

Greenhouse Gas (GHG) Reporting Regulation Policy Intentions Paper for Consultation

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1. Introduction

The British Columbia Ministry of Environment (the ministry) intends to introduce a Mandatory Reporting of Greenhouse Gas Emissions Regulation (GHG Reporting Regulation) to support fulfillment of the *Greenhouse Gas Reduction (Cap and Trade) Act*,¹ which received Royal Assent on May 29 2008. It is anticipated that the regulation will come into effect in early 2009.

The GHG Reporting Regulation will set out requirements for the reporting of greenhouse gas emissions to the ministry. It will also support the implementation of a cap and trade system² (such as that being developed under the Western Climate Initiative³). The ministry intends to develop additional regulations under the *Cap and Trade Act* addressing emission sources that will be covered by an emissions cap, as well as the creation and distribution of compliance units (i.e., allowances).

¹ See: www.leg.bc.ca/38th4th/3rd_read/gov18-3.htm

² Cap and trade (or emission trading) systems set an absolute limit on the quantity of GHG emissions a jurisdiction can be responsible for on an annual basis. They promote the trading of emissions allowances between emitters who can meet the cap efficiently and those who face more of a challenge in reducing emissions. Cap and trade systems are used around the world to reduce greenhouse gas emissions. British Columbia is the first province to introduce legislation authorizing hard limits (i.e., “caps”) on greenhouse gas emissions. See: www.env.gov.bc.ca/epd/climate/reduce-ghg/em-trading.htm

³ See: www.westernclimateinitiative.org

It is anticipated that additional regulations for other components of British Columbia’s cap and trade program will be developed over the next year or so (with consultation through intentions papers and other mechanisms, as appropriate). The proposed GHG Reporting Regulation will be linked to these future program components (such as allowance trading and offsets). The ministry intends to consult on the development of these further regulations in 2009.

The process for establishing the regulation consists of five phases:

1. **Scoping** – including commissioned assessments of specific technical issues and ministry staff assessment of issues and alternatives.
2. **Ministry Intentions Paper for Consultation** (intentions paper) – outlining the ministry’s proposed approach for reporting of greenhouse gas emissions and associated information.
3. **Consultation** – with affected stakeholders and the general public, using the intentions paper and response forms posted on the ministry website, and other means as required.
4. **Drafting** – preparation of legal language for consideration by the Minister and Lieutenant Governor-in-Council.
5. **Implementation** – informing ministry staff and external stakeholders, and developing guidelines and/or best management practices.

The purpose of this paper is to communicate ministry intentions, and to seek responses and comments from stakeholders and the general public on the proposed regulation.

This paper provides a summary of ministry and government goals, background information concerning greenhouse gas reporting and ministry intentions for the proposed regulation and the Western Climate Initiative. The paper also describes the avenues for providing comment as the proposed regulation is drafted and implemented. A preliminary list of acronyms used in the intentions paper and a sample of definitions to be included in the proposed regulation are included as appendices.

Information on the proposed regulation, and the response form, can be accessed by clicking on the ad-

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dress below, or from the ministry homepage, by following the Environmental Protection and Climate Change links. See: www.env.gov.bc.ca/epd/climate.

2. Ministry and Government Objectives

The Ministry of Environment encourages environmental stewardship, provides environmental education opportunities, engages stakeholders and actively promotes the sustainable use of British Columbia's environmental resources. In addition, the ministry is a leader in implementing the government's climate change initiatives. This role has been strengthened by the government's commitment to comprehensive climate action targets. Current ministry goals and objectives include "clean and safe water, land and air" and "effective responses to climate change."⁴

In 2007 the provincial government committed "to reduce B.C.'s greenhouse gas emissions by at least 33 per cent below current levels by 2020."⁵ The Minister of Environment introduced the *Greenhouse Gas Reduction Targets Act* (GGRTA)⁶ on November 27, 2007, establishing the legislative base for this commitment.

3. Background Information

3.1 Policy context

The province's Climate Action Plan⁷ describes the legislative, regulatory and program initiatives intended to achieve greenhouse gas emission reduction commitments. A major component of the plan is to reduce emissions from industrial facilities and other large emitters. The *Cap and Trade Act* provides the legislative authority to implement a cap and trade system, including provisions for establishing reporting and compliance requirements under regulation.

At the federal level, Environment Canada plans to implement an "intensity-based" cap and trade program under the *Canadian Environmental Protection*

Act (CEPA), as well as a series of other greenhouse gas reduction efforts. Recognizing regional differences and existing efforts, Environment Canada has indicated a willingness to enter into equivalency agreements with provinces/territories whose programs have similarly (or more) stringent outcomes. The programs outlined in B.C.'s Climate Action Plan (including the *Cap and Trade Act*), will help the province to demonstrate that its regulations will meet or exceed emerging federally mandated targets.

There is a significant international body of work on climate change science and greenhouse gas accounting – regularly revised through the processes of the United Nations Framework Convention on Climate Change (UNFCCC)⁸ and the Intergovernmental Panel on Climate Change (IPCC).⁹ Existing and proposed emissions trading schemes include the European Union Emissions Trading Scheme (EU ETS); the United Kingdom Emissions Trading Scheme (UK ETS);¹⁰ the Regional Greenhouse Gas Initiative (RGGI);¹¹ the Lieberman-Warner Bill¹² (and other federal United States proposals); the International Climate Action Partnership (ICAP);¹³ and other initiatives. For an overview of cap and trade programs, and other international information related to climate change policy, see (for example) the World Resources Institute climate change website.¹⁴

The proposed B.C. GHG Reporting Regulation is based on rigorous and internationally recognized science from the IPCC and UNFCCC – and is intended to facilitate future linkage with other emissions trading programs (if and as deemed appropriate).

3.2 The Western Climate Initiative

In 2007, the B.C. government joined the Western Climate Initiative (WCI),¹⁵ a regional market-

⁴ For further detail, see the Ministry's service plan and the 2008 provincial budget: www.bcbudget.gov.bc.ca/2008/sp/env.

⁵ British Columbia Legislature Speech from the Throne, February 13, 2007. See: www.leg.bc.ca/38th3rd/4-8-38-3.htm

⁶ See: www.leg.bc.ca/38th3rd/3rd_read/gov44-3.htm

⁷ See: www.livesmartbc.ca/plan/index.html

⁸ See: <http://unfccc.int/2860.php>

⁹ See: www.ipcc.ch

¹⁰ See:

www.defra.gov.uk/Environment/climatechange/trading/

¹¹ See: www.rggi.org

¹² See: <http://lieberman.senate.gov/documents/acsa.pdf>

¹³ See: www.icapcarbonaction.com

¹⁴ See: www.wri.org/climate/usclimate and follow, for example, the "cap-and-trade" link under "the bottom line series."

¹⁵ See: www.westernclimateinitiative.org

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based climate program that reduces global warming pollution to promote a thriving economy and protect public health. The WCI is committed to the development of a broad multi-sector cap and trade scheme as part of a comprehensive regional effort to reduce emissions.

The WCI is a collaboration of U.S. states and Canadian provinces, including British Columbia, Quebec, Ontario, Manitoba, Arizona, California, New Mexico, Oregon, Washington, Utah and Montana (with Saskatchewan, as well as additional U.S. and Mexican states, participating as “observer” jurisdictions).

In August 2007, the WCI set an aggregate regional greenhouse gas emission reduction goal of 15 per cent below 2005 levels by 2020. This regional goal is to be achieved by WCI partners through a cap and trade system, and complementary measures to reduce GHG emissions. Draft design recommendations for the program were released in July 2008¹⁶ and updated to a finalized design document released on September 23 2008.¹⁷

Under the WCI design facilities emitting more than 25 000 tonnes of carbon dioxide equivalent (CO₂e) per annum from the sum of all non-carbon dioxide (CO₂) biomass sources – including industrial process and fugitive emissions, or those that import thermal electricity from a non-WCI jurisdiction – would fall under the cap and trade system. These facilities would have requirement to “surrender for retirement” emission allowances (and/or emission offsets in some cases) of an amount equal to their reported GHG emissions. A separate emissions threshold may be set for some industrial sectors, such as upstream oil and gas or electricity. At the end of a three-year compliance period (starting with 2012 to 2014), a facility’s reporting data may be combined with a compliance report for the purpose of the cap and trade program.

British Columbia’s *Cap and Trade Act* and its associated regulations will establish or enable requirements for facilities.

In British Columbia, non-combustion emissions at solid waste disposal facilities and municipal and industrial wastewater treatment plants will be addressed under separate regulations and would not fall under the cap and trade program. Downstream combustion of gasoline, diesel, marine and aviation fuels and residential, commercial and industrial (below the cap and trade compliance threshold) use of natural gas, propane and home heating oil would also not fall under the cap and trade program as they are subject to the province’s carbon tax (although these activities are contemplated in the overall WCI design framework).

Full implementation of the regional cap and trade system is currently anticipated to occur in 2012. However, it is necessary to institute reporting in advance of 2012 in order to accurately establish the level of emissions from the year 2006 onward. These emissions reports are required as the basis for comparison and tracking of progress towards future GHG targets. Smooth operation of the cap and trade program (i.e., a properly functioning market) will, in part, depend on: 1) reported facility greenhouse gas emissions being as accurate as possible, given administrative feasibility; and 2) similar facilities in different jurisdictions harmonizing quantification methods and protocols (to the extent possible and reasonable).

The provisions outlined in this intentions paper have drawn on the contents of the WCI Draft Essential Requirements for Mandatory Reporting document.¹⁸ The proposed provincial reporting thresholds are lower than the threshold for facilities that may be obligated to receive and retire allowances in a cap and trade program. This will support the integrity of the allowance threshold and ensure that the threshold is set at an appropriately comprehensive level. The ministry anticipates that the definitions and quantification method(s) for each source category to be detailed in British Columbia regulations will be harmonized with those agreed to by the WCI jurisdictions.

¹⁶See: www.westernclimateinitiative.org/ewebeditpro/items/O104F18808.PDF

¹⁷See: www.westernclimateinitiative.org/ewebeditpro/items/O104F19865.PDF

¹⁸ For the current version of the document see: www.westernclimateinitiative.org/WCI_Documents.cfm

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3.3 Quantification methods

Technical and administrative standards for cap and trade systems are presently evolving at international, regional and state or provincial levels. While common practice has not yet been entrenched, there are significant efforts currently underway to develop and establish best practices. Current or emerging quantification methods include those of: the Intergovernmental Panel on Climate Change (IPCC) Good-Practice Guidance;¹⁹ Environment Canada current CEPA Section 46²⁰ and Section 71²¹ and proposed Section 93;²² California Air Resources Board (CARB);²³ European Union Emissions Trading Scheme (EU ETS);²⁴ U.S. EPA current Climate Leaders²⁵ and proposed²⁶ methods; Regional Greenhouse Gas Initiative (RGGI);²⁷ WRI/WCSBD GHG Protocol;²⁸ The Climate Registry;²⁹ and those contained in industry-specific protocols such as NCASI.³⁰

The ministry, and other B.C. government representatives, are actively participating in Western Climate Initiative processes to identify and address issues involving quantification and accurate reporting of emissions. Ministry intentions for incorporating the results of this WCI work in the proposed regulation are outlined in the following sections of this intentions paper.

3.4 Design principles for emissions reporting

In developing the GHG Reporting Regulation, the ministry is using the following design principles (in common with the underpinnings of most mandatory reporting systems):

- ◆ **Compatibility** – the reporting system (including accuracy of quantification methods, timing of reports, level of confidentiality, source categories covered, and level of verification) facilitates linkages with other reporting programs;
- ◆ **Prioritization** – reporting and verification effort is focused on: larger emitters or those with large cumulative impact; source categories covered/scheduled to be covered within a cap and trade program; and those areas where there is substantial data uncertainty;
- ◆ **Prescribed quantification methods** – prescription is required for smooth and fair market functioning – to ensure that when a facility reports a tonne of emission levels, all potential trading partners have full confidence that the amount traded for is, in fact, correct;
- ◆ **Risk-based third party verification** – the reporting program ensures both accuracy of reported emissions and the ability to trade allowances based on those emissions (3rd party verification of reporting, supplemented by ministry auditing as appropriate); and
- ◆ **Access to information** – greenhouse gas reporting data (i.e., reported emissions by source category and facility) should be freely available to market participants and observers, with provision to ensure that market activity data is obtained by market participants at the same time.

¹⁹ www.ipcc-nggip.iges.or.jp/public/2006gl/index.html

²⁰ See: www.ghgreporting.gc.ca

²¹ See: www.ec.gc.ca/cleanair-airpur/Turning_the_Corner/CEPA_1999_Sec_71-WS074B0A75-1_En.htm

²² www.ec.gc.ca/default.asp?lang=En&n=75038EBC-1

²³ See: www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm

²⁴ See:

http://ec.europa.eu/environment/climat/emission/mrg_en.htm

²⁵ www.epa.gov/climateleaders/index.html

²⁶ www.epa.gov/climatechange/emissions/ghgulemaking.html

²⁷ www.rggi.org

²⁸ www.ghgprotocol.org

²⁹ www.theclimateregistry.org/protocols.html

³⁰ www.ncasi.org

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MINISTRY INTENTIONS

4. Definitions

The ministry intends to develop a full set of definitions for the regulation to specify application and interpretation of the regulation. These would build on Western Climate Initiative and Environment Canada terms and definitions, supplemented with specified definitions as required for B.C. circumstances or regulatory needs. A preliminary set of definitions is provided for discussion purposes in Appendix B of this intentions paper. Definitions would fall under the following general categories:

- ♦ Greenhouse gases, related measurement units, and conversion factors (i.e., carbon dioxide equivalence);
- ♦ Facility and related production definitions (e.g., points of regulation, emission source categories, emission types and fuel types, feed stocks);
- ♦ Industry and facility-specific terms (e.g., lime kiln, calcination, Söderberg process); and
- ♦ Reporting and compliance terms (e.g., quality control, verification, audit and compliance).

5. Reporting Requirements

5.1 Greenhouse gases subject to reporting

Greenhouse gases subject to reporting requirements under the proposed regulation will be those outlined, along with their global warming potentials,³¹ in regulations being developed for the B.C. *Greenhouse Gas Reduction Targets Act* (GGRTA). The six main greenhouse gases³² include: (i) carbon dioxide (CO₂); (ii) methane (CH₄); (iii) nitrous oxide (N₂O); (iv) sulphur hexafluoride (SF₆); (v) hydrofluorocarbons (HFCs); and, (vi) perfluorocarbons (PFCs).

³¹ 100-Year global warming potential values will be those presented in the IPCC 2nd Assessment Report and used nationally by Environment Canada. Values are subject to change based upon adoption of new IPCC values for international reporting or allowance trading.

³² Other greenhouse gases (or subsets of the synthetic HFC and PFC gases) may be subject to reporting and will use nationally or internationally adopted global warming potentials.

5.2 Fuels and inputs included in reporting requirements

Fuels and inputs included in the proposed reporting requirements are listed in Table 1 below.

Table 1: Fuels & Inputs Included in Reporting Requirements

Fuel Data	Notes
1. Natural gas	By type
2. Propane	
3. Coal	By type
4. Oil and natural gas production and processing constituents and by-products	Facility specific composition data may be required
5. Gasoline	Marked and/or unmarked, ethanol
6. Diesel	Marked and/or unmarked, also heating and industrial diesel, biodiesel
7. Other fuels (identified in the regulation)	Such as tires, waste products, kerosene
8. Biomass	By type
9. Inputs	For process emissions

5.3 Level of emissions requiring reporting

Under the proposed regulation, facilities emitting more than 10 000 tonnes per year (including CO₂ biomass emissions) of CO₂e per annum will be required to report their greenhouse gas emissions to the ministry, beginning with the 2009 calendar year and annually thereafter (for the previous calendar year's emissions). Facilities with emissions over 20 000 tonnes CO₂e (excluding CO₂ biomass emissions) will also be required to provide their best estimates of GHG emissions by source category for the 2006, 2007 and 2008 calendar years. If a facility were to have more than 25 000 tonnes of emissions (from sources except non-CO₂ biomass) in any calendar year from 2009 onwards, it would be required to report for all subsequent calendar years, regardless of emission level.

The proposed regulation will include a separate threshold of 3 000 tonnes CO₂e per annum for "upstream oil and gas facilities." This threshold is

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intended to ensure that a sufficient proportion of upstream oil and gas emissions are reported, while recognizing the diffuse structure of the industry. This will facilitate compatibility with the WCI, and is in accordance with the threshold proposed by Environment Canada. If an upstream oil and gas facility was to have more than 3 000 tonnes of emissions (from sources except non-CO₂ biomass) in any calendar year from 2009 onwards it would be required to report for all subsequent calendar years, regardless of emission level.³³

5.4 Facilities required to report

The GHG Reporting Regulation will require facility-level reporting as well as “facility” reporting of upstream oil and gas emissions and reporting of electricity imports into the province.

Facilities existing within British Columbia that would be subject to reporting and/or cap and trade compliance obligations will include:

- ◆ Aluminium and alumina;
- ◆ Base metals smelting;
- ◆ Cement;
- ◆ Chemicals and petrochemicals;
- ◆ Co-generation and biomass generation;
- ◆ Commercial and institutional facilities;
- ◆ Thermal electrical generation and import;
- ◆ Electricity transmission;
- ◆ Food production and manufacturing;
- ◆ Lime;
- ◆ Mining;
- ◆ Pipeline transportation, natural gas transmission and distribution systems;
- ◆ Non-metallic mineral products manufacturing;
- ◆ Petroleum refining;
- ◆ Pulp and paper;
- ◆ Upstream oil and gas, including gas plants and production;
- ◆ Wood products manufacturing; and
- ◆ Other stationary combustion, fugitive sources or industrial processes releasing GHGs.

³³ The ministry is considering a threshold that combines tonnes of emissions and barrels of oil equivalent.

Based on existing emissions information and consultations, the ministry has estimated that under the proposed regulation 80 to 100 facilities would have reporting, allowance holding and third party verification obligations while another 160 to 180 could have reporting, but not allowance holding or third party verification, obligations, including facilities reporting biomass emissions (see sections 7 and 8.3).

5.5 Sources and activity data to be reported

The emission source and sink categories subject to the proposed regulation are listed in Table 2 below.

Table 2: Emissions Source (and Sink) Categories

Source/Sink Category
1. Stationary and mobile non-transportation fuel combustion
2. Industrial process emissions
3. Venting emissions
4. Flaring emissions
5. Other fugitive emissions
6. Biomass combustion (CO ₂ and non CO ₂) emissions ³⁴
7. Thermal electricity imported to British Columbia
8. On-site mobile transportation emissions ³⁵
9. Offsets bought and sold ³⁶
10. Carbon capture and storage ³⁷

³⁴ CO₂ emissions from the combustion of biomass will be considered carbon neutral, except for reporting purposes. However, in the case of reporting, CO₂ emissions from biomass may put a facility over the 10 000 tonne reporting threshold, but not the 25 000 tonne threshold for verification. These emissions will be captured in reporting (once quantification methods are established) to ensure consistency with reported emissions from other partners in a regional cap and trade system, such as the WCI.

³⁵ British Columbia intends to maintain GHG regulation of transport fuels under the carbon tax. For the purposes of reporting and consistency with WCI requirements, however, on-site off-road transportation emissions will be reported.

³⁶ Offsets bought and sold would be reported separately within a facility’s accounts to ensure emissions ownership and accounting transparency.

³⁷ Carbon capture and storage projects would be reported separately in a facility’s accounts to ensure emissions ownership and accounting transparency.

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The proposed reporting threshold will be based on the gross emissions for all source categories at a given facility (i.e., reported emissions for a facility would combine industrial process emissions with the stationary combustion and any other applicable emissions at the same facility).

Emission source categories exempt from the initial phase of mandatory reporting are listed in Table 3 below. Note that some or all of these sources and activities may be required to report emissions in subsequent phases of regulatory development. Development of subsequent phases would include consultation with affected stakeholders and would likely be due to requirements of cap and trade programs.

Table 3: Source Categories Exempt from Initial Phase of the GHG Reporting Regulation

Source Category
1. Forestry, land use and land-use change (soils, growth, harvest, fire, insect and disease, etc)
2. Non-combustion landfill emissions ³⁸
3. Non-combustion municipal and industrial wastewater emissions
4. Air and marine transportation
5. On-road and out of facility off-road transportation
6. Petroleum products terminal fuel throughput
7. Natural gas, propane and home heating oil delivered for consumer use
8. Hydro-electric facilities

The proposed regulation will specify the activities that should be reported and the data types and measures for each of the activities. An initial list of proposed requirements is set out in Table 4 below.

Table 4: Activity Data to be Reported

Activity Data	Notes
1. Amount of fuel consumed	By fuel and product
2. Combustion sources	Type and size of boiler, kiln, furnace, etc. and/or total number of vehicles by vehicle type for on-site mobile combustion sources
3. Industrial processes used	Detail on specific industrial processes, process flow(s) and industrial process GHG emissions within a facility
4. Venting, flaring and fugitive emissions	Detail on sources of venting, flaring and fugitive emissions, and methods used to reduce emissions,
5. GWh of production and MWh of capacity	By thermal electric and co-generation facility
6. Facility start-ups, shutdowns, reduced operations	Amount of facility downtime or reduced operations, normal or abnormal for the given year. Information on new start-up or shutdown.
7. Total kilometres	For upstream oil and gas and pipeline transportation (by pipeline size)
8. Production stream	Detail on the production stream for the facility, and where in the production stream GHGs are produced
9. GHG Measurement Methods	Detail on the specific equipment and methods used to quantify inputs for, or provide, GHG measurements. Detail on downtime of measurement methods and procedures used to fill in missing data.
10. Verification processes	Detail on the quality assurance, quality control, internal and external verification processes used to ensure integrity of the submitted data

³⁸ Landfill methane emissions are specifically addressed under the Landfill Gas Regulation.

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6. Quantification Methods to be Used in Reporting

For the 2009 calendar year and subsequent emissions reporting years, the proposed regulation will include or reference prescribed quantification methods for most source categories (listed in Table 2) – utilizing WCI approved quantification methodologies wherever possible. Specific quantification methods may be prescribed for further source categories over time as they become available. Information on quantification method(s) proposed for specific source types will be released for comment by the WCI, likely in fall 2008 or early winter 2009. General quantification methods that may be prescribed include continuous emissions monitoring systems (CEMS), fuel flow monitoring, material balance methods, periodic monitoring and parametric monitoring

If events occur that result in data gaps, or it is not feasible for the operator to obtain prescribed or preferred data for any given quantification method, the ministry is proposing that a conservative estimate (i.e., one that would err on the side of higher emissions) be used to approximate the emissions for the relevant time period. Descriptions of data gaps and the approaches used to address those gaps would be required to accompany the applicable submission to the ministry.

The proposed regulation will include a defined approach to the quantification of thermal electricity import emissions, where a first jurisdictional deliverer (FJD) approach will be used.³⁹ Simplified quantification methodologies for biomass combustion emissions will be examined by the ministry for suitability and inclusion in the regulation. In the event that a quantification methodology is not prescribed for a source category, the operator of a facility would be required to report the emissions using valid quantification methods,

³⁹ For sources within WCI jurisdictions, the FJD would be the generator. For power that is generated outside the WCI jurisdictions for consumption within a WCI partner jurisdiction, the FJD would be the first entity that delivers that electricity over which the consuming WCI partner jurisdiction has regulatory authority.

with documentation and rationale for choice of methods submitted with the report.

The ministry is aware that the selection of some quantification method(s) may impose obligations and costs on specific facilities to install and calibrate CEMS or other monitoring equipment and is seeking specific comment on how best to address these considerations in developing and implementing the regulation.

If any data gaps, methodological errors or issues are identified by a facility operator, its verification body or the ministry, the operator would be obliged to address the concerns and resubmit the revised report to the ministry within six months (of the operator's receipt of the information).

The ministry is considering allowing facilities to be able to use "de minimis" emissions quantification methods in some source categories. These are less complex than other methods and conservative in their estimation of emissions. The ministry is proposing that such methods may be used where the sum total of the de minimis emissions is less than a small percentage (e.g., 3 per cent) of a facility's total emissions in the calendar year (and does not exceed a specified threshold, such as 5 000 tonnes CO₂e).

Estimates for 2008 and prior calendar years would be made using the reporter's choice of quantification methods. If a facility reported to Environment Canada under Sections 46 or 71 of the *Canadian Environment Protection Act*, or to Metro Vancouver, for the 2006 (or subsequent) calendar year, this information may simply be submitted to the (B.C.) ministry – so long as the emission quantification methods are appropriately documented and submitted in accordance with the provincial regulation.

7. Verification

The proposed regulation will include provisions for verification of reporting information. Facility operators who have submitted emission reports to the ministry will be required to also undertake and have verification documentation prepared and submitted by an accredited verifier to review and substantiate

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applicable quantification methods and content of the emission report (see also section 8.3 below).

Beginning with the emissions reports for the 2010 calendar year, facilities with WCI cap and trade program allowance compliance obligation (i.e., those with over 25 000 tonnes of greenhouse gas emissions in any given year – excluding CO₂ biomass emissions), would be required to obtain “third party” (independent) verification for their reported emissions.

The proposed regulation will include a requirement that verifiers be accredited by a recognized accreditation body, such as the Standards Council of Canada⁴⁰ (e.g., accreditation could be for the use of ISO 14064-3⁴¹). Verification providers may also be subject to a time-limited relationship with any single facility or company (i.e., the same verification body would not be able to verify reporting data at a given company’s facilities for longer than a six year time period).

The ministry intends to establish standard protocols for verification, utilizing those developed by a regional cap and trade program, such as the WCI. These standards will likely be based on California Air Resource Board mandatory reporting⁴² and The Climate Registry’s general verification protocol.⁴³ For example, site visits would be required during the verification process.

The ministry is examining whether those facilities and source categories associated with more complex and/or variable operations and/or emission calculations will be subject to more detailed verification requirements

The ministry will work with other jurisdictions in the regional cap and trade program to ensure that sufficient verification capacity is developed.

⁴⁰ See: www.scc.ca/en/programs/ghg/index.shtml

⁴¹ See: ISO 14064-3:2006 Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions.

www.iso.org/iso/catalogue_detail?csnumber=38700

⁴² See: www.arb.ca.gov/cc/reporting/ghg-ver/ghg-ver.htm

⁴³ See: www.theclimateregistry.org/downloads/GVP.pdf

8. Reporting Process

8.1 Obligation to register and report

All facilities with a sum total of 10 000 tonnes or more of greenhouse gas emissions (including CO₂ biomass emissions) from all covered source categories will be required to register and report such emissions to the ministry. The proposed regulation will identify the “operator” of a facility as the person responsible for reporting and attesting to the accuracy of the emission information.

Registration will involve identifying to the ministry (electronically and without fee) that a facility is likely to be covered by the regulation, and providing contact information for the operator and basic descriptive information regarding the facility.

A facility operator not covered by the regulation may wish to document emissions and establish a reporting record to support corporate or communications objectives. In such cases, an operator may voluntarily submit a report to the ministry.

If, after registration, an operator finds that their facility is not subject to the regulation (i.e., if annual emissions from the facility are below the levels required for reporting under the proposed regulation), he or she would inform the ministry by submitting a completed declaration of non-applicability form.

The regulation will require operators of facilities to provide information in their possession and information to which they may reasonably be expected to have access (including estimates based on that information). Specific information categories for reporting information required under the proposed regulation will include:

- ◆ Administrative information;
- ◆ Greenhouse gas and fuel use data;
- ◆ Source and activity data, including inputs and feed stocks, production, cogeneration, equipment specifications;
- ◆ Quantification methods used for reporting; and
- ◆ GHG emission reduction activities taken.

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The proposed regulation will specify the information that is required to be reported for each source category. As well as common reporting requirements, there may be additional specific requirements for specified source categories. For example, operators of smelters that have both stationary fuel combustion and industrial process emissions may have distinct reporting requirements associated with each of the emission sources.

8.2 Electronic submission

The proposed regulation will require electronic submission of required reporting information (including emissions, activity, supporting documentation and other data) to the ministry – with a digital dated and signed declaration from the signing officer(s) of facilities (the “operator”) confirming that the information is accurate and complete.

Electronic reporting formats (using templates) would wherever possible be compatible with other WCI jurisdictions, as well as Environment Canada practices. Guidance documents will likely be developed to assist in the reporting process.

British Columbia may share reporting data, as appropriate, with a central co-ordinating body or reporting registry (within or outside Canada) for participation in a regional (or other) cap and trade system.

In implementing the regulation, the ministry will develop and provide electronic forms for documents required for submission – including facility registration, declaration of non-applicability, report delivery date extension, information not available and verification.

8.3 Milestones for registration, reporting and verification

The proposed regulation will require operators to report emissions beginning with the 2009 calendar year (from January 1 to December 31 2009 inclusive). Facilities with emissions over 20 000 tonnes CO₂e (excluding CO₂ biomass emissions) will also be required to provide their best estimates of GHG emissions by source category for the 2006 through 2008 calendar years.

Registration

All facility operators who reasonably expect to be subject to the reporting regulation for calendar year 2009 will be required to register with the ministry by July 15, 2009. For subsequent years, all facilities that are newly subject to regulation would have to register (emissions for the previous calendar year) by January 30 of the calendar year in which they will be reporting.

Reporting

Under the regulation, initial best available data on emissions will be required for facilities with emissions over 20 000 tonnes CO₂e (excluding CO₂ biomass emissions for the 2006 through 2008 calendar years). This data will be required to be submitted to the ministry by August 30, 2009. Data for the 2009 calendar year will have to be submitted by June 15, 2010. For subsequent years, reporting information will be required to be submitted by April 1 of the year following the reporting calendar year for electricity generation and facilities with only stationary combustion sources. For all other source categories, reporting would be required by May 1 of the year following the reporting calendar year.

Verification

Reporting parties will be required to arrange for verification and ensure that an accredited verifier completes and submits any required statement of verification. A statement of verification will be required within five months of the delivery date of the 2010 and 2011 calendar year emissions reports – and within one month of submission of the annual report for 2012 and subsequent calendar years. No verification will be required for any of the 2006 to 2009 calendar year reports or for facilities with no allowance compliance obligations.

Extension

The proposed regulation will include provisions for the ministry to grant an extension of a specified time period to submit the required information, given suitable cause. For example, an operator of any facility reporting for the 2006 to 2008 emissions years may submit a request in writing to the Director for consideration of an extension.

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8.4 Reporting fees and costs

The ministry does not intend to require a registration or other fee for submission of registration, reporting or verification documentation to the ministry.

8.5 Compatibility with existing and emerging emissions reporting

Some facilities in British Columbia are currently required to report greenhouse gas emissions to Environment Canada under Sections 46 and 71 of the *Canadian Environment Protection Act*. Additional reporting requirements may also be prescribed under the federal government's draft Regulatory Framework for Industrial Greenhouse Gas Emissions. As well, some facilities are required to report greenhouse gas emissions to Metro Vancouver.⁴⁴ The ministry intends to work with Environment Canada and Metro Vancouver to ensure compatibility of both existing and emerging reporting requirements. Potential linkages could include, for example, cooperation on reporting windows and data sharing.

9. Public Disclosure

Annual summaries of greenhouse gas emissions emitted by facility, gas and major source category, verification summaries and other information will be compiled by the ministry and posted for public information. Any public sharing of summary data would be subject to short-term embargo prior to a common report posting date. The province may also forward more detailed reported data to a central coordinating body for a regional cap and trade system.

The ministry does not intend to disclose proprietary or other information collected under the proposed regulation in a manner that could compromise business competitiveness. Reporting information may, however, be aggregated and shared as appropriate with regional or other coordinating bodies to support efficient market functioning, transparency and oversight.

⁴⁴ See: www.metrovancouver.org/services/air/emissions/Pages/default.aspx

Any information submitted may be subject to disclosure based on the provisions of the *Freedom of Information and Protection of Privacy Act*.⁴⁵

10. Compliance and Enforcement

10.1 Reporting and record keeping

Operators of applicable facilities will be legally obligated under the proposed regulation to provide the ministry with applicable greenhouse gas emission information in their possession, information to which they may reasonably be expected to have access, and information obtained through prescribed quantification and verification methods. Information that will be required to be submitted to the ministry includes registration, annual reporting and verification. Operators will be required to retain all facility greenhouse gas reporting documents and records for a minimum of seven years following submission date.

10.2 Compliance promotion

In keeping with ministry practice, a strategy for compliance promotion will be developed for the proposed regulation. The strategy will be developed in cooperation with facilities, industry associations and other interests. Compliance promotion may entail training for ministry staff, as well as information and the development of reporting guidelines, interactive improvement and refinement of the regulation, a reporting help desk and site visits.

10.3 Compliance enforcement

To ensure integrity of submitted data, the ministry (or parties designated by the ministry) will undertake electronic or manual quality assurance checks in accordance with compliance monitoring policies.

The proposed regulation will include provisions that enable the ministry (or parties designated by the ministry) to undertake periodic, risk-based and/or random audits – including site visits to ensure both the proper operation of monitoring systems and accuracy and completeness of reported information.

⁴⁵ See: www.qp.gov.bc.ca/statreg/stat/f/96165_01.htm

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The ministry is also committed to using verification and audit data to guide the ongoing management and development of the cap and trade program. Inspection powers would be created by regulation, similar to those powers contained in the existing *Environmental Management Act*.

10.4 Enforcement measures and penalties

Potential ministry responses to non-compliance with provisions of the regulation might include written advisories or warnings, requests for further information, investigations, directives, administrative penalties and/or prosecutions. The choice of response will be based on ministry compliance and enforcement policy.

The ministry is considering at what point(s) enforcement action (such as penalties applied) would be taken for items such as failure to submit a report, missing data or documentation, failure to provide a re-estimate or using non-approved quantification methodologies (i.e., “administrative errors”).

The *Greenhouse Gas Reduction (Cap and Trade) Act* sets out offence provisions relevant to the proposed regulation. For example, failure to submit emissions reports or supplementary reports could result in a fine of up to \$1 000 000, imprisonment for up to 6 months, or both. Similar consequences would apply where a person is convicted of obstructing, resisting, or failing to comply with a direction given by, a director or inspector under the Act.

If a corporation commits an offence, officers, directors, or agents of the corporation who authorized, permitted, or acquiesced to the offence may be held liable.

11. Providing Comment

The ministry is presently engaged in consultations with stakeholders on GHG reporting through the activities of the Climate Action Secretariat, the Ministry of Environment and the Western Climate Initiative.

Comments regarding the proposed intentions of the ministry outlined in this intentions paper are being solicited for a 45-day period. Following review of comments and submissions, the ministry will complete legal drafting of the amendment for legislative review and implementation.

Comments received will be treated with confidentiality by ministry staff and contractors. Please note that 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) 598-9947

**Comments to the ministry should be made on
or before November 28, 2008**

*Thank you once more for your time
and consideration*

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Appendix A: Acronyms and Abbreviations

Acronym or Abbreviation	Definition
ANSI	American National Standards Institute
B.C.	British Columbia
CARB	California Air Resources Board
CEMS	Continuous Emission Monitoring Systems
CEPA	Canadian Environmental Protection Act
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COI	Conflict of Interest
CSA	Canadian Standards Association
EC	Environment Canada
EPA	Environmental Protection Agency
EU	European Union
EU ETS	European Union Emissions Trading Scheme
FJD	First jurisdictional deliverer
FOI	Freedom of Information
GGRTA	Greenhouse Gas Reduction Targets Act
GHG	Greenhouse Gas
ICAP	International Climate Action Partnership
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
MOE	Ministry of Environment
NCASI	National Council for Air and Stream Improvement
RGGI	Regional Greenhouse Gas Initiative
U.S.	United States
UK ETS	United Kingdom Emissions Trading Scheme
UNFCCC	United Nations Framework Convention on Climate Change
WCI	Western Climate Initiative
WCSBD	World Business Council for Sustainable Development
WRI	World Resources Institute

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Appendix B: Preliminary Definitions

These preliminary definitions from the Western Climate Initiative Essential Requirements background document, or elsewhere as noted, are provided to provide context for the intentions paper. It is expected that the list will be greatly expanded and the current definitions modified as both the Essential Requirements piece and the regulation are developed. During this process, harmonization with Environment Canada definitions will be addressed where possible.

“Continuous emissions monitoring system” or “CEMS” means the total equipment required to obtain a continuous measurement of a gas concentration or emission rate from combustion or industrial processes.

“Facility”⁴⁶ means any property, plant, building, structure, stationary source, stationary equipment or grouping of stationary equipment or stationary sources located on one or more contiguous or adjacent properties, in actual physical contact or separated solely by a public roadway or other public right-of way, and under common operational control.

“Stationary combustion unit” means any boiler, heater, furnace, kiln, turbine, internal combustion engine, incinerator or other non-mobile source device that combusts any solid, liquid, or gaseous fuel for purposes of producing useful heat or energy for industrial, commercial, or institutional use; or for purposes of reducing the volume of waste by removing combustible material.⁴⁷

“Carbon dioxide equivalent” or “CO₂ equivalent” or “CO₂e” means a measure for comparing carbon dioxide with other GHGs, based on the quantity of those gases multiplied by the appropriate global warming potential (GWP) factor and commonly expressed as metric tons of carbon dioxide equivalent.

“First jurisdictional deliver”, For sources within WCI jurisdictions, the FJD would be the generator. For power that is generated outside the WCI jurisdictions for consumption within a WCI partner jurisdiction, the FJD would be the first entity that delivers that electricity over which the consuming WCI partner jurisdiction has regulatory authority

“Greenhouse gas”, “greenhouse gases” or “GHG” means carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

“Global warming potential” or “GWP factor” means the radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time.

“Hydrofluorocarbons” or “HFCs” means a class of GHGs primarily used as refrigerants, consisting of hydrogen, fluorine, and carbon.

“Perfluorocarbons” or “PFCs” means a class of greenhouse gases consisting on the molecular level of carbon and fluorine.

⁴⁶ The regulation may include specific definitions for some categories of “facilities” – such as upstream oil or gas production, electricity import, electricity transmission and spatially disaggregated facilities (e.g., mines).

⁴⁷ The intent is to require any collection of stationary combustion units, located at any facility, that collectively emit 10 000 tonnes of CO₂e on an annual basis, to report emissions. In other words, the requirement would apply to any individual stationary combustion unit, or any collection of units, whether or not they are located at a source-specific category facility addressed by this rule. Biomass-fueled units are included but would be reported separately.