

Emission Offsets Regulation under the *Greenhouse Gas Reduction Targets Act* – Policy Intentions Paper for Consultation

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1. Overview

The Ministry of Environment (ministry) intends to introduce emission offsets regulation under the *Greenhouse Gas Reduction Targets Act*¹ (GGRTA). The GGRTA received royal assent on November 29, 2007 and came into force on January 1, 2008. The proposed emission offsets regulation will be one component of regulations that will be developed in phases to implement the provincial government commitment to a “carbon neutral public sector” beginning with the 2010 calendar year. The offsets regulation will set out requirements for greenhouse gas reductions or removals by projects or actions to be recognised as emission offsets for the purposes of the GGRTA. A key element of the proposed regulation is the offset eligibility criteria – within scope, real, measurable, additional, verifiable, counted once and clear ownership.

The emission offsets regulation will be one component of regulations to be developed in accordance with authority provided by the

GGRTA. Another component (anticipated for this summer) concerns defining the public sector organizations (PSOs) that are subject to the GGRTA and the sources of GHG emissions for which PSOs will be responsible. Under carbon neutral public sector requirements of the Act, each public sector organization must be “carbon neutral” by 2010 and will be responsible for: 1) pursuing actions to minimize its greenhouse gas emissions for each calendar year; 2) determining its greenhouse gas emissions for that calendar year; and 3) no later than the end of June in the following calendar year, applying emission offsets to net those emissions to zero.

The provincial government and PSOs (individually or in designated groupings) will also be required to prepare annual “carbon neutral action reports” documenting: 1) actions taken to minimize greenhouse gas emissions; 2) plans to continue minimizing those emissions; 3) determination of greenhouse gas emissions for the year; 4) a statement of the emission offsets applied by the organization in relation to those emissions; and 5) any additional information required under the Act and its regulations.

Public sector organizations acquiring offsets under the GGRTA will be required to purchase offsets from the “Pacific Carbon Trust” (PCT), a Crown Corporation intended to facilitate carbon neutrality. In practice, most or all interactions between project proponents and the public sector for the acquisition of offsets would take place through the PCT. PSOs will also likely rely on the PCT to ensure that delivered offsets meet regulatory requirements.

¹ Bill 44 – 2007 *Greenhouse Gas Reduction Targets Act*. See: www.leg.bc.ca/38th3rd/3rd_read/gov44-3.htm

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The process for establishing the proposed emission offsets regulations consists of five stages:

Scoping – reviewing existing offset programs and considering comments received through stakeholder discussions.²

Ministry Intentions Paper for Consultation – outlining the ministry’s proposed approach to regulating emission offsets.

Consultation – with affected stakeholders and the general public, using the intentions paper and response form posted on the ministry website, and other means as required.

Drafting – preparing legal language for consideration by the Minister and Lieutenant Governor-in-Council.

Implementation – informing government staff and external stakeholders of this phase of regulatory development.

This intentions paper provides an overview of the regulations, background information regarding emission offsets, a summary of government goals and objectives and a discussion of the ministry’s intentions regarding the purpose and contents of the proposed regulations. The final section describes avenues for providing comment on the ministry’s intentions, using the prepared response form or separate submission. Acronyms and abbreviations used in the document and potential guidance for preparing project information are also provided in appendices to the intentions paper.

The ministry is seeking comments from stakeholders, First Nations and the general public on the proposed emission offsets regulations. Though the intentions paper outlines a particular approach for achieving regulatory objectives, the ministry welcomes feedback on all aspects of the proposed regulations and will consider other options. In particular, the ministry requests comment on the purpose and proposed application of the regulations, proposed offset eligibility criteria, project information requirements and the

validation and verification process for the proposed regulations.

Information on the proposed regulation, and the response form, can be accessed by clicking on the address below, or from the ministry homepage, by following the Environmental Protection Division and Climate Change Section links. See: <http://www.env.gov.bc.ca/epd/climate/index.htm>

2. Emission Offsets – Background Information

An *emission offset* is a defined measure representing a reduction in greenhouse gas (GHG) emissions. An offset project consists of a specific activity or set of activities intended to reduce GHG emissions, increase the storage of carbon or enhance GHG removals from the atmosphere. There are six primary categories of greenhouse gases.³ Emission offsets are commonly measured in metric tonnes of carbon dioxide-equivalent (CO₂e) (see the “commonly used terms” text box on the following page). One emission offset represents the reduction of one metric tonne of carbon dioxide, or its equivalent in other greenhouse gases. An emission offset accounts and compensates for greenhouse gas (GHG) emissions at one source (such as travel by a group of B.C. government employees) by identifying and tracking the reduction of GHG emissions at another source.

The proposed regulation will build on internationally recognized criteria, standards and terminology common to offset systems. Fundamental commonalities include such criteria for establishing offsets as “real”, “measurable” and “additional”.⁴ The regulation draws on some of the most credible voluntary and compliance markets for carbon offsets, such as the Clean Development Mechanism (CDM) of the Kyoto Protocol and the Voluntary Carbon Standard, as a basis for proposed provisions.

² For example, discussion comments made at an “Offsets Design Workshop” hosted by the Western Climate Initiative held in Vancouver, B.C. on March 26, 2008.

³ Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

⁴ See, for example, ~~text and links under the~~ Voluntary Carbon Standard: www.v-c-s.org/about.html

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Information requirements and guidance for documentation in the proposed regulation would also draw on internationally reputable greenhouse gas accounting methods. The International Organization for Standardization (ISO), for example, provides specifications associated with greenhouse gas accounting (such as ISO 14064 and ISO 14065). Offset system standards are also often consistent with the World Resources Institute's Greenhouse Gas Protocol for Project Accounting,⁵ a general reference on quantifying GHG reductions from specific projects. These methods can be adopted and tailored to appropriately reflect regionally-specific conditions.

One key aspect of offset criteria design is establishing an appropriate level of tests for "additionality". There are inevitably some appropriate opportunities (i.e. that would only happen with the recognition of offsets) that fail to pass the tests – and there are some projects that do pass the tests but would have been undertaken irrespective of climate change concerns.⁶ The ministry's intent is to design a set of additionality tests that strike an acceptable balance between "lost opportunities" and "phantom reductions" – upholding environmental integrity while ensuring that the tests are technically feasible and financially manageable for project proponents to commercialize market opportunities.

In developing the proposed regulations, the ministry has reviewed past Canadian emissions-reduction pilot programs, existing international project-based schemes, the system under Alberta's Specified Gas Emitters Regulation⁷ and the current federal framework *Turning the Cor-*

*ner: Canada's Offset System for Greenhouse Gases.*⁸ The ministry is also currently involved in the design of an offset system in cooperation with the Western Climate Initiative.

Common Terms Used in Greenhouse Gas Reduction Efforts

Carbon neutrality – involves measuring all GHG emissions for which an entity is responsible, pursuing actions to reduce those emissions as much as possible and netting the emissions to zero by offsetting the remaining emissions through the use of emission offsets.

Carbon dioxide equivalent (CO₂e) – the mass of carbon dioxide that would create the same global warming impact as a given mass of another greenhouse gas (calculated using the Intergovernmental Panel on Climate Change's 100-year global warming potential factors).

Greenhouse gas (GHG) – any or all of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Reservoir – a physical unit or component of the biosphere, geosphere or hydrosphere with the capability to store or accumulate a GHG removed from the atmosphere by a GHG sink or a GHG captured from a GHG source (e.g. trees, soil, oil and gas reservoirs, and oceans).

Reduction – a decrease in GHG emissions released into the atmosphere by a source.

Removal – a decrease of GHGs in the atmosphere through an increase of GHGs in a reservoir through sinks.

Sink – any process, activity or mechanism that removes GHGs from the atmosphere and stores them (e.g. natural processes such as sequestration of carbon in biomass or soils.)

Source – any process or activity that releases a GHG into the atmosphere.

Note that "GHG reductions" addressed by the proposed regulations encompass both "reductions" and "removals".

⁵ World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI). 2005. The GHG Protocol for Project Accounting. Available at www.ghgprotocol.org

⁶ For an informative explanation, see: Trexler, M.C., Broekhoff, D.J., and Kosloff, L.H. "A Statistically Driven Approach to Offset-Based GHG Additionality Determinations: What Can We Learn," Sustainable Development Law and Policy, Winter 2006, vol. VI, issue 2, 30-40.

⁷ See: www.qp.gov.ab.ca/catalogue and search for "Specified Gas Emitters Regulation".

⁸ See: http://www.ec.gc.ca/doc/virage-corner/2008-03/526_eng.htm

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3. Government Goals and Objectives

The provincial government has committed to reduce B.C.'s greenhouse gas emissions by at least 33 per cent below current levels by 2020.⁹

In support of the economy-wide emissions reduction goal, under the *Greenhouse Gas Reduction Targets Act* (GGRTA), the B.C. government is legislated to achieve “carbon neutral” status for the B.C. public sector for calendar year 2010 and all subsequent years.

The B.C. government has also committed to carbon neutral business travel for core government starting in October 2007.

Emission offsets are a key element of the government’s plan to honour the carbon neutral commitment under the *Greenhouse Gas Reduction Targets Act* and to realize B.C.’s emission reduction targets. After aggressive reductions have been made by PSOs, emission offsets provide a technically and economically feasible way to reach the GHG reductions required by the GGRTA within the ambitious timeline that has been established.

The objectives for the proposed emission offsets regulation under GGRTA are to facilitate recognition of greenhouse gas emission reduction and removal projects in a manner that:

- ◆ Ensures integrity and maintains credibility, consistency and transparency;
- ◆ Is administratively simple and minimizes uncertainty;
- ◆ Is consistent with other climate action programs adopted by the province;
- ◆ Builds on experience gained from other systems; and
- ◆ Maximizes scope, timeliness and cost effectiveness.

⁹ B.C. Legislature Speech from the Throne, February 13, 2007. See: www.leg.bc.ca/38th3rd/4-8-38-3.htm

MINISTRY INTENTIONS

4. Purpose of the Regulation

The purpose of the emission offsets regulation is to set out requirements for greenhouse gas reductions or removals by projects or actions to be recognised as emission offsets for the purposes of the GGRTA. The regulation will establish transparent and science-based eligibility criteria for determining whether GHG reductions and removals from a project are a valid offset under the Act. Information requirements and guidance are intended to support consistent, efficient and timely compliance with regulatory provisions.

The framework set out by the proposed emission offsets regulations is intended to be compatible with good practice guidance and international standards in the context of B.C.

5. Application of the Regulation

The proposed regulation will provide guidance to provincial public sector organizations (PSOs). PSOs are those public organizations and corporations that are committed to “carbon neutrality” under the GGRTA. This includes core government operations (ministries), school districts, health authorities, post-secondary institutions and Crown corporations.¹⁰

The proposed regulation will:

- ◆ Establish the criteria for what constitutes an eligible offset under the GGRTA; and
- ◆ Set out standard requirements for the project information that must be available for emission reductions from a project to constitute valid offsets.

In practice, PSOs will rely on the Pacific Carbon Trust (PCT) to ensure that these requirements and criteria are met.

¹⁰ Another component of the regulations currently in development under the *Greenhouse Gas Reduction Targets Act* will include an explicit definition of the public sector organizations that are under the purview of the Act.

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The proposed regulation does not apply to offsets other than those defined under the GGRTA. Other B.C. entities (e.g. private companies, non-government organizations) may however, choose to use the criteria in their own voluntary efforts to become “carbon neutral”. The government wishes to obtain highly credible offsets in line with best practices and will encourage other entities to adopt the proposed criteria in their practices.

An offsets mechanism is also a component of the proposed Western Climate Initiative cap and trade system design and will be used to achieve net-zero emissions from B.C. electricity generation. The proposed regulation applies strictly to public sector carbon neutrality – and not to these other offset uses (i.e. cap and trade and net-zero emissions from electricity generation).

6. Key Definitions

The proposed regulation will contain a number of key definitions, including:

Baseline scenario – a conservative estimate of the most likely emissions scenario that would occur in the absence of the offset mechanism that acts as a reference case against which the estimated net GHG emissions of a proposed project will be measured. (The baseline helps to determine “additionality” – see section 7.4.)

Controlled GHG sources, sinks and reservoirs (SSR) – a GHG source, sink or reservoir whose behaviour or operation is under the direction and influence of the project proponent through financial, policy, management or other instruments. A controlled GHG source, sink or reservoir is generally on the project site.

Emission offset – for the purposes of the GGRTA, each “emission offset” (offset) represents one tonne of carbon dioxide equivalent (CO₂e) emissions reduced or removed from the atmosphere.

Offset project (project) – a project implemented by a project proponent that reduces greenhouse gas emissions into the atmosphere

or removes greenhouse gas emissions from the atmosphere (from a source or to a sink).

Leakage – an unintended change in GHG emissions or removals elsewhere, but resulting from the offset project, such that the overall net GHG emissions associated with the project are diminished or fully negated.

Project proponent (proponent) – the person or entity identified in the project plan as having the authority to implement the proposed project and ownership of the reductions.

Protocol – a set of common approaches and calculation tools for measuring, quantifying and reporting GHG reductions or removals for a specific project type.

Reversal – (in relation to “removals” – see the “common terms” textbox in section 2) a release of GHGs to the atmosphere from a project (or changes in the baseline scenario) that diminishes the quantity of removals. Sequestration (e.g. a sink through forestry, agriculture or carbon capture and storage projects) is measured relative to a baseline scenario.

Validation – assurance by an independent, objective and knowledgeable body that a proposed project complies with the requirements of the GGRTA emission offsets regulations.

Verification – assurance by an independent, objective and knowledgeable body that the GHG reductions/removals claimed by a validated project have occurred and have concordance with the project plan (see section 8.1 for more information on concordance).

7. Proposed Offset Eligibility Criteria

The proposed regulation will set out criteria for the GHG reductions and removals that would be eligible as offsets under the *Greenhouse Gas Reduction Targets Act* and regulations.

Eligibility would be evaluated on the basis of consistency with *all* of the following criteria:

- ◆ Within scope;
- ◆ Real;

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- ♦ Measurable;
- ♦ Additional;
- ♦ Verifiable;
- ♦ Counted once; and
- ♦ Clear ownership.

Proposed projects that meet the criteria should be eligible for further consideration. Meeting these criteria does not fully determine whether a project will succeed in being used for GGRTA compliance purposes, since the government may not need to acquire all offsets that meet the criteria and the price will be a consideration.

The proposed regulation will require each PSO (or its designated offset service provider – e.g. the Pacific Carbon Trust) to have documentation (available on request of a ministry official) that demonstrates how offsets used to meet obligations under the GGRTA conform to all applicable eligibility criteria.

Proposed project information requirements are outlined in section 8 of this paper, with potential guidance for preparing project information described in appendix B.

The following subsections describe how conformity with each of these criteria would be determined under the proposed regulations.

7.1 Scope

Greenhouse Gases

Emission reductions of one or more of the six main types of greenhouse gases¹¹ would be considered eligible.

Inventory Coverage

The offsets resulting from the project would have to be accounted for and consistent with B.C.'s reporting on greenhouse gas emissions and facility-level regulatory reporting requirements. Quantification methodologies that are compatible with this reporting would have

¹¹ Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

to be used to enable comparison and ensure consistency.

7.2 Real

For GHG reductions to meet the *real* criterion – they must derive from a specific and identifiable action associated with a defined project – and the project must result in an absolute net reduction or removal of greenhouse gases after accounting for all relevant greenhouse gas sources, sinks and reservoirs (SSR).¹² This accounting would have to address “leakage” (such as outsourcing – see proposed definition in section 6). That portion of a project’s emission reductions that simply moved to another part of the facility or operation, or another site or source entirely, would not be considered to be “real”.

To meet this criterion, the procedures used to identify all relevant SSR and select the most appropriate *baseline scenario* (see proposed definition in section 6) would have to be consistent with the guidance on procedures for preparing project information (see appendix B). The validated project plan would also have to identify any changes in emissions and removals from or to the SSR that are not under control of the project proponent but that would be affected by the project through activity shifting or market effects.

The ministry’s intent is that any *reversal* (see proposed definition in section 6) will have to be replaced. The validated project plan for each project that involves GHG removal must include an adequate plan to address the risk of a reversal.

7.3 Measurable

The greenhouse gas reductions achieved from a project need to be measured in accordance with scientifically acceptable methods that maintain the principles of accuracy and conservativeness – documenting the difference between the

¹² This criterion, accompanied by the proposed requirement that any “reversal” be replaced, is intended to address what is sometimes described as the “permanence” of the offset.

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emissions that would have occurred in the absence of the project (i.e. the baseline scenario) and the emissions that are forecast to occur with the project in place. The proposed regulation and associated guidance (see appendix B) will include provisions requiring general alignment with the World Resources Institute's GHG Protocol for Project Accounting and/or the International Organization for Standardization (ISO). The ministry will ensure that, in practice, offsets used for GGRTA compliance are accounted for in provincial GHG progress reports.

7.4 Additional

A greenhouse gas emission reduction or removal achieved through a project needs to be incremental – or “*additional*” – to that which would have occurred in the absence of an offset mechanism (see discussion in section 2).

The proponent of a proposed project will (under the proposed regulations) have to demonstrate that the net GHG emissions would be lower after implementation of the project than those that would have occurred in its absence. The proponent would be required to prepare a “baseline scenario” (see appendix B for further detail) that represents a conservative estimate of the most likely emissions scenario that would occur in the absence of the offset mechanism (i.e. allowance in the GGRTA for PSOs to use offsets, in addition to making direct reductions in GHG emissions).

The regulation would include the following proposed requirements for a project to demonstrate “additionality”:

1. The reductions must come from a project that began commercial operation after November 29, 2007;¹³
2. The reductions must come from a project whose technologies or practices are not “common practice” (i.e. not widely observed nor commonly carried out in the relevant sector and region);

¹³ The date the GGRTA received royal assent.

3. The baseline must represent a scenario that complies with all relevant legal requirements, agreements, contracts or industry standards;
4. The baseline must represent GHG reductions expected from the receipt of other material incentives (e.g. government grants for climate change); *and*
5. The baseline must represent a conservative estimate of the most likely GHG emissions that would have occurred without the project. This additionality requirement would need to be demonstrated through at least one of the following analyses:
 - a) *Investment analysis* – the baseline scenario must represent a commercially reasonable, economic or financial evaluation, without the revenue from the sale of offsets; *and/or*
 - b) *Barrier analysis* – the project must have at least one viable alternative scenario that does not face the same realistic and credible barrier(s) to implementation.

Appendix B to this paper provides further guidance on the proposed procedure for conducting these additionality analyses. However, alternative methods of demonstrating additionality, such as benchmarks and market penetration may also be considered as appropriate under the proposed regulations.

7.5 Verifiable

Under the proposed regulation, offsets must represent emission reductions that have been validated and verified in accordance with a recognized project plan and reporting protocols. For emission reductions to be considered as offsets, proponents will need to have maintained project information (i.e. records of project activities, methodologies, emissions data and associated documentation – see section 8) for the purposes of verification, and the verification process must be undertaken by an independent “recognized assurance provider” (see section 9) as defined in the proposed regulations.

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In practice, the Pacific Carbon Trust (PCT) and project proponents engaged in project development will need to ensure that a validated project plan has been prepared, and that a recognized assurance provider is able to confirm the calculations and assertions in project reports and provide a reasonable level of assurance that the reductions claimed from the project have actually taken place (i.e. have been monitored, quantified and reported as set out in the project information that is submitted).

It is important to note that the ministry does not intend for offsets to be eligible for use towards carbon neutrality before the GHG reductions and removals have actually occurred (i.e. “ex-ante”). GHG reductions and removals must have both occurred and been verified before they can be used to offset public sector emissions.

7.6 Counted Once

The proposed regulation will specify that a greenhouse gas emission reduction or removal can only be counted once as an emission offset.¹⁴ A reduction that has already received recognition through another voluntary or compliance offset system, or as a component of another project already validated under the proposed regulations, would not be eligible for recognition as an “offset”.

7.7 Clear Ownership

An offset will only be valid where it represents an emission reduction “owned” by the PSO using the offset. Ownership entails a person or entity having exclusive right to the legal and commercial benefits that arise from GHG reductions or removals caused by a project. This ownership may be separate from any rights to implement a project.

In practice, project proponents will need to resolve any ownership issues through contractual arrangements that clearly set out the rights

and responsibilities of all parties involved in the project. The intention of the ministry is that the Pacific Carbon Trust will acquire ownership from proponents and will transfer this to PSOs.

8. Project Information Requirements

8.1 Project Plans and Reports

For a project to be a valid source of offsets under the proposed regulations, a *project plan* must have been prepared and validated in advance of emission reductions and offsets must be supported by *verified project reports* prepared and submitted in accordance with regulatory requirements.

The ministry intends to provide templates that outline information requirements for validation of project plans and verification of project reports (see section 9.1).

Following submission of a validated project plan, verified project reports containing GHG reduction claims may reference the project plan – with identification and justification of any changes related to the proponent, facility or project clearly highlighted.

8.2 Procedures for Preparing Project Information

The ministry has prepared proposed general guidance on the procedures for preparing project information (see appendix B). This guidance is intended to assist project proponents, PSOs and other entities that may be responsible for preparing a validated project plan and verified project reports. A standardized approach to procedures and reporting is intended to ensure consistency and timeliness through transparent demonstration of how offsets meet the eligibility criteria outlined in section 7. The procedures that are proposed are similar to approaches adopted by many existing offset systems.

¹⁴ This criterion is often referred to as requiring the emission reduction or removal to be “unique”.

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The proposed guidance on procedures for preparing project information (see appendix B) covers the following elements:

- ◆ Use of a recognized protocol;
- ◆ Identification of the GHG sources, sinks and reservoirs (SSR) affected by the project;
- ◆ Selection of the baseline scenario and associated SSR;
- ◆ Establishment of “relevant SSR” for project monitoring and quantification;
- ◆ Quantification of reductions and removals;
- ◆ Monitoring; and
- ◆ Data management.

9. Validation and Verification – Assurance Providers

The proposed regulation will include provisions for independent validation and verification of information provided in the project plan and project reports. Validation and verification would only be undertaken by “assurance providers” recognized under terms of the regulations.

9.1 Role of Validation and Verification

Validation of offset project plans and *verification* of GHG reductions and removals should provide assurance that:

- ◆ Offset eligibility criteria are met;
- ◆ GHG reductions or removals are appropriately quantified; and
- ◆ The project’s internal operational and control systems and processes are appropriate and effective.

Information relevant to providing this assurance may include evidence of:

- ◆ How approaches were used or decisions taken;
- ◆ Why approaches were chosen or decisions made; and
- ◆ Why alternative approaches were not chosen.

The ministry is interested in comment on the level of assurance necessary for offsets, and appropriate requirements for assurance providers, under the GGRTA. For example, the ministry intends to develop templates for letters of assurance that would accompany a validated project plan and a verified project report.

9.2 Requirements of Assurance Providers

The regulation will include provisions intended to ensure that the process of validation and verification involves independent and appropriately qualified parties and individuals. The ministry is presently assessing a number of options in terms of approaches to recognize *assurance providers* that are suitable for validating and verifying offset projects. Criteria for assessing the options include effectiveness in meeting regulatory objectives, administrative efficiency, independence and practical implementation in the B.C. context.

One approach would require assurance providers for B.C. offset projects to maintain accreditation with one or more “recognized emission offset assurance organizations” under terms of the regulations. Current examples of organizations with accreditation schema include the California Climate Action Registry, “The Climate Registry” and the United Nations Framework Convention on Climate Change Clean Development Mechanism (which lists “designated operational entities”) and Joint Implementation (which intends to list “accredited independent entities”).

Other potential approaches for the proposed regulations include: definition and requirements for use of “qualified professionals” with appropriate expertise; establishing a “roster of approved assurance providers”; and/or delineating detailed “standard procedures for assurance providers” in the regulations. The ministry is seeking comment on the effectiveness and practicality of these or other

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approaches for recognizing assurance providers, and any recommendations for providing assurance of independent validation and verification for B.C. offsets.

Proposed provisions delineating the process and expertise required for entities or individuals who are acting as assurance providers under the regulations are listed below.

The assurance providers would have to meet the following general requirements:

- ◆ Appropriate legal structure and authority including the ability to enter into legally binding agreements with the project proponent;
- ◆ Holding appropriate insurances to cover liabilities associated with validation and verification activities;
- ◆ Operational structure necessary to develop and support policies, finances, contracts and resourcing, and to resolve appeals and complaints;
- ◆ Methodologies for and documentation of acting impartially and avoiding all conflicts of interest;
- ◆ Procedures to ensure required sector specific knowledge is held and the body acts only within areas of competency; *and*
- ◆ Documentation of procedures and appropriate maintenance of records.

The assurance providers would also have to meet the following specific competencies:

- ◆ Detailed knowledge of the emission offsets regulation, GHG accounting and existing recognized protocols;
- ◆ Expertise in: assessing the project GHG activity and technologies; identifying and selecting GHG sources, sinks and reservoirs; performing quantification, monitoring and reporting; and assuring consistency between the validated project plan and implementation;
- ◆ Expertise in evaluating financial, operational, contractual and other agreements that affect the project (including legal re-

quirements pertaining to the project assertion);

- ◆ Expertise in data and information auditing including identification, collection, analysis and reporting of emissions, designing sampling plans, analyzing risks and identifying failures and assessing impacts on the materiality of the project assertion; and
- ◆ Expertise in assessing methodologies used to select, justify and quantify the baseline scenario and demonstrating project additionality with respect to the baseline.

9.3 Assurance Provider Conduct

An assurance provider should:

- ◆ Demonstrate competence, ethical conduct and professionalism;
- ◆ Be independent and avoid potential conflicts of interest;
- ◆ Truthfully and accurately reflect assurance activities and conclusions; and
- ◆ Meet the assurance requirements prescribed by regulation.

10. Public Disclosure

All project-related information regarding offsets used to comply with the GGRTA, as well as associated statements of assurance, will be posted on a government website. Posting of validated project plan information would serve as a de facto “registry” for offset projects, and assist in checking for “double counting” of projects, as well as providing information to support public understanding and proponent accountability.

11. Development of the Regulation

The ministry is intending to finalize the proposed emission offsets regulations by fall 2008.

12. Providing Comment

Consultations with stakeholders on offsets are already underway through the activities of the Climate Action Secretariat, the Ministry of Environment and the Western Climate Initiative.

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Comments regarding the proposed intentions of the ministry are being solicited for slightly more than the standard 45-calendar day period. Following review of comments and submissions, the ministry will complete legal drafting of the proposed regulations.

Comments received will be treated with confidentiality by ministry staff and contractors. Please note that the comments you provide and information that identifies you as the source of those comments may be publicly available if a Freedom of Information (FOI) request is made under the *Freedom of Information and Protection of Privacy Act*.

Those interested are invited to submit comments in writing to Cindy Bertram of C. Rankin & Associates, who has been contracted by the ministry, at:

Email: cindybertram@shaw.ca

Mail: PO Box 5293
Victoria, B.C. V8R 6N4

Fax: (250) 598-9948

Comments to the ministry should be made on or before August 29, 2008

Thank you for your time and consideration

Appendix A: Acronyms and Abbreviations Used in this Document

Acronym	Definition
B.C.	British Columbia
CDM	Clean Development Mechanism (of the Kyoto Accord)
CO ₂	Carbon dioxide
CO _{2e}	Carbon dioxide-equivalent (one metric tonne of CO ₂ emissions)
COD	(Initiation of) Commercial operation (of an offset project)
e.g.	for example
FOI	<i>Freedom of Information (Act)</i>
GGRTA	<i>Greenhouse Gas Reduction Targets Act</i>
GHG	Greenhouse gas
i.e.	that is
ISO	International Organization for Standardization
PCT	Pacific Carbon Trust
PSO	Public sector organization
SSR	Sources, sinks and reservoirs
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

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Appendix B: Outline of Guidance for Preparing Project Information

This appendix outlines areas of potential guidance for the preparation of project information to be submitted in the project plan and project reports in support of the proposed emission offsets regulations under the *Greenhouse Gas Reduction Targets Act* of 2007. Note that the outline headings and contents do not cover the full extent of guidance that could be provided by the ministry. The ministry is seeking comments regarding the desired extent of guidance that should be provided to support the proposed regulations, as well as specific comments or recommendations concerning the potential content provided in this appendix.

Use of a Recognized Protocol

Use of a recognized protocol or methodology helps to ensure that a project proponent is following an appropriate and consistent approach to measuring, quantifying and reporting GHG reductions over the lifetime of a project. There is an extensive set of protocols in existence internationally that have been developed and tested in voluntary and compliance market systems. For example, the Clean Development Mechanism (CDM) is a source for numerous expert and publicly reviewed methodologies.¹⁵ In initial implementation of the proposed regulations, project proponents will be encouraged to adopt an established protocol of recognized origin, adapted as necessary to B.C.-specific conditions. Over time, the government may identify a specific suite of protocols in order to standardize similar projects and streamline the project information process.

At this initial stage of regulatory development, proponents should provide the rationale for their selection of any one recognized protocol over another, accompanied by an explanation of how the selected protocol was chosen and, if relevant, adapted. This proposed approach is intended to support the objectives of consistency, administrative simplicity, timeliness and building on other systems.

If a proponent is of the opinion that there is no existing protocol from a recognized origin that is applicable to the proposed project type, any new proposed protocol should remain consistent with the core components of the outline of proposed procedural guidance.

General components that are common to the guidance on procedures adopted by many existing offset systems include:

- ◆ Identification of the GHG sources, sinks and reservoirs (SSR) affected by the project;
- ◆ Selection of the baseline scenario and associated SSR;
- ◆ Establishment of “relevant SSR” for project monitoring and quantification;
- ◆ Quantification of reductions and removals;
- ◆ Monitoring; and
- ◆ Data management.

These components, as well as other procedural elements specific to the B.C. context, are discussed in the following sections of this outline.

¹⁵ A library of CDM-approved methodologies is available at <http://cdm.unfccc.int/methodologies/index.html>

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Outline of Proposed Procedural Guidance

1. *General project information*

General information provided within the project plan should include the name and contact information of the project proponent and identification of all parties that may have a valid legal or financial interest in the project.

The project plan should provide a brief description of the emission reduction project, including the type of project or activity (purpose and objective), size, location (street address and degree-minute-second latitude / longitude coordinates), current condition, project photographs, physical information allowing the unique identification and delineation of the specific extent of the project and duration. The plan should also include the name of the facility or activity, a description of the products and/or services of the facility or activity and the 6-digit North American Industry Classification System (NAICS 2007) code if applicable.

2. *Identification of SSR affected by the project*

All GHG sources, sinks and reservoirs (SSR) controlled, related to or affected by the project should be identified and assessed. The project proponent should identify these SSR as being:

- a) Controlled by the project proponent;
- b) Related to the project; or
- c) Affected by the project.

The ministry recognizes that there are a variety of approaches to defining the SSR and seeking feedback from stakeholders on the extent to which they would like the ministry to provide specific guidance on certain aspects of this step.

3. *Selection of the baseline scenario*

A range of potential baseline scenarios should be identified and assessed before an appropriate baseline is selected as the most plausible alternative scenario to the implementation of the project.

The following baseline types (applied appropriately depending on the type of project) could be evaluated:

- a) Historic benchmark (continuation of past emission trends and existing activities);
- b) Performance standard (typical emissions profile for an industry or sector);
- c) Comparison approach (actual measurements of parameters from a control group);
- d) Projection-based (forward-looking projections with possible ex-post revision); and/or
- e) Adjusted baseline (same baseline, based on current practice levels of a particular project, for all projects of a given type).

In order to appropriately demonstrate additionality, the baseline scenario assessment should take into account:

- a) All legal requirements, agreements, contracts or industry standards;
- b) The receipt of material incentives;
- c) Identified SSR;
- d) For biological sink projects, current management and the impact of age-class structure, natural disturbances and indirect human effects through climate change (e.g. pest outbreaks, wildfires, windthrow, drought, extreme weather events) on SSR;

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- e) Existing and alternative project types, activities and technologies providing equivalent type and level of activity of products or services to the project;
- f) Existing best management practices, guidelines or other similar documents for use of technologies or project methodologies within an industry;
- g) Data availability, reliability and limitations; and
- h) Other relevant information concerning present or future conditions, such as legislative, technical, economic, socio-cultural, environmental, geographic, site-specific and temporal assumptions or projections.

The project plan would need to explain and justify the procedure for identifying and selecting the baseline scenario. The outputs and services of the baseline scenario should be equivalent to those of the project in quality, properties and application areas, though the equivalency need not be strictly applied. Using the principles of conservativeness and accuracy, the assumptions, values and procedures applied should ensure that project reductions are credible and not over-estimated.

The project plan would then identify all SSR that would be controlled, related and affected under the baseline scenario (in manner equivalent to the identification of SSR affected by the project).

4. Selection of “relevant SSR” for monitoring and quantification

All “relevant SSR” should be selected for regular monitoring or estimation. The continuous or periodic quantification of reductions, however, would not necessarily involve all SSR controlled by the proponent, in addition to those related to or affected by the project and baseline. In such cases, the project plan should explain why a SSR identified in the project scenario or the baseline scenario is excluded from the list of “relevant SSR”.

The project plan should include a monitoring strategy that identifies and justifies the reservoirs to be monitored, and how they would be monitored, on the basis of: 1) the longevity of the reservoir; and 2) the stability of its stocks. For projects where the level of emissions could vary significantly, and which are difficult to estimate in advance, more frequent monitoring of SSR may be needed. Projects that involve sinks may require a longer period of monitoring of SSR.

5. Quantification of reductions

Project GHG reductions are measured in terms of the difference between the net GHG emissions from the project’s relevant SSR and the baseline scenario’s relevant SSR.

The project plan should justify the selection of all quantification methodologies applied to the relevant SSR for the project GHG reductions and the baseline scenario for each type of greenhouse gas. The proposed regulations would not delineate specific methodologies for quantification of emissions – estimation, modelling, direct measurement, emission/removal factors and/or calculation from data and information for the project and the baseline scenario may be appropriate – provided that the methodology is applicable and consistent with procedural guidance. The project plan should reference the source of all emission/removal factors used in quantification of reductions.

Quality management procedures should be applied to manage data and information, including the assessment of uncertainty, relevant to the project and baseline scenario. Uncertainties related to the quantification of GHG reductions should be reduced as far as is practical. Conservative assumptions, values and procedures should be used to ensure that GHG reductions are not overestimated. Industry

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best practice and other good practice guidance on methods for quantifying the various emissions, adapted to the B.C. context, should be considered.

Metric tonnes would be used as the unit of measure. Where possible, the project plan should identify the project's GHG reductions by each relevant greenhouse gas and its corresponding SSR. The quantity of each type of greenhouse gas would then be converted to metric tonnes of CO₂e using the 100-year global warming potentials adopted by the Intergovernmental Panel on Climate Change.

The project plan should identify any risks that may substantially affect the project's expected GHG reductions. In particular, the project plan should include a carbon reversibility management plan that addresses intentional and unintentional activities that may alter the carbon stocks relative to the baseline scenario. The plan should outline the proposed strategy for replacement of any reversals.

6. Determining additionality

The project plan should justify procedures for demonstrating that the project results in GHG reductions that are additional to what would occur in the baseline scenario.

A proposed project's additionality should be demonstrated through the following five steps:

1. Demonstrate the reductions come from a project that began commercial operation (COD) after November 29, 2007;
2. Demonstrate the reductions come from a project whose technologies or practices are not widely observed nor commonly carried out in the relevant sector and region;
3. Demonstrate the baseline represents a scenario that complies with all relevant legal requirements, agreements, contracts or industry standards;
4. Demonstrate the baseline represents what is expected from the receipt of other material incentives (e.g. government grants for climate change); *and*
5. Demonstrate the baseline represents a conservative estimate of likely emissions that would have occurred in the first place (using either an investment analysis *or* a barrier analysis).

Step 1 – requirement for commercial operation (**COD**) of the project to fall after November 29, 2007 – confirms that a project proponent was not intending to launch the project before the *Greenhouse Gas Reduction Targets Act* established requirements for the B.C. public sector to become carbon neutral, and that the GHG reductions associated with the project would otherwise not have occurred.

Step 2 – common practice analysis – is intended to be a quick scan that filters out projects that are clearly not additional before parties proceed to more involved subsequent steps. Common practice analysis involves a comparison of practices and technologies of the proposed activity with projects in the same country/region that rely on a broadly similar technology, are of a similar scale, and take place in a comparable environment with respect to regulatory framework, investment climate, access to technology and access to financing. There should be no similar activities observed – or if they are observed, essential distinctions between the project activity and similar activities can reasonably be explained. Note that other offset projects do not have to be included in the comparison.

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Steps 3 and 4 – address key considerations that must be incorporated into the baseline scenario – existing **requirements** and **material incentives**. There must be consistency between the methodologies used in determination of the baseline scenario and determination of additionality of a proposed project. In the case of activities that have been incented under provincial or federal programs, stacking would be permitted. Additionality may be demonstrated if the baseline scenario, with material incentives included, still is not a financially viable project.

Step 5 – demonstration of conservative analysis – is needed to ensure that the baseline represents a conservative estimate of likely emissions that would have occurred in the first place. A proponent could choose either an investment analysis or a barrier analysis for this step. An **investment analysis** involves demonstrating that the baseline scenario represents the most economically or financially attractive option, without the revenue from the sale of offsets. This could be accomplished through a simple cost analysis, an investment comparison analysis or a benchmark analysis. A simple cost analysis could be used if the activity produces no financial or economic benefits beyond offset-related income; otherwise an investment comparison analysis or benchmark analysis (with a financial indicator such as internal rate of return, net present value, cost benefit ratio or unit cost of service) should be used. A **barrier analysis** involves demonstrating that the identified barriers prevent potential project proponents from carrying out the proposed project without receiving recognition for offsets. This could be accomplished through demonstrating that the project has at least one viable alternative scenario that does not face the same realistic and credible barrier(s) (i.e. investment barriers other than economic/financial barriers; technological barriers; barriers due to prevailing practice; or other specified barriers) to implementation.

7. *Monitoring the project*

The project plan should identify and justify a monitoring strategy. Procedures should be established and maintained for obtaining, recording, compiling and analysing data and information important for quantifying and reporting GHG emissions relevant for the project and baseline scenario.

The monitoring strategy should describe the sources, sinks and reservoirs (SSR) that will be monitored and how they will be monitored (including estimation, modelling, measurement or calculation approaches), the types of data and information that will be collected (including units of measurement), monitoring times and periods, roles and responsibilities, and any GHG information management systems (including the location and retention of stored data).

The monitoring should be conducted on a regular basis during project implementation. Where measurement and monitoring equipment is used, the equipment should be calibrated in accordance with relevant technical specifications and current best practices.

8. *Data management*

Records and monitoring information should be maintained in a data management system that documents all procedures and activities needed to support an independent and objectives verification process. The project plan should demonstrate conformance with all regulatory requirements for validation and verification.

All documentation should be stored and available to relevant parties in accessible electronic formats for a minimum of 10 years (or longer, as appropriate, for biological sink projects).