

Industry – Provincial Offset Group (IPOG)

Final Report

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Representatives of the participating organizations were engaged in some or all of the consultations that led to the development of this document. This document represents a consensus (66% + 1%) of the discussions but it does not necessarily represent in whole or in part the policy positions of these organizations.

Executive Summary

This report represents the majority view of the Industry Provincial Offsets Working Group (IPOG), a group of representatives from provincial governments, industry and service providers. IPOG was formed to develop useful, constructive recommendations on the design elements of a domestic offsets system that reflect the needs of those engaged in reducing and removing greenhouse gas emission (GHG) across Canada. This final report represents the recommendations of the more than 50 participating organizations engaged in the process over the last half year.

IPOG believes a beneficial and early start to a Canadian offsets system can be achieved by adopting and adapting existing processes and documentation, by refining the system through learning by doing and by drawing on the wealth of experience Canadian organisations have at home and abroad. This report presents IPOG's recommendations on principles to guide a domestic offsets system, desirable traits of an offset system such as linking to other systems and incenting a broad spectrum of emission reduction and removal activities, as well as a balanced approach to the competing objectives of an offset system. This report also provides input on designing the steps offset suppliers must take to create a compliance unit. Because of the central role quantification plays in an offset system, IPOG has developed a checklist to provide a means of assessing existing protocols that should be used in the start up stage of a Canadian offset system. A separate appendix, to be included shortly, discusses the role and function of a registry and the marketplace.

Going forward, IPOG has identified the following three areas of immediate interest/opportunity that should be prioritized:

- 1) Meaningful representation by provinces, industry, and other stakeholders on near term and longer term decisions related to offsets.**
- 2) Use of existing processes and experience where possible to ensure speedy implementation of the system, e.g. use of adjusted Clean Development Mechanism (CDM) protocols etc.**
- 3) Use of an approach that drives timely project launch and incents small, medium and large scale projects.**

Introduction

This report was developed by industry, provincial, service providers and other stakeholders to provide the federal government with technical input on a domestic greenhouse gas offsets system. There is a common belief that a domestic offset system for greenhouse gases is a cost effective compliance mechanism for regulated entities and provides important benefits to a broad range of economic sectors and to Canadian society. Given this, industry proponents, provincial regulators and other stakeholders have a strong interest in the development of a robust, coherent national offset system that meets emerging policy needs, including provincial actions and Federal *Clean Air Act* objectives.

As the Notice of Intent to Develop and Implement Regulations and Other Measures to Reduce Air Emissions (October, 2006) clearly notes, the private sector can play a significant role in the establishment of an emissions trading system, including an offset component, for Canada. Industry proponents (including service providers) bring a wealth of direct practical experience in project design and implementation from within Canada and internationally. Provincial governments bring expertise in offset project¹ development issues and a desire to include offsets as part of a system that helps meet provincial expectations on climate change.

Recognizing the importance of having a workable offset system, the Industry-Provincial Offsets Group (IPOG) began in June 2006 as a group of approximately 20 representatives from Provincial Governments and industry associated with a significant percentage of large industrial emitters' greenhouse gas emissions to discuss the technical elements of GHG Offset Systems and the Canadian context. Co-chaired by Spectra Energy and Alberta Environment, the objective of the group is to serve as the principal process to develop useful, constructive recommendations on policy options that reflect the needs of those who will be engaged in reducing greenhouse gas emissions across Canada through a domestic offset system.

Based on this work (Provincial – Industry Offsets System Working Group: Workshop Report – July 2006) a second phase of the process began in late summer aimed at building consensus around unresolved issues and furthering development of the technical elements of an offset system. Working Group meetings to conclude this technical work have included participants from a broad spectrum of private sector and public sector interests, including industry, environmental, project proponents, service providers as well as the provinces of BC, Alberta, and Manitoba, Ontario and Quebec (as observers). Participants have experience in the development of components of the Canadian offset system (including PERT, GERT and PERRL) and had a working knowledge of the European Union Emissions Trading System (EUETS). Several of the participants have actual emissions trading experience and involvement in emission reduction projects.

The final results of discussions are provided in this report. This document is not a policy position paper, nor is it a recommendation for a “rules re-write”. Instead, it is a reflection of common needs and expectations around a domestic offset system with the intent to engage in further

¹ Learnings to-date indicate that while offset projects in general should be subject to a common system, including the elements of the standard project cycle, certain activities, such as biological sequestration, may warrant unique approaches (including estimation and verification procedures) for providing a consistent level of assurance around associated removals/reductions but in a manner that more appropriately reflects environmental, temporal, technical and/or other dimensions of such actions.

policy development where areas in need of discussion remain among the engaged stakeholders and the Federal Government.

Some basic conditions were assumed by participants in conducting discussions:

- A regulatory framework aimed at reducing Canadian greenhouse gas emissions is inevitable.
- A market based mechanism is a cost effective method for achieving reductions across the economy.
- The proper design of the market-based mechanism is key to its success
- An offsets program designed to complement any targeted industry reductions through regulation is a necessity
- The integrity of an offsets program can be balanced with efficiency to support a robust, liquid carbon market in Canada.
- A staged approach to an offset program in Canada will promote adaptability of participants, build capacity and confidence to employ new technology and develop offset projects, and achieve low cost reductions through increased efficiency in the carbon market.
- Readily available and cost effective protocols (or standard methodologies) are essential to the efficient functioning of an offsets system.
- Implementation should be sooner rather than later, to allow regulated entities and other program participants (and the government) gain valuable experience and knowledge through “learning by doing”.

With regard to the working group meeting formalities please note that;

- Not every individual voted on every issue
- Not every group voted on every issue
- Consensus is defined as 66% + 1 of participants in a meeting
- Where consensus, as defined above, was achieved but significant alternate views exist, this report provides those views in footnotes
- Detailed meeting notes are available but not presented here

Going forward, IPOG has identified the following three areas of immediate interest/opportunity that should be prioritized:

- 1) Meaningful representation by provinces, industry, and other stakeholders on near term and longer term decisions related to offsets.**
- 2) Use of existing processes and experience where possible to ensure speedy implementation of the system, e.g. use of adjusted Clean Development Mechanism (CDM) protocols etc.**
- 3) Use of an approach that drives timely project launch and incents small, medium and large scale projects.**

Key Principles - Principles Working Group Contribution

Out of the first IPOG Workshop in June it was established by consensus that the Canadian Offset System should be built around the following five principles identified in the Offset System for Greenhouse Gas Overview Paper –2005 (Environment Canada):

- Environmental benefits (real reductions)
- Transformational change
- Maximum scope
- Administratively simple
- Build on existing programs

It was later felt that the Principles should be expanded upon. The following Key Principles were developed by a sub-set of the broader IPOG and have been agreed to by the participants group.

Key Principles should guide the development, implementation and delivery of an effective and efficient offset system that supports, with integrity, the achievement of associated environmental outcomes. Consideration and application of these Key Principles must recognize that:

- While each specific principle element is important as a stand-alone item, they must be considered in the context of one another as an integrated package of ideas and concepts serving to mutually support each other.
- They reflect the desired attributes of a national system that is fully functional and in operation. Initial implementation must reflect the spirit of these Key Principles, but include appropriate flexibility upfront to initiate a system that recognizes and integrates as appropriate with other existing or planned climate change policies in Canada to support a coherent national system that will be improved over time to reflect these attributes.

Administratively Simple: The Offset System, including consideration of design, implementation and key functions, should be administered in a simple, cost-effective and timely manner.

Maximum Scope: The Offset System should, over time and to the extent practical, promote and enable projects in all sectors and of all types and size.

Building and Linking: The Offset System should seek to maximize efficiency and resources by building on and linking with existing programs and trading systems.

Transformational Change: Offset System design should support transformational change throughout all sectors of the economy and society in such a way that emission reductions and removals are a part of daily decision-making by Canadians. This change will be enabled, in part, by the deployment of proven, enhanced and innovative technologies with support from public education, regulatory and other policy direction to drive the behaviors necessary to contribute to overall reductions.

Environmental Benefits: To be eligible for offset credits a project must result (with high confidence) in lower greenhouse gas emissions or higher greenhouse gas removals. Other environmental benefits and impacts must also be addressed when considering project eligibility.

Transparency and Accountability: To earn public confidence and mitigate conflicts of interest, the Offset System must maximize opportunities for public scrutiny and input at the level of individual projects; and ensure robust, independent verification of emission reductions and/or removal enhancements while respecting confidential business information.

Ongoing participation in system development

Industry proponents, provincial regulators and other stakeholders have an interest in developing a robust offset system that meets Federal climate change objectives. A system that allows the experience of these stakeholders to be represented at decision making tables on an ongoing basis would seem to make sense from a regulatory efficiency point of view. Such an arrangement offers immediate input and options as new issues or review items come forward. As a result of the work done to date, IPOG feels they could contribute to the Federal Government's Offset System development process and would appreciate the opportunity to become more engaged on a going forward basis.

Supply and Demand

The fundamental driver of an active trading system is the creation of demand and provision for supply of emission reductions. Demand is driven by regulated reduction requirements for emitters with relatively higher cost abatement options. Supply is created by entities with lower cost abatement options and participants with project-based abatement options outside the scope of regulated operations.

There was agreement that without well defined demand for emission reductions/removals enhancements driven by emitters seeking low cost methods to reduce GHG emissions to meet regulated targets, the Canadian offset market would be constrained to meeting voluntary reductions and not offer the prices necessary to incent meaningful activity.

There was further consensus that;

- Demand in the 2010 – 2015 timeframe would be timely enough to drive a domestic offset system.
- The anticipated regulatory framework would be sufficient to drive a domestic offset system.

Project developers will require certainty that there will be demand for their products (offsets) and without a system in place to demonstrate the volume of that demand, projects that are largely reliant on greenhouse gas offset sales to be attractive to investors will not secure financing.

Fungibility

Liquidity (broad, deep supply and demand) drives real price discovery (see price discovery section below) and for greenhouse gases that leads to economically efficient compliance. Offset sellers wish to achieve reasonable return on their investment. Offset buyers wish to achieve compliance at reasonable cost. Artificial barriers to commodity exchange and complex trading rules across multiple jurisdictions create opportunities for arbitrage.

Due to the potentially small size of the Canadian offset market (supply and demand), it is important that Canadian buyers and sellers have access to as much flexibility and fungibility as possible. Enabling access to broader and deeper international markets will incent suppliers

(project developers) to bring forward projects to meet not only the demand of the Canadian (constrained) market but global (broad as possible) demand. Furthermore, Canadian buyers will be able to balance a multinational portfolio that leverages made-in-Canada emission reduction projects and international investments.

To achieve a supply/demand and cost/benefit balance there was agreement on the following:

- No constraint should be placed on the ability of the project developer to sell Canadian offsets into any market that will accept them.
- No constraint should be placed on the ability of external (foreign) credits (e.g. Certified Emissions Reductions (CERs) or Emission Reduction Units (ERUs) conformant with Canadian offset system requirements to trade into the Canadian market.
- Canada should actively facilitate the exchange of Joint Implementation (JI) and Clean Development Mechanism (CDM) emission reductions into and out of Canada.
- To ensure domestically approved offsets are available for the 2010 – 2015 timeframe, the Federal Government must get moving now (and worry about where credits go later).
- The Federal Government should understand that the more robust / compatible (to other international programs) an overall domestic trading system is the more options will exist for linking.

Timeliness, Integrity and Cost

Commerce is guided by an existing body of standards, policies and laws to create an efficient market and that there is no need to deviate from this guidance to establish a domestic emissions trading market. The Offset System faces the challenge of operating in a timely and cost effective manner while ensuring quality projects are approved/registered and credible reductions/removals issued. There needs to be a realization of the traditional trade-offs between the practicalities of ***cost-time-integrity***.

It requires a great deal of effort from both the government and the project proponent to develop a project and bring it through the offsets system. It is vital that the correct balance between ensuring robustness, timeliness and cost burden is found. The elements of cost-time-integrity carry through the discussion topics that follow as well. The majority of participants viewed these elements as being of equal priority.

COST –

Minimize transaction costs: Within a market based mechanism all the costs associated with project administration will ultimately be passed on to the “final buyers”. Higher transaction costs will increase the cost of compliance. Minimizing the administrative cost burden is essential to ensure an efficient market.

Cost disclosure: Project developers bringing forward projects must have a clear understanding of the associated costs to be borne by them (application fee, validation fee, certification fee, and registration fee, etc...). Project developers will NOT submit projects without an understanding of the costs. Thus all “fees” should be defined clearly as soon as possible.

TIMELINESS –

Minimize project approval time: the project documentation development, validation, public review and registration (expert review) are important and the time associated with the process will be material. Minimizing the time associated with “approving” projects is essential to ensure an active and liquid market.

Time Disclosure: A timeframe for project review and approval should be defined and disclosed in the form of a guaranteed turnaround time.

INTEGRITY –

Canadians and international markets will demand the offset system be based on real reductions. Attempts to allocate offset value to a project based on anything except actual real reductions will reduce the integrity of the domestic offset system and affect Canada's reputation in international markets.

To ensure the public, project proponents and potential buyers trust in the integrity of an offset system, all emissions reductions should meet the following offset criteria identified in the Offset System for Greenhouse Gas Overview Paper –2005 (Environment Canada):

- Quantifiable
- Real
- Surplus
- Verifiable
- Unique

Phased Implementation

To expedite the Offset System process, a phased implementation of the program should be adopted and initiated immediately with scheduled review and improvement. To date the good has been the victim of the search for perfection. Based on the aforementioned principles and the rules common of all offset existing systems (real, quantifiable, surplus, verifiable, unique) a functioning offsets system could be implemented in short order.

In view of a 2010 – 2015 timeframe for defined demand for emission reductions (ERs) and removal enhancements (REs) driven by emitters seeking low cost methods to reduce GHG emissions to meet regulated targets, the Canadian offset market should be launched January 1, 2008. A baseline year from which offset projects are accepted needs to be determined. This start date would provide an extremely useful 2 year pre-compliance period for development and improvement. This period is strongly recommended to test the offset system and allow for creation of compliance units to meet demand.

Protocols

The goal is to move towards as deep and wide participation in reduction activities as possible. However it is important to note that such a system would not create different types of credits as it is recognized that a functional and effective market is dependent on all credits being equal. It is clear that small projects with relatively low returns simply cannot withstand a very costly, high overhead regulatory framework. To ensure maximum scope of transformational change, an approach must be designed that balances administrative burden against project size such as the approach taken by the CDM fast track process enable smaller projects. Aggregating or pooling similar small projects together is another method of addressing this issue.

ER/REs are quantified based on the difference between emissions in a baseline scenario (representing emissions in the absence of the project) and emissions in a project scenario (emissions where the project is in place). Per the project cycle in Figure 2, each project in the

offset system must define and defend a methodology for quantifying emission reductions. To ensure consistency in the treatment of similar projects, reduce time and costs (i.e. promote efficiency) and avoid every project developer with a similar project from having to develop a quantification methodology, a library of protocols (or offset system quantification methodologies) are typically a component of an offsets system. Much work has been done in the development of these standardized methodologies for various offset systems and there are now some 70 distinct protocols available (predominantly via the CDM) internationally.

There was general agreement that:

- Protocols (or standard methodologies) are essential to the efficient functioning of an offsets system. A library of Protocols/ Approved Methodologies (AM) should be developed².
- Based on CDM experience, protocol/Approved Methodologies (AM) development is an expensive and time consuming process. The CDM is a source for numerous expert and publicly reviewed quality protocols. To expedite the offset system objective of incenting project development and generation of ERs, CDM protocols (AMs) should be adapted for Canadian circumstance and adopted immediately for use by domestic project developers. Work has also been done by provincial, territorial and the federal government on quantification protocols through the National Offsets Quantification Team (NOQT), which also should be considered in a future offset system. The Federal Government will need to define the reference against which protocols and methodologies will be adapted (Refer to Appendix C: Quantification Protocol Checklist – Working Group Contribution).
- Existing protocols should be reviewed and those deemed eligible identified as compliant and appropriate in the Canadian context. Both the Federal Government and recognized third parties should play a role in determining eligibility.
- Existing/appropriate standards that align with the requirements of the quantification protocol/methodology filter mechanism should be adopted for the following;
 - Project documentation
 - Offset project eligibility criteria
 - Validation and verification (see section below)
 - Validators and verifiers (see section below)
- Canadian offset projects should not be obliged to undergo a CDM type Environmental Impact Assessments (EIAs), as this clause was meant to apply to developing nations that do not have well developed guidelines and requirements to guard against projects with significant negative environmental impacts (e.g. EIA) such as those in Canada.
- A staged process for Federal Government approval (registration) of projects should be implemented allowing for projects conformant to CDM AMs (or other adequate methodologies) to start now and receive “credit”. In the mid term (2/3 years) adopted protocols can be adapted to meet Canadian needs – standard, simple, made in Canada. New protocols can be developed by project developers (or industry) and submitted for approval by the Federal Government.

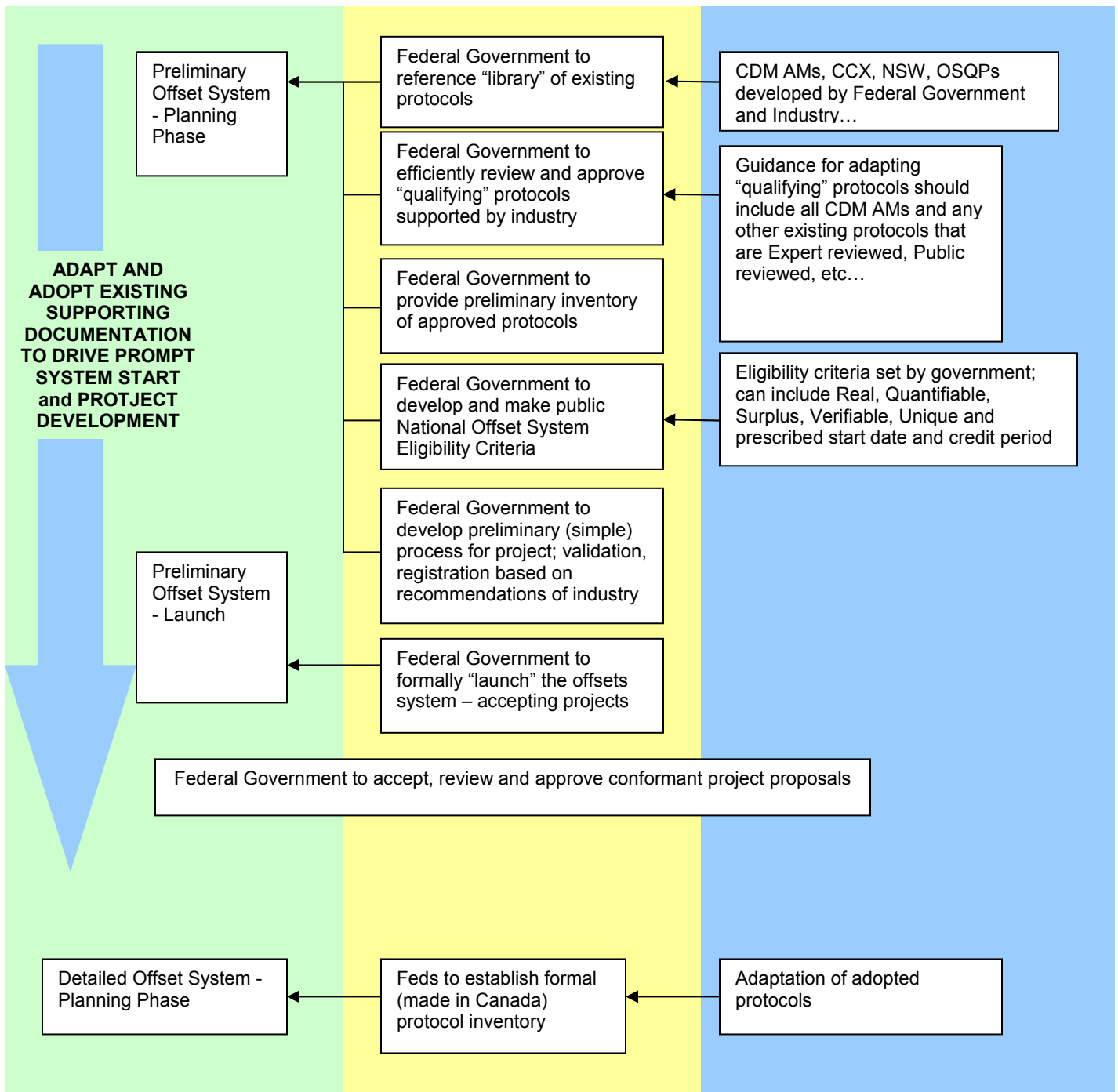
² A library of protocols and methodologies has been developed by Climate Change Central called the Protocol Catalogue: http://www.climatechangecentral.com/protocol_catalogue.html .

- To facilitate the use of existing protocols, the development of new protocols and adaptation of adopted protocols, the Federal Government must define project eligibility criteria (Real, Quantifiable, Surplus, Verifiable, Unique, along with start date and credit period) as soon as possible.
- An efficient and transparent process involving developers and Government (Federal and Provincial) and other stakeholders should be set up to expedite approval of existing protocols for Canadian use and for approval of novel ones developed in Canada.
- Accuracy should not be the victim of conservativeness where substantiation of emission reductions is based on acceptable practices of commerce, legal or regulatory requirements.
- Public posting (and solicitation of relevant comments) of protocols is essential to ensure transparency and robustness of the process. A mechanism should be put in place to appropriately assess and manage comments.
- A dispute resolution process must be established that acts quickly and decisively to address points of contention (ownership and public comment). This process need not be established and managed by the Federal Government and should involve expert review.
- With regard to industry developed protocols, issues around ownership and proprietary information must be addressed.
- The sub working group on protocols has established a checklist of basic requirements for a filter mechanism that would be used to determine the protocols that could be used in the early phase of a domestic offset system. This approach acknowledges the need for developing a standard for the Canadian system over time. For more information see Appendix C.
- Projects that differ in a few identifiable elements from those with existing applicable protocols should be able to adapt existing protocols and propose a related / alternative approach without having to have the protocol/methodology undergo the complete review and approval process.

Figure 1 below is intended to detail the process. Where agreement was not reached, an attempt has been made to make this clear.

Figure 1 – Protocol Development/Adaptation Process

Provincial authorities and industry have a wealth of knowledge and experience in offsets and is willing to assist in the following process.



Project Cycle

The following is a description of the typical regulation-driven offset project cycle (5 steps). Typically voluntary mechanisms are similar but less prescriptive. It is based on a review of existing/evolving systems.

Project document (PD) development:

Project developers prepare and submit information describing the project (existing or proposed). The PD format can be flexible or prescribed by the Federal Government. Examples of PD requirements can be found in the CDM Guidelines for completing Project Design Documents (http://cdm.unfccc.int/Reference/Documents/copy_of_Guidel_Pdd/English/Guidelines_CDMPDD_NM.pdf) or within ISO 14064-2: *Specifications for the quantification, monitoring and reporting of project emissions and removals*.

There was consensus that;

- Project developers should develop documented project information.
- The Federal Government should not be required to develop a standardized quantification protocol, based on a project document, for use by other/future project developers with similar projects.
- Quantification methodologies should be available for free (as opposed to a fee) to other project developers looking to implement similar projects.

There was a lack of consensus on the proposed requirement that the project developers develop a quantification protocol, based on a project document, for use by other project developers.

Project Validation and registration (2 steps)

Validation is the process of independent evaluation of a project activity on the basis of the project design document. A determination is made if the project is in conformance with offset system eligibility criteria and if the quantification methodology is acceptable. Validation can either be a formal requirement of the project cycle or carried out at the option of the project developers as a risk management tool³. Registration is the formal acceptance of the project by the Federal Government. Registration typically relies on a validation process or tool to ensure the aspects described above are addressed. See the section below for more detail on validation/verification elements.

Project development, monitoring and reporting

The project developer constructs or executes the project and collects operational information required to quantify the Emission Reductions / Removal Enhancements (ERs / REs) per the project document.

Verification, Certification and Issuance of ERs / REs

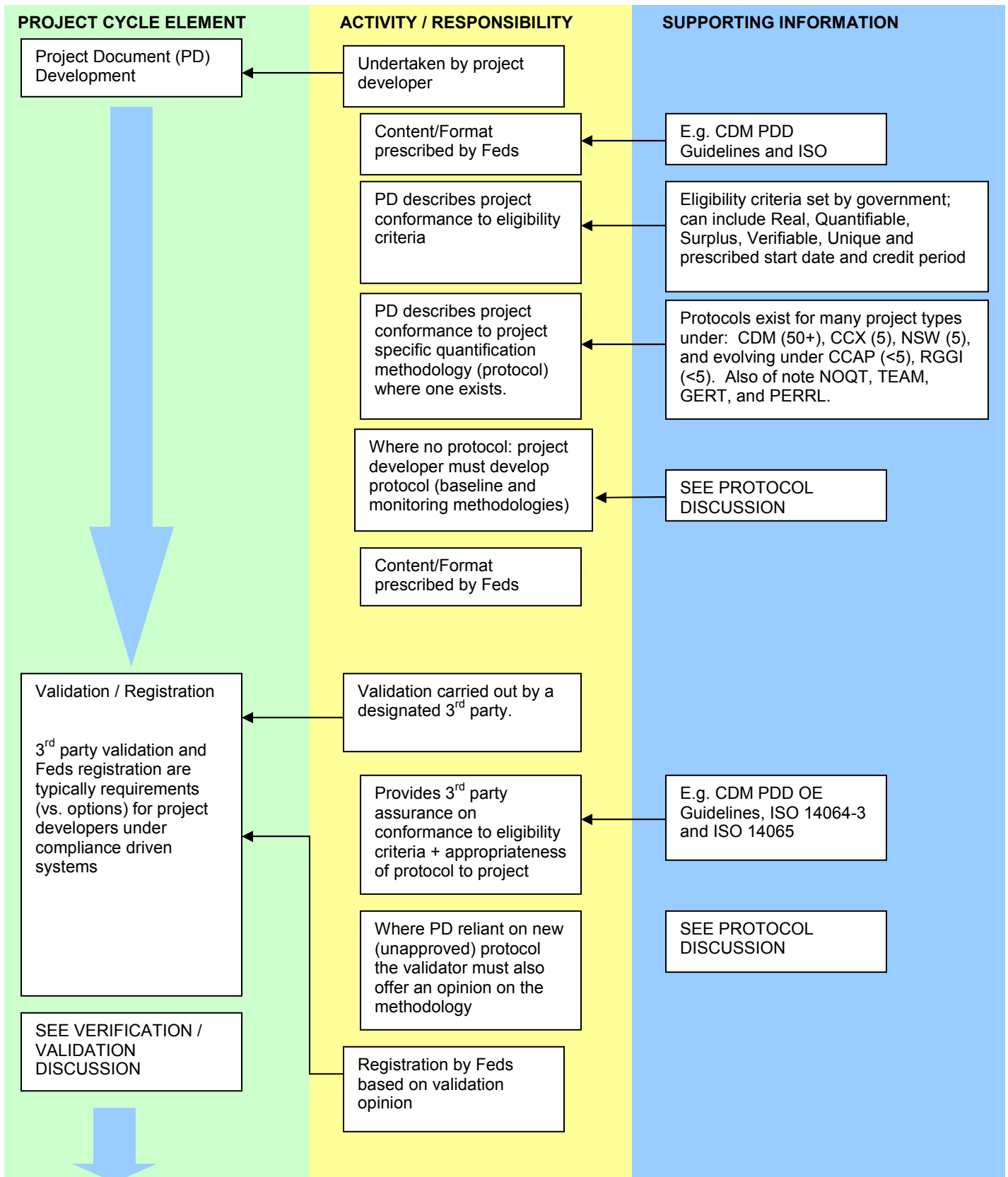
Third party verification is the independent review and ex-post determination of the volume of ERs claimed as a result of the project activity during the verification period (typically annual).

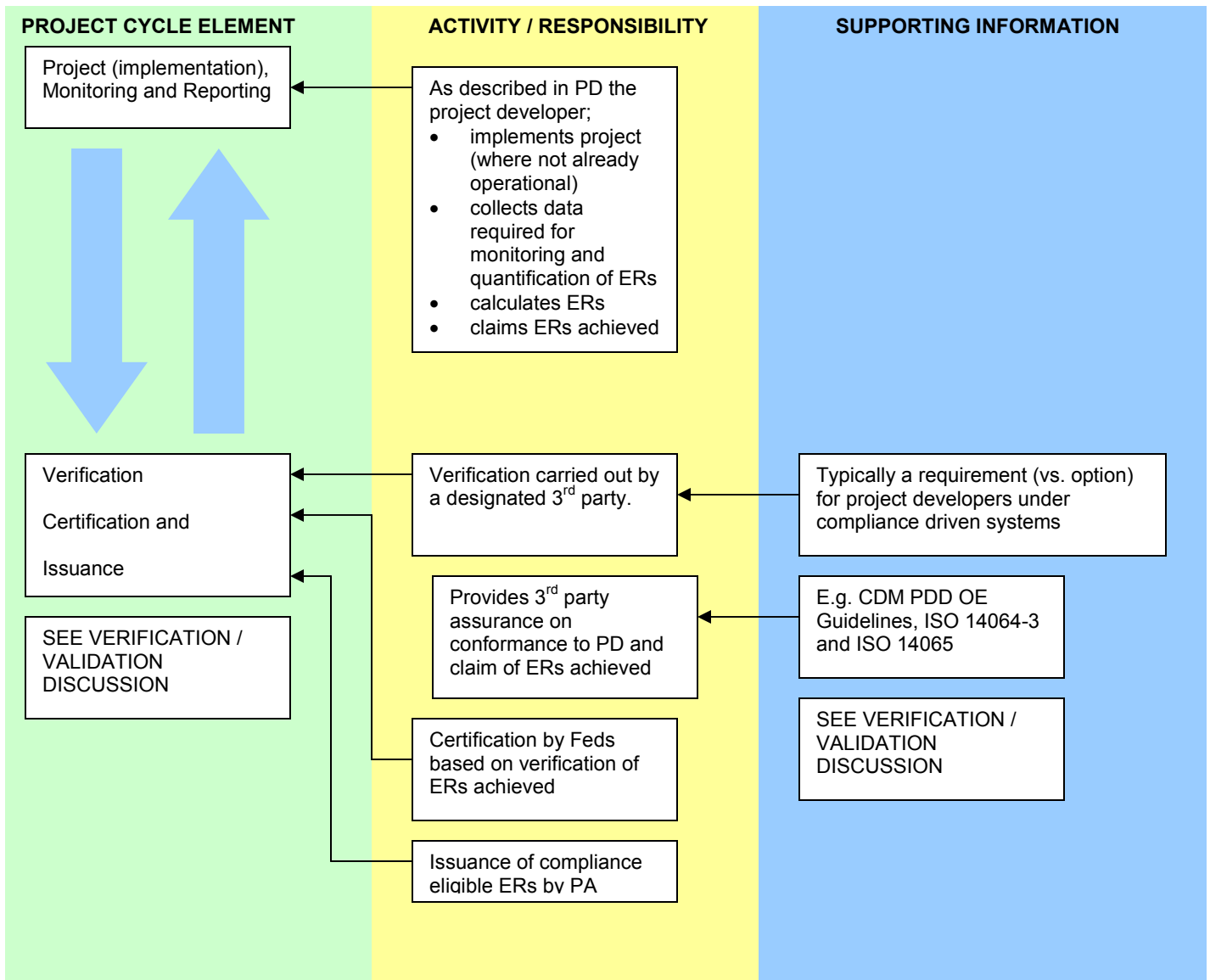
³ After validation public posting of validated projects is typically done to receive public comments on significant issues that will be considered by government authorities prior to project approval/registration.

Certification is formal acceptance (and assurance) of the ERs / REs by the Federal Government. Once certified, the Federal Government issues compliance eligible ER / RE units to the project developers. These units are typically tagged with individual identifiers and are posted on a “registry”.

Figure 2 below details the elements of the project cycle. Where agreement was not reached it has been made clear (ex. Validation as a requirement or option). In addition please refer to related sections of this paper on Verification/Validation and Protocols for more detail.

Figure 2 – Elements of the Project Cycle





Validation and Verification

As discussed above, validation and verification involve the independent evaluation of a project activity on the basis of the project design document (validation) or ex post determination of the ERs / REs claimed as a result of the project activity (verification).

There was agreement that:

- Current capacity to conduct validation and verification in the private and public sector is limited. The early transitional phase of the offset system must reflect this and develop a stable of qualified auditors.
- Validation and verification should be required elements of the project cycle (vs. an option or risk management tool) for project developers.

- The evaluation process (validation and verification) should be carried out and paid for by the private sector.
- The Federal Government should develop a list of “qualified/recognized” firms/individuals or a professional designation. Evaluators should be independent from industry generating or buying compliance units.
- The Federal Government should adapt (vs. develop) existing requirements for validators and verifiers. For example, existing requirements include the CDM OE eligibility requirements and ISO 14064-3 and ISO 14065.
- The Federal Government should adopt (vs. develop) and prescribe an approach to validation and verification. For example, existing requirements include the CDM OE requirements and ISO 14064-3.
- Formal project approval (registration) is an essential element of the offset system.

The responsibility for project registration did not have a consensus position; future work will need to bring this to a final position. Specifically there was a lack of agreement on who should carry out the registration – Federal Government or third party. It was felt by many that the Federal Government would have to have final approval over offset projects in order to gain public acceptance and drive accountability. There was consensus that the offsets resulting from a project must be issued by the Federal Government (see discussion on Registry and Marketplace in Appendix B).

There was lack of consensus that validation/verification should follow the “tax” model or the “financial” model. Under the tax model, the report is prepared by the project developer and is subject to spot audit by the Federal Government. Under the financial model, third party verification is a necessary part of the reporting process.

Price Discovery

Price discovery is an important component of any successful trading mechanism especially related to immature market evolution. Price signals drive investment in offset projects and allow emitters to forecast costs and undertake appropriate risk management activities.

There was consensus that:

- There would be demand for market information.
- Confidence in the currency (offset) is extremely important in early markets.
- All project level information should be posted on a privately developed and operated registry. Information relevant for public review and comment (including offsets created) should be made publicly available via the registry.
- The registry should be linked to a privately developed and independently operated exchange. Essential transaction level market information, summarized on a non-confidential level, should be made available through the exchange.

A registry of domestic offsets and a trading exchange are necessities in any offset system. At the second workshop it was felt that the Registry and Exchange are critical elements of the offset system and should be expanded upon. Information was developed by a sub-set of the broader IPOG to initiate discussion. Please refer to Appendix B for their contribution.

Conclusions and Next Steps

There is a common belief held by industry, provinces and other stakeholders that a domestic offset system for greenhouse gases is a cost effective compliance mechanism for regulated entities and provides important benefits to a broad range of economic sectors and to Canadian society. Furthermore the development of a Canadian offset system need not start from a standstill. Experience has shown that project based offset systems have common elements – every attempt should be made to ensure congruency with other existing and evolving systems.

This document is a working paper, with the intent to further refine through engagement of a broader group of interests. It also represents some areas of agreement (and some areas where further work is required) to inform future policy.

In sum, going forward the following three areas are of immediate interest/opportunity and should be prioritized:

- 1) Meaningful representation/contribution by provinces, industry, and other stakeholders on near term and longer term decisions related to offsets.**
- 2) Use of existing processes and experience where possible to ensure speedy implementation of the system, e.g. use of adjusted CDM protocols etc.**
- 3) Use of an approach that drives timely project launch and incents small, medium and large scale projects.**

Appendix A: Participants

Representatives of the following organizations participated in some or all of the consultations that led to the development of this document. They lent their considerable expertise which was sincerely appreciated by the co-chairs. This document represents a consensus (66% + 1%) of the discussions but it does not necessarily represent in whole or in part the policy positions of these organizations.

AgCert
Alberta Government
Alcan
Alberta-Pacific Forest Industries Inc. (AL-PAC)
Alberta Research Council
Baseline Emissions Management Inc.
B.C. Hydro
Bennett Jones LLP
Biothermica Energy Inc.
British Columbia Ministry of Environment
Bruce Power
Canadian Climate Exchange
Canadian Electricity Association
Canadian Gas Association
Cement Association of Canada
Climate Change Central
Chicago Climate Exchange
CO2e.com
Direct Energy
Dow Chemical
Department of Foreign Affairs and International Trade (observer)
Economic Development, Innovation and Exportation – Quebec (observer)
EnCana
EPCOR
Golder Ecofys Solutions
ICF International
Industry Canada (observer)
International Emissions Trading Association (IETA)
IPSCO Inc.
INVISTA Canada
Manitoba Hydro
Manitoba Government (observer)
Montreal Climate Exchange
Natsource
Nexen
Ontario Ministry of the Environment (observer)
Ontario Power Generation
Parkland Agri-Services
Pristine Power
Sustainable Development, Environment and Parks – Quebec (observer)
Reseau Environmental Group

Shell Canada
SNC Lavalin Environmental
Spectra Energy (formally Duke Energy)
Suncor
The Delphi Group
Toronto Stock Exchange
TransCanada
TransAlta

In addition, Canada's thermal generators (Atco, Epcor, TransAlta, Sask Power, Nova Scotia Power and New Brunswick Power) in a separate process have referenced and endorse the system design proposed by the IPOG group.

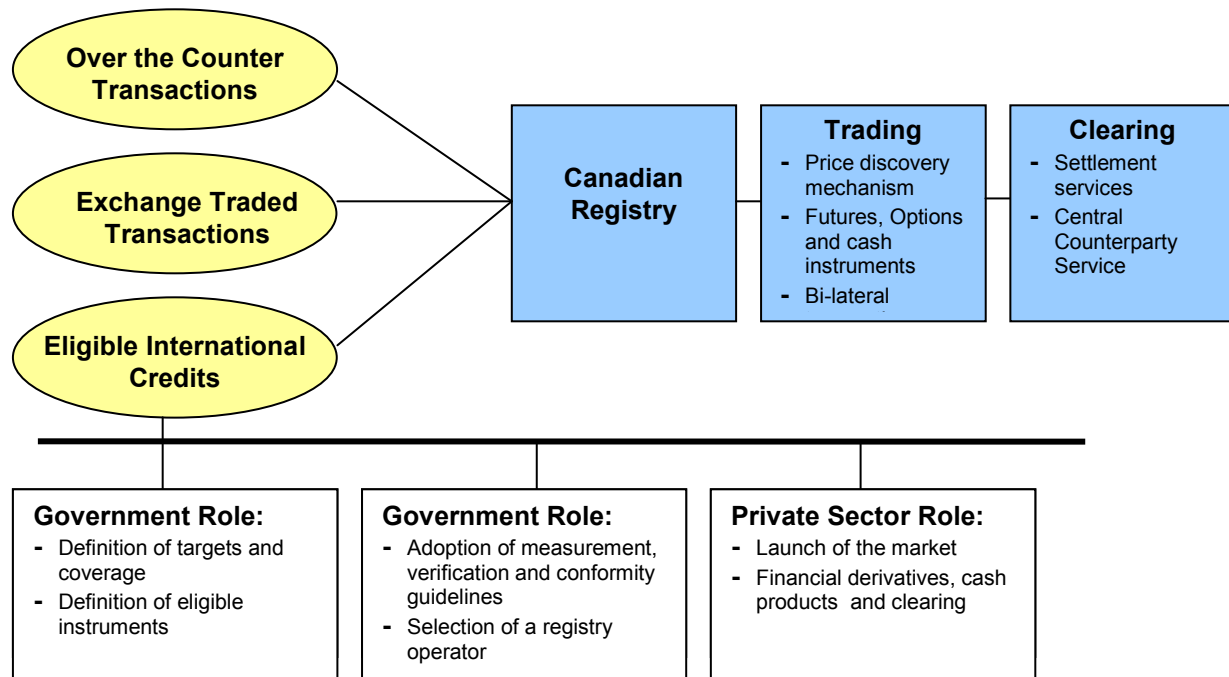
Appendix B: Registry and Marketplace

The domestic emissions trading market will evolve over time. However, in order for an efficient market to develop the federal government needs to establish the regulatory framework. The federal government should establish the framework for trading including the allocation process for allowances, the rules for offset creation and the compliance and penalty provisions.

In the offset market, a key role of the federal government is to create the compliance provisions. This requires a procedural gateway into the registry by which offsets are issued to project developers upon successful completion of approval procedures. Similarly, the government must have the capacity to retire offsets surrendered for compliance. The Federal Government should let the free market develop and operate to meet the legislative requirements.

Various private sector players will be involved in the market including but not limited to industry (emitters and companies outside the regulated sectors), registry operators, validators, verifiers, traders, brokers, banks and exchanges. If designed properly, a domestic offset market will evolve as part of the domestic emissions trading market and will constitute one of the tools which can assist emitters to meet their compliance requirements.

The Process:



The Registry

On the issue of a registry there was agreement that:

- A Registry, defined as a tracking system, is an essential element of an efficient emissions trading market
- A registry would include a database where allowances, emissions data, methodologies, protocols and project related documents could be posted, where offsets and allowances would be registered and tracked and where verified emissions data can be posted.
- The owner of the registry should be the government, but the development, administration and operation of the registry can be delegated (or not) by the government to a private sector body. There should be a clear line between the registry operator and entities participating in the marketplace. Registry owners should have limited participation in the marketplace and must not offer consulting services on verification and or any other aspect of the project that may be submitted to the registry. Registry operators who participate in the marketplace, must firewall any data from other parts of their business subject to regulatory oversight.

While there may be an advantage for a single registry initially, to generate cost efficiencies, multiple registries may be considered in the future. The ability of competitive registries to offer cost-effective registry and risk management services with dynamically evolving technology could be attractive to emitters, brokers and marketplaces. Some of these registries may be associated with entities with other involvement in the marketplace, such as exchanges or clearing agencies. In this context, some of the key requirements of regulation would include:

- a single source for recognizing and overseeing such registries
- a requirement that one emitting project could only use one registry at a time (presumably large entities could have a variety of projects which may be registered in different places)
- registries must accept data feeds from any source in a non-discriminatory fashion
- registries must be accessible to regulators
- registries must firewall any data from existing other parts of their business
- allowing multiple registries is a pre-condition for allowing registries to be associated with participants in the marketplace.

There is a need to balance environmental integrity which is strongly linked to transparency with confidentiality in the market. Transactional information subsequent to the creation of offsets should reside with the participants, while the verification granting initial offsets could be made public for the transparency of the system. Regulators would require the ability to track offsets presented for compliance in the registry, but the transactional information associated with offsets posted on the registry and/or surrendered for compliance would need protection as it would constitute confidential business information.

At a minimum, the registry must be founded through enabling regulation. The federal government may choose to implement the regulation through the creation of a private sector registry, or may use a sub-contracting approach in which the registry could be both developed and operated by the private sector but regulated by the federal government.

It is imperative to identify the necessary function of a registry as distinct from those functions that may be performed by an exchange. The efficient operation of the market relies on a partitioning between registry and exchanges (which may be achieved through the key requirements of regulation of associated entities as noted above). Exchanges could be assigned the ability to view or update ownership in the registry for transactions executed or cleared through the use of an exchange, which has the merit of allowing multiple exchanges to operate but would necessarily place restrictions on public access to registry information.

The federal government, or the private sector entity that is chosen to run the registry, needs to be able to charge registration and activity fees for transactions in the registry such as opening accounts, transactions between accounts, filing documents, etc.

The Marketplace

Effective market regulation is very important to public confidence in any marketplace. The self-regulatory organization (SRO) model would best serve the market for emissions trading. SROs include a broad variety of participants and stakeholders on their boards and rules committees, including emitters, brokers, marketplaces and NGOs. SROs have a public interest mandate recognized by the federal government and by any other governments that delegate regulatory activity to them (for other environmental market initiatives). An SRO would steward its activities to any recognizing regulators, much as some SROs do in the securities industry, to ensure that its activities meet governmental goals. SROs would bring the classic SRO advantages of: bringing together expert skills in organizations affected by the marketplace; rapid response to changing market dynamics; practical, efficient and effective regulation and more rapid assimilation by industry of regulatory initiatives.

For the Canadian emissions marketplace, there may be one SRO, or multiple SROs. Examples of both exist in established markets. In some cases, multiple trading entities are regulated by a single SRO. In other cases, each exchange or trading body is its own SRO. In either situation, the key feature is that government, both federal and provincial, establishes the broad regulatory regime through enabling acts, but leaves day-to-day regulation, rule-making, and contract design to the SRO. This is the method by which securities and derivatives markets are currently regulated throughout North America.

Transactions in the market place will occur in a number of different venues ranging from direct transactions between buyers and sellers as well as through over-the-counter transactions facilitated by brokers, aggregation services providers and also through exchanges. Independent exchanges will emerge as the market develops and their participation will increase as liquidity occurs.

Independent exchanges could offer the following services:

- Executing and managing commitments resulting from market transactions that are either conducted on or cleared through exchanges
- Providing protection against counterparty credit risk
- Contributing to financial integrity of the market.
- Governance by one or more independent self-regulatory organization(s) (SRO) made up of a broad variety of participants and stakeholders
- Linking and information exchange with registry services.
- Data distribution services

As noted above, in addition to exchanges, there will be “over the counter” trades, and longer term forward contracts conducted bilaterally between parties, relying on brokerage and aggregation service providers.

Appendix C: Quantification Protocol Checklist – Working Group Contribution

Quantification Protocol Checklist

Preamble: Canada is developing its own greenhouse gas offset system. To expedite the development of the system, the use of methods to quantify project based emission reductions developed for other credible greenhouse gas offset systems is highly recommended. This checklist outlines the components of a screening tool for phase 1 of a Canadian greenhouse gas offset system that would ensure the submitted quantification protocol is consistent with the preliminary design of the Canadian offset system. It is assumed that the submitted quantification protocol does not explicitly⁴ contain policy elements. It is understood that the application of this checklist is the initial phase of a phased approach, with some of the items applying with a different degree of rigour than later on in the regulatory process, to encourage the timely and efficient development of a domestic system within Canada. This checklist has been written in plain language⁵ to facilitate its understanding. Detailed guidance will be developed in a more extensive document following acceptance of this initial approach.

General concepts the quantification method must address include:

- Ownership of the Project Activities
- Project and approach to quantification are appropriate for the Canadian context
- Completeness and Accuracy of the calculation of greenhouse gas emission reduction or removal enhancement
- Existence of relevant information
- Comparability between baseline and project
- Avoidance of double counting
- Acceptable risk of error

Explicit Policy Elements: If specific policy elements exist, they should be removed from the protocol or adapted to the appropriate Canadian equivalent.

⁴ It is acknowledged that all quantification protocols contain implicit policy bias based on the system for which they were designed. Questions in this checklist attempt to ensure that the accepted policy is consistent with Canadian intentions.

⁵ Terms such as permanence and additionality have been avoided because they are subject to multiple interpretations.

Appendix C: Protocol Adoption Guidelines

1.1	
Phrase -	Is there an <i>explicit baseline</i> in the quantification protocol?
Guidance	<i>Explicit baseline</i> is interpreted to mean a reference scenario in which there is or would have been an end service or product that leads to the emission or removal of greenhouse gases that is clearly defined in terms of boundary, function, sources and sinks.
Justification	For example, an explicit baseline is important for: <ul style="list-style-type: none"> • understanding whether the baseline and project are comparable, • determining the risk profile for investment purposes (understanding the magnitude and percent emission reduction/removal enhancement), and • determining whether the baseline is appropriate in the Canadian context.
Examples	In a landfill project, the baseline will comprise of the: <ul style="list-style-type: none"> • boundary (e.g., the physical site), • end service (e.g., garbage disposal), • greenhouse gas source (e.g., methane).

1.2	
Phrase	Has the <i>function</i> of this baseline/project been clearly described and are the functions similar?
Guidance	“Function similarly” is interpreted to be the end product or service that is the same in magnitude and quality/performance.
Justification	If the functions of the baseline and project don’t align, over or under calculation of the emission reductions/removal enhancements will occur
Examples	For a co-generation project using natural gas or other lower carbon intensive fuel that displaces coal fired power, the function of the baseline and the project must focus on the electricity component of the co-generation project. The steam or heat component cannot be used to calculate emission reductions attributable to the project unless a second baseline focusing on conventional steam/heat production is included.

1.3	
Phrase	Does this baseline <i>reasonably represent</i> what would have occurred in Canada?
Guidance	<i>Reasonably represents</i> is a professional judgment based on appropriate information evaluated by a capable party, aware of national and provincial law, policy and practice, exercising fair-minded judgment and assumes the project takes place in Canada – applies to projects in Canada (for this simplified version)
Justification	Some assessment as to whether the proposed baseline is valid in the Canadian context must occur or the baseline may not provide an accurate representation of the without-project case from which emission reductions from the project will incorrectly calculate the number of emission reductions/removal enhancements to be issued
Examples	Reasonable representation may be established by comparison of the baseline to: <ul style="list-style-type: none"> • pre-project activity in Canada (historical evidence) • Canadian industry and performance standards • forecasts of expected activity prepared by industry associations or

	<p>government bodies</p> <ul style="list-style-type: none"> • legislation and regulations
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1.4	
Phrase	Are the <i>significant</i> baseline/project sources and sinks identified?
Guidance	In general, <i>significant</i> is interpreted to mean a source or a sink that effects the emission reduction or removal enhancement by 5%.
Justification	An important aspect of defining significant in this manner is that it applies to the net effect on the emission reduction or removal enhancement (top down), not to the individual sources or sinks, which can be time consuming. This is beneficial as it expedites the analysis of baseline and project inventories. It also does not force a life-cycle approach, which again can be time intensive, but does ensure that major sources and sinks outside the project boundary are taken into consideration. At a later date, the 5% can be tightened or eased depending on the effect wanted on the market.
Examples	<p>In professional judgment sources below X number of tons equivalent to 5% don't need to be included.</p> <p>a) A source emitting 1000 tons a year undertakes a project that reduces 500 tonnes. Significant emission reductions or removal enhancements are those that are greater than 5% of the total project reductions (500) or 25 tonnes.</p> <p>B A source emitting 100 tons a year undertakes a project that reduces 50 tonnes. At a level of 5% of project size, significant sinks or sources are reductions/removals that total greater than 2.5 tonnes (50 tonnes * 5% = 2.5 tonnes)</p>

1.5	
Phrase	Are there <i>reasonable</i> methods for measuring the baseline/project sources and sinks?
Guidance	<i>Reasonable</i> is interpreted as a balance of accuracy, cost, reliability and availability.
Justification	This interpretation is a modification of who is a "reasonable man" under Canadian law for due diligence purposes. This is founded on what is normal in society. This has attempted to break it down into the factors that motivate "normal"- accuracy, cost, reliability and availability.
Examples	<p>Reasonable measuring methods would include:</p> <ul style="list-style-type: none"> • regulatory requirements • contractual requirements • standardized equipment • measurement standards • traditional methods • guidance documents (industry and regulatory) • engineering standards • acceptable industry practice or best practice

1.6	
Phrase	Does the baseline/project data exist or could it be obtained?
Guidance	Baseline/project data or the information used in calculations to extrapolate

	baseline/project emissions must be available.
Justification	Baseline/project data is not always directly available or is the property of another party, especially in projects with indirect emission reductions. The baseline/project data must be acceptable to the owner of the data as well as the project proponent so as to avoid double counting of emission reductions from the same activity.
Examples	<ul style="list-style-type: none"> • Assured report, government issued reports • Commonly accepted data (GIS data) • Scientific data • Articles in peer reviewed journals • Acceptable data would be in a form that has been third party reviewed or could be third party reviewed and updated as required by the protocol. • Assured data – assured financial reports

1.7	
Phrase	Are the quantification methodologies applicable to the project and baseline in the Canadian context?
Guidance	<i>Applicable</i> is a professional judgment as to whether the quantification procedure for the sources/sinks is valid in the proposed baseline/project context.
Justification	Some assessment as to whether the proposed quantification protocol is applicable in the Canadian context must occur or you will get inappropriate accounting at the National level and risk is introduced into the trading system. This does not have to be time intensive as there are calculations that are clearly independent of the region in which they operate.
Examples	<p>Scenario 1) A proposed quantification protocol uses a project indirect source (i.e., power) imported onto the project site. The quantification methodology assumes that this indirect source uses the combustion of dried manure as its power source. In Canada, the likely power source would be hydro/coal/gas. The quantification protocol would have to be adapted.</p> <p>Scenario 2) A proposed quantification protocol has a source which is based on the combustion of methane. In Canada, the fuel for this source is likely to be methane and the combustion efficiencies are likely to be the same. The quantification protocol could be adopted.</p> <p>Scenario 3) A proposed biological sequestration quantification protocol was developed for the Sahara desert. In Canada, the project will not be applied in the same eco-region. The quantification protocol would have to be adapted.</p>

1.8	
Phrase	Are the baseline and the project time period the same?
Guidance	The time period for the reference scenario should match the time period for the project activity to enable appropriate calculation of emission reductions.
Justification	Although a baseline may be established based on historical evidence, the pattern, trend or subject activity must be forecast into the future to cover the crediting period for the project activity so as to align with the project operation.
Examples	An electricity displacement project can use generation data for the last ten

	years (including average growth) for extrapolating the baseline electricity generation for the next ten years (including predicted average growth).
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1.9	
Phrase	Is ownership or title clear?
Guidance	All sources and sinks within the project boundary should be owned by project proponent. Indirect sources and sinks should be explicitly addressed through a legal mechanism including regulatory definition mechanisms.
Justification	Ownership, especially in cases of indirect emission reductions or projects involving public assets is important to establish there is no double counting.
Examples	<ul style="list-style-type: none"> • Ownership of any indirect emissions or removals should be established in property law or contract. • Assigned rights (e.g. DSM & landfills) • Regulation defining ownership • Regulation defining right of use

1.10	
Phrase	Is there a concern about whether the greenhouse gases will remain placed where the project puts it?
Guidance	Contractual or regulatory requirements should establish responsibility for long-term containment or storage.
Justification	When there is a high risk of loss of storage/containment, risk mitigation options should be established.
Examples	<p>Risk mitigation options can include the following:</p> <ul style="list-style-type: none"> • Monitoring programs • Discounts • Holdbacks • Purchasing credits in kind (funds set aside) • Insurance