
GHG and Energy Management

v.2.3. 2010-12-17

Policy No.:	1012
Category:	Administration
Approving Body:	
Executive Division:	Education
Department Responsible:	
Current Approved Date:	2010 MMM DD

Policy Statement

BCIT is committed to reducing its greenhouse gas emissions and to using energy in the most efficient, cost-effective and environmentally responsible manner possible.

To meet this goal, BCIT will commit to the following:

- To meet or exceed government regulations (federal, provincial and local), including regulations regarding greenhouse gases (GHG) and energy.
- To identify all BCIT sources of greenhouse gas emissions, and to set reduction targets for each.
- To report on GHG reduction progress.

The Institute will manage energy and greenhouse gases together through an integrated approach, and respond to climate change with both mitigation and adaptation strategies.

This policy applies to all areas of BCIT operations, infrastructure, education, and research at all five campuses.

Purpose of Policy

In MM YYYY, BCIT adopted a sustainability policy (#1010) to provide general guidelines for the BCIT community to implement sustainability. More precisely, the sustainability policy states:

“This policy is intended to guide BCIT practices toward sustainability. It is created as an umbrella policy that provides general guidelines for the BCIT community to implement sustainability. The strategy is to maximize sustainability by engaging and guiding the BCIT community in the development and the implementation of new projects, behaviours, and policies that will advance the sustainability agenda.”

Greenhouse gas and energy management is one of many areas of operation, teaching and research under the sustainability umbrella policy. This greenhouse gas and energy management policy is one of many sub-policies needed to maximize sustainability at BCIT.

The purposes of this policy are as follows:

- To define a framework for greenhouse gas and energy management.
- To communicate the governing process by which BCIT will reduce and manage its GHG emissions and energy use.
- To comply with the *BC Greenhouse Gas Reduction Targets Act (2007)*
 - requires each public sector organization to be carbon-neutral for the 2010 calendar year and for each subsequent calendar year.
- To comply with electricity conservation goals as defined in the Clean Energy Act.
 - Through the Public Sector Energy Conservation Agreement (PSECA), B.C. is targeting a 20 percent reduction in public sector electricity consumption by 2020.

- To define the roles and responsibilities within the BCIT community for managing GHG emissions and energy use.
- To promote compliance with relevant government legislation and agreements.

Table of Contents

Policy Statement	1
Purpose of Policy	1
Application of this Policy	2
Related Documents and Legislation	2
Definitions	2
Principles and Goals	3
Duties and Responsibilities	4
GHG and Energy Management	4
Procedures Associated With This Policy	4
Forms Associated With This Policy	4
Amendment History	4
Scheduled Review Date	4

Application of this Policy

This policy applies to BCIT students, employees, and contractors.

Related Documents and Legislation

BCIT Policy 1010, Economic, Social and Environmental Sustainability
 BC Energy Plan
 British Columbia *Greenhouse Gas Reduction Targets Act* (2007)
 Public Sector Energy Conservation Agreement (PSECA)

Definitions

carbon-neutral: describes a condition or activity in which overall carbon emissions are reduced to zero by (a) pursuing actions to minimize the relevant greenhouse gas emissions for a given period, and (b) averaging positive greenhouse gas emissions with carbon sequestering.

emission offset: actions established, approved or recognized under the BC *GHG Reduction Targets Act* (Bill 44) regulations to (a) reduce greenhouse gas emissions, or (b) reduce atmospheric greenhouse gas concentrations through storage, sequestration or other means.

greenhouse gas: any or all of the following: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride; and any other substance prescribed by regulation (Bill 44) and that create a greenhouse effect by massing in the atmosphere and trapping heat or reflecting it back to the surface.

LEED: Acronym for Leadership in Energy and Environmental Design.

life cycle cost: a measurement of total costs of any given article over its lifespan. It is a financial analysis tool that includes initial cost (e.g.: purchase, construction/installation cost, etc.); operating cost (e.g.: energy cost), other costs (e.g.: maintenance, disposal fee, etc.) and revenues (e.g.: residual value, revenues from being a net energy producer, etc.). Life cycle cost also takes into account time value of money.

low-carbon: describes a process or equipment that emits a minimal output of greenhouse gas.

Principles and Goals

The following principles and goals will guide the GHG reduction initiative:

Greenhouse Gas and Energy Management Principles

- Evaluate equipment/vehicles and projects on life cycle cost rather than on lowest initial cost;
- Conduct financial analysis using incremental cost when appropriate (e.g., for replacing broken equipment/vehicles);
- Include the burden of a carbon tax and emission offset costs when developing the business case for projects. Emerging carbon markets will be anticipated to seek potential added revenue sources from selling carbon emission reduction, whenever in compliance with directive from the government;
- Whenever possible, include sensitivity analysis with various levels of energy price inflation and carbon cost inflation, when developing the business case for projects;
- Develop guidelines for decision-making in activities such as purchasing of energy consuming equipment (e.g., facilities equipment, fleet, information technology, etc.).

Goals

BCIT will publish an annual greenhouse gas and energy management plan with specific goals and timelines. Examples include the following:

- Find innovative methods of conducting our core activities with no, minimal, or decreasing GHG emissions;
- Establish and implement effective energy conservation and preventive maintenance programs, continuous improvement, and sound operation practices;
- Incorporate energy efficiency into existing equipment, facilities and fleets, as well as in the selection criteria and purchase of new equipment and vehicles;
- Lower operating costs by emphasizing passive systems and energy efficiency as factors in facility design;
- Build all new buildings to LEED Gold equivalent as a minimum, and to a higher level of performance where practical;
- Maximize incorporation of renewable energy and other sustainability features in operations, renovations, and new building facility and infrastructure projects;
- Increase resilience to increasing cost of energy;
- Celebrate our successes in greenhouse gas and energy management to enhance our corporate image and brand equity (potentially resulting in more BCIT job applicants, improved employee recruitment retention and productivity, and an increase in donations to BCIT);
- Invest in training and behavioural change programs for BCIT's buildings occupants (staff and students) to maximize savings and be consistent with our role as educators;
- Train students in greenhouse gas and energy management by developing programs and courses within the regular curriculum where appropriate;
- Support further internal and external development of energy-efficient and low-carbon technologies.

Funding

As described in the BCIT sustainability policy, the Institute will create a system of incentives that rewards the adoption or achievement of sustainability-related goals, which will include "re-investing a portion of the savings or revenue generated by successful sustainability programs to provide a much-needed revenue stream for funding new sustainability initiatives". Greenhouse gas and energy management efforts will be eligible to these incentives/funds.

Duties and Responsibilities

BCIT Community

The Institute will work towards defined energy and greenhouse gas reduction goals while respecting its core business, current commitments, and the limits of BCIT resources.

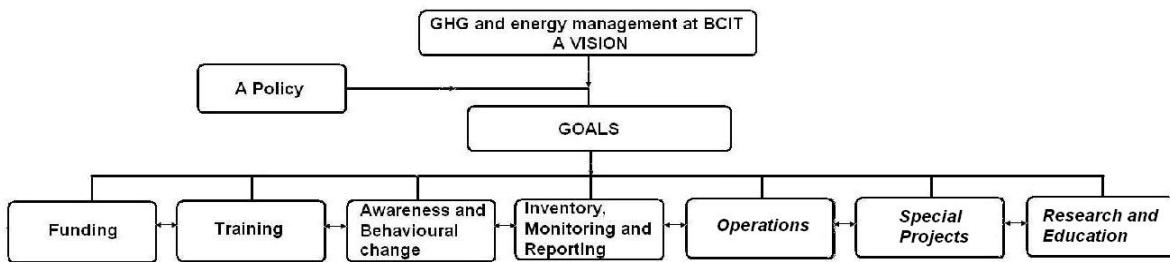
BCIT employees involved with energy and greenhouse gas reduction initiatives will monitor progress, using measurable, quantifiable information to report in an objective, transparent manner.

All members of the BCIT community have responsibilities toward achieving the Institute’s energy and greenhouse gas reduction goals.

Figure 1: GHG and Energy Management

A multidisciplinary function

This chart illustrates how BCIT plans to develop and accomplish its GHG reduction goals.



Procedures Associated With This Policy

To be determined through the work of the Sustainability Committee.

Forms Associated With This Policy

None

Amendment History

- 1. Created YYYY MMM DD
- 2. Revision 1 YYYY MMM DD

Scheduled Review Date

2015 MMM DD