost Benefit Analysis or other study” on the Document Upload Page. This documentation will further support the business case.

A business case supports the application, and allows for elaboration on elements which may not be captured in SIMSI. In addition to the business case elements outlined on pages 35-41 of the BCF On-Line Program Guide, an effective business plan should include:

- A capital cost estimate for the infrastructure that includes an amount for contingency costs;
- A five year budget summary indicating the sources of financing for the construction, operation and replacement of the infrastructure. The sources should include, as applicable, grants, property taxes, fees, debt, surplus energy being sold back to the grid and other sources. The financing should be matched by expenditures for the construction and subsequent operation and maintenance of the infrastructure as well as a contribution to a reserve fund for the replacement of the infrastructure;
- Where the potential for revenue exists, describe how this will be managed;

- A discussion of the method by which the infrastructure will be amortized to meet the new requirements for financial reporting under Generally Accepted Accounting Principles for the public sector;
- An indication that information in the five year budget provided is or will be incorporated into the financial plan required under s.165 of the *Community Charter* or s.815 of the *Local Government Act*;
- Grant per capita: the total Federal/Provincial request divided by the number of individuals served by the infrastructure; and
- **For Regional Districts**, the number, type and assessed value of properties served by the infrastructure and a description of the area that will be served by the infrastructure and how the costs of the service will be allocated among participants in the service.

IMPORTANT NOTES:

- **If this information is contained within the Engineering Feasibility Study of Options (See Section 3.1), it can be used to support the business case requirements.**
- There will be a **financial analysis of each application**, which will contain a review of the periodic financial information submitted to the Ministry of Community Development (the Ministry). This required financial reporting is available on Ministry files, and thus does not need to be submitted with an application. However; the applicant should recognize that the ranking of applications may reflect the extent to which applicants have met financial criteria such as:
 - Did the applicant meet the deadlines for legislated financial reporting, including the financial plan, audited financial statements, Local Government Data Entry (LGDE) forms and Statement of Financial Information (SOFI)?
 - For municipalities, did the financial plan submitted to the Ministry meet the 2008 transitional requirements for amended s 165 of the Community Charter found in Financial Circulars 08:10 (Financial Plan: New Revenue Policy Disclosure Requirements) and 08:15 (Guide to the Amortization of Tangible Capital Assets)?
 - Measures of financial stability and sustainability which include property tax and development costs charge structures.

3.3 Green Energy Supplement Questions

The following section describes the additional questions to the on-line SIMSI application and information needed to complete the Green Energy Supplement Form located in Appendix 1 - a fillable form is found on the BCF-CC website: www.bcbuildingcanadafundcommunities.ca. The Green Energy Form must be submitted by uploading it to the on-line SIMSI application. It is integral that these questions are answered, as they will be used to support the ranking of your project against others.

A1. Does this project application include proposed works that were the basis, or a component of a previously approved or unapproved provincial or federal capital or planning grant program? Yes/No. If yes, indicate the program name, project number and the amount of funding requested and/or received.

If applicable, identify all approved or unapproved contributions, program name, project number, and the amount of funding requested and/or received. This information will further assist in the review of this project.

A2. Will the project be constructed on lands within the Agricultural Land Reserve? Yes/No. Explain:

The Agricultural Land Reserve (ALR) is a Provincial land use zone regulated through the Agricultural Land Commission that protects scarce soil resources and provides a location to sustain agriculture. As the ALR is a matter of significant provincial interest, all ministries work to support the integrity of the ALR and maintain and enhance its ongoing suitability for farming.

For projects involving land within the ALR, describe the infrastructure components that will be constructed in this area. In addition, a letter of support/endorsement from the Agricultural Land Commission must be attached to the application to support this project.

A3. Major risks related to extreme natural events and/or climate change with a potential impact on the project during construction and once complete, must be considered and, where applicable, a mitigation plan developed. Identify these risks and explain how the project considers these risks, and identify the measures being implemented to manage these risks.

Climate change refers to any long-term significant change in the “average weather” in a given region. Climate change can include changes in average climate, climate variability, the frequency and/or severity of extreme weather events and climate-related emergencies (e.g. flood, drought, storm surge).

These climatic changes in turn affect the delivery of energy (e.g. warmer temperatures or timing of snowmelt and amount of snowpack may impact hydroelectricity production; temperatures changes may increase energy need for more heating or cooling of buildings; impacts on energy delivery due to increase in storm events). An initial assessment can indicate the potential for climate change or related impacts to affect infrastructure over its lifetime.

Infrastructure is a long-term commitment; therefore it is important that applicants consider major risks related to extreme natural events and/or climate change when planning for infrastructure. An initial assessment can indicate the potential for climate change or related impacts to affect infrastructure over its lifetime. Identify the risks associated with your project and explain how these risks are being managed.

A4. Describe how greenhouse gas (GHG) emission impacts (through the construction and operation of the proposed infrastructure project) have been considered, and where possible, reduced? Please include an outline, in detail the methodology used to determine GHG emission reduction estimates (include all calculations and assumptions).

The Province is committed to firm greenhouse gas (GHG) reduction targets and enshrined these in law through the Greenhouse Gas Reduction Targets Act. The Provincial government is encouraging local governments to become carbon neutral in their operations by 2012 through signing and implementing the *Climate Action Charter*

(www.cserv.gov.bc.ca/ministry/whatsnew/climate_action_charter.htm).

Not all infrastructure projects will lead to net greenhouse gas reductions. For example, the construction of new infrastructure will often lead to a net increase in GHG emissions. However, where these projects take steps to reduce greenhouse gases, it is still possible to report emissions reductions relative to a 'business-as-usual' future. For example, a new building will lead to an increase in overall energy and greenhouse gas emissions even if it is highly energy efficient. However, a highly energy efficient building will reduce emissions in comparison to a business-as-usual building.

Please outline, in detail, the methodology used to determine GHG emissions (including all calculations and assumptions). For further information on calculating greenhouse gases view the Greenhouse Gas Emissions Assessment Guide (www.cserv.gov.bc.ca/lqd/environment/energy_efficiency.htm).

A5. What is the current status of the community's local and regional planning? Explain how this project supports the environmental, social and economic goals and objectives of community and regional plans (e.g., official community plan (OCP), regional growth strategy (RGS))?

Describe when the community's OCP and, if applicable, the region's RGS and municipal RGS, were last updated and explain the specific goals, objectives, strategies and/or policies that the project application contributes towards. Explain the connection at both a strategic and practical level.

B1. Does the local government have a corporate and/or community energy and/or emissions plan? If yes, identify and explain how this project fits into the/these plan(s) and attach the related sections of the plan(s) to the application. If no, identify the strategies the local government utilizes to manage/plan for energy and/or emissions and how this project will support these strategies.

Most GHG emissions within a local government's jurisdiction result from energy consumption. A community energy and emissions plan is one in which energy use and GHG emissions throughout the community are considered, including both public and private. This differs from a corporate energy and emissions plan, which only looks at energy and GHG emissions that are a direct result of local

government operations (such as local government buildings, fleets, etc.). Energy and emissions planning describes existing energy use and GHG emissions in order to improve energy efficiency, reduce energy consumption and emissions, and increase local renewable energy supply.

Energy and Emissions Planning has many benefits, such as reduced energy costs, energy independency and security, economic development, efficient communities, healthier communities, environmental benefits, and future revenue streams. The presence of a Community/Corporate Energy and Emissions Plan and implemented strategies, demonstrates that the community is working towards supporting British Columbia's Climate Action and Energy Plans.

Identify if the local government has a community and/or corporate plan and how the Green Energy project will support a corporate and/or Community Energy and/or Emission Plan or related strategies. Where appropriate, attach sections and link as appropriate.

B2. Do the local government's plans/strategies identify targeted reductions for corporate and/or community energy use?

Targets are an important part of energy and emissions planning. A target sets a goal for operations and/or the community, which allows policies and projects to be developed with the objective of meeting the target. Provincial legislation requires local governments to include GHG reduction targets and strategies in OCPs and RGS's by 2010 and 2011 respectively.

B3. Describe any other strategies that are planned, in process, or complete that support sustainable energy for your community.

The following planned, in process, or complete strategies can include, but are not limited to:

- Infrastructure/building energy audits
- Incentive programs
- Policies/bylaws
- Marketing/ education program
- Local government staff person responsible for energy management
- Renewable energy supply (solar hot water heating, heat reclamation, etc.)
- Links to other plans, such as completion of transportation plans to increase non-motorized use of transportation.

3.4 Value Engineering

Where **the project is over \$15 million (or less at the discretion of the Ministry of Community Development)**, the applicant must conduct a value engineering analysis, or similar analysis that satisfies the intent of the value engineering analysis and is approved, in advance, by the Infrastructure Branch, Ministry of Community Development, prior to approval of a grant. The Infrastructure Branch reserves the right

to send a representative to participate in the process. To be eligible, the applicant must demonstrate how they will satisfy this requirement; the value engineering analysis must be received by the Infrastructure Branch for review before funding approval.

Phased components of projects are cumulatively likely to trigger the Value Engineering requirement (e.g. total cost of all phases is over \$15 million), and thus must still be included in a Value Engineering analysis. It is important, and most beneficial, to commence the value engineering process early in the project planning stage. For guidance and assistance, please refer to the Ministry's publication *Value Engineering for Municipal Projects (March 1995)* available at: www.cserv.gov.bc.ca/lgd/infra/library/value_engineering_for_municipal_projects.pdf.

Further Value Engineering resources include:

- The Canadian Society of Value Analysis (www.scav-csva.org)
- SAVE International (www.value-eng.org).

4 Technical Conditions

The following section has been provided for **information purposes only**. It outlines technical conditions that will be used to develop the contribution agreements for recipients who obtain an approved grant under the Building Canada Fund – Communities Component. These technical conditions must be met prior to receiving claim payments. The contribution agreement payment conditions are a valuable resource to ensure that infrastructure investments meet the desired goals and objectives of the BCF-CC, as well as work to support provincial plans and strategies. These technical conditions further support the Infrastructure Branch's mandate: to promote, encourage and support the development of sustainable infrastructure.

The following sections have been organized to identify the various technical conditions for each project type throughout the claim process.

4.1 Conditions Prior to First Payment/Start of Construction

Projects where MCD determines that the design must be reviewed prior to the start of construction

Prior to the start of construction, the Recipient must submit a pre-design report to the Infrastructure Branch, Ministry of Community Development. *The Ministry will provide the Recipient with confirmation once this condition is deemed to have been satisfactorily met. Only once the condition has been met will the applicant be able to proceed with construction.*

The pre-design report, being a statement of project concept and desired performance, shall include details such as treatment process flow-line diagrams, location map, detailed cost estimates (an itemized description, cost per unit of measure, number of

units, as well as engineering and contingency costs) and an anticipated construction schedule.

Projects with installed equipment

Prior to the start of construction, the Recipient must provide documentation to the Infrastructure Branch, Ministry of Community Development, confirming that, where applicable, equipment/devices contain energy efficiency features and design (e.g. pumps, lighting, controls, HVAC, etc.).

All new buildings constructed as a 'stand alone project' or to support other infrastructure (e.g. water and wastewater facilities)

Prior to the start of construction, the Recipient must submit documentation to the Infrastructure Branch (IB), Ministry of Community Development, confirming that for all new buildings exceed the energy efficiency requirements of the Model National Energy Code for Buildings (Code), or obtain LEED (Leadership in Energy and Environmental Design) certification.

For projects that are over \$15 million (or less at the discretion of the Infrastructure Branch, Ministry of Community Development)

Prior to completion of pre-design and/or construction, the Recipient must conduct a value engineering analysis by a Certified Value Specialist (CVS); or similar analysis that satisfies the intent of the value engineering analysis and is approved in advance by the Infrastructure Branch, Ministry of Community Development. It is advised that the value engineering analysis be completed as early as possible.

The Infrastructure Branch reserves the right to send a representative to observe and/or participate in the process. The value engineering analysis must be received by the Branch for review before construction commences or before completion of the pre-design (depending on current stage of project). *The Ministry will provide the Recipient with confirmation once this condition is deemed to have been satisfactorily met. Only once the condition has been met will the applicant be able to proceed.*

4.2 Conditions Prior to 25% of Eligible Costs

Asset Management

The Province reserves the right to withhold payments on claims in excess of \$xxx (i.e. 25% x 2/3rds of eligible costs) until the Recipient has completed and submitted an Asset Management electronic reporting form to the Infrastructure Branch (IB), Ministry of Community Development.

This Asset Management reporting form will be provided by IB and will be the first of two electronic submissions required under this contribution agreement. This first submission establishes a benchmark/baseline and is the first step towards performance

measurement. The second submission, required prior to the final claim, enables a comparative performance assessment.

4.3 Conditions Prior to 85% Eligible Costs

Installed equipment, energy systems, buildings (All buildings constructed as ‘stand alone’ or to support other infrastructure, including building retrofits)

The Province reserves the right to withhold payments on claims in excess of \$xxx (i.e. 85% x 2/3rds of eligible costs) until the Recipient has submitted documentation to the Infrastructure Branch, Ministry of Community Development, demonstrating:

- The degree to which the building and/or equipment met the expected energy efficiency performance (including the amount of energy saved and the amount of renewable energy produced);
- The amount of greenhouse gases that are reduced/emitted as a result of this project; and
- Where applicable, certification achieved.

4.4 Conditions Prior to Final Payment

Final Asset Management Report – Final Form

The Province reserves the right to withhold payments on the final claim until the Recipient has completed and submitted the second electronic Asset Management reporting form to the Infrastructure Branch (IB), Ministry of Community Development.

This second Asset Management reporting form requirement builds on the first submission, enabling a comparative performance assessment of, but not limited to, the infrastructure constructed through this funding program.

This second submission is to be completed and submitted electronically on the same form as the original submission.

If the Recipient is not able to complete this condition (e.g. the project has not been completed prior to submission of the last claim and/or insufficient time – one (1) year – has not passed since completion) then the Recipient must submit a letter of commitment that the data will be submitted once the project is complete and an appropriate amount of time has passed.

5 Contact Information

Ministry of Community Development

PO Box 9838 Stn Prov Govt
4th Floor 800 Johnson Street
Victoria, BC V8W 9T1
Phone:(250) 387-4060

Fax : (250) 356-1873
Email: infra@gov.bc.ca

Additional resources can be found on the Building Canada Fund – Communities Component website: www.bcbuildingcanadafundcommunities.ca

The Shared Information Management System for Infrastructure (SIMSI) on-line application, can be found at: <https://bcfcc-fccvc.infrastructure.qc.ca/>

To be assigned a username and password to access the SIMSI on-line application system, please forward a request to Infra@gov.bc.ca.

Appendix 1: Green Energy Supplement Form

Please read the related category supplement guide before completing this form. This document is meant to be completed electronically, and submitted with the SIMSI on-line application. A word version of this form is found on the BCF-CC website under the Program Guide tab: www.bcbuildingcanadafundcommunities.ca. The form fields will expand as you write and each question must be completed using 200 words or less. These questions form a component of the review and ranking of your project. If you have questions, please contact the Ministry of Community Development by telephone: 250-387-4060 or email: infra@gov.bc.ca.

Name of Project	
Legal Name of Applicant	
Contact Name	
Telephone	
Email	
A1.	Does this project application include proposed works that were the basis, or a component of a previously approved or unapproved provincial or federal capital or planning grant program?
	<input type="checkbox"/> Yes <input type="checkbox"/> No
	If yes, indicate the program name, project number and the amount of funding requested and/or received.
A2.	Will the project be constructed on lands within the Agricultural Land Reserve?
	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Explain:
A3.	Major risks related to extreme natural events and/or climate change with a potential impact on the project during construction and once complete, must be considered, and where applicable, a mitigation plan developed. Identify these risks and explain how the project considers these risks, and identify the measures being implemented to manage these risks.
A4.	Describe how greenhouse gas (GHG) emission impacts (through the construction and operation of the proposed infrastructure project) have been considered, and where possible, reduced? Please include an outline that details the methodology used to determine GHG emission reduction estimates (include all calculations and assumptions).
A5.	What is the current status of the community's local and regional planning? Explain how this project supports the environmental, social and economic goals and objectives of community and regional plans (e.g., official community plan (OCP), regional growth strategy (RGS))?
B1.	a. Does the local government have a corporate and/or community energy and/or emissions plan?
	<input type="checkbox"/> Yes <input type="checkbox"/> No
	b. If yes, identify and explain how this project fits into the/these plan(s) and attach this/these plan(s) to the application.
B1.	c. If no, identify the strategies the local government utilizes to manage/plan for energy and/or emissions and how this project will support these strategies.

B2.	Do the local government's plans/strategies identify targeted reductions for corporate and/or community energy use? Please explain.
	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Explain:
B4.	Describe any other strategies that are planned, in process, or complete that support sustainable energy for your community.

Appendix 2: Application Checklist

Projects that are approved under this program must demonstrate how they support the program purpose and objectives set out in the Program Agreement and supporting documents. If the application form has not provided the opportunity to reflect this, please upload additional supporting information to SIMSI.

To ensure that your project application is reviewed effectively, fully complete the SIMSI on-line application, and upload the supplementary questions and all applicable supporting documents listed in the application checklist shown below. If there is no supporting documentation to be attached, or the question is not applicable to your project, provide a brief explanation. If there is insufficient information, it will delay the review of your application and may render it ineligible.

In addition to a completed on-line SIMSI application, the following supporting documents should be also **uploaded** to your application:

- Documentation, which verifies that your share of the project's funding, is in place (see the Provincial Program Guide, Section 6.1).
- Resolution from your board or council, authorizing the project to proceed (see the Provincial Program Guide, Section 3.1).
- Detailed cost estimates with dimensions, lengths, diameters, unit costs, etc. State the date and basis of cost estimates (see the Provincial Program Guide, Section 6.3).
- List of all required federal and/or provincial licenses, permits and approvals as well as status of each (see Provincial Program Guide, Section 6.6).
- Documentation detailing the issues addressed by the project (e.g. inspection reports - see the Provincial Program Guide, Section 6.4).
- Engineering feasibility study of options/reports (see the Green Energy Supplement, Section 3.1).
- A Business Case (see the Green Energy Supplement, Section 3.2).
- A Green Energy Supplement Form (see the Green Energy Supplement Section 3.4 and Appendix 1, a digital version is located on the BCF-CC website: www.bcbuildingcanadafundcommunities.ca).
- Completed Authorization/Certification Form, which is found on the last page of the SIMSI application. This can be either uploaded as a scanned pdf copy of the original or mailed into the appropriate Ministry contact (see the Green Energy Supplement, Section 5).

Where applicable, the following supporting documents are required:

- Where the project cost is over \$15 million, a value engineering analysis (see the Green Energy Supplement, Section 3.4).
- For projects involving land within the Agricultural Land Reserve, attach a letter of support/endorsement from the Agricultural Land Commission (see the Green Energy Supplement, Question A2 in Section 3.4).