

# **Canadian Offset System:**

## **An Assessment of the Option to Offer Early Issuance Credits**

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**Environment Canada**

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## **ABBREVIATIONS**

CDM	- Clean Development Mechanism
EIC	- Early Issuance Credit
ENGO	- Environmental Non-Governmental Organization
EU-ETS	- European Community Emissions Trading System
GHG	- Greenhouse Gases
LFE	- Large Final Emitters

## TABLE OF CONTENTS

<b>1. INTRODUCTION</b> .....	4
1.1. Background .....	4
1.2. Purpose of Study .....	4
1.3. Approach.....	4
1.4. Organization of Report .....	5
<b>2. STUDY RESULTS</b> .....	6
2.1. Benefits.....	6
2.1.1. “Pushing” Development of the Offsets System .....	6
2.1.2. Support for Financing.....	7
2.1.3. Market Development .....	8
2.1.4. Competitiveness.....	8
2.1.5. Other Benefits .....	8
2.1.6. No Benefit! .....	9
2.2. Risks.....	9
2.3. Design .....	10
2.3.1. Key Features .....	11
2.3.2. How Much? .....	12
2.3.3. When? .....	13
2.3.4. For How Long? .....	14
2.4. Alternatives.....	14
2.5. Anticipated Impact of EIC .....	16
<b>3. DISCUSSION AND CONCLUSIONS</b> .....	17
3.1. Summary of Stakeholders’ Perspectives .....	17
3.2. Literature Review .....	18
3.3. Consultant’s Assessment.....	20
3.4. Summary .....	21
<b>APPENDICES</b> .....	23
Appendix 1. Study Questionnaire and Background .....	24

## 1. INTRODUCTION

### 1.1. Background

The Government of Canada's *Climate Change Plan for Canada* (Plan) sets out an approach for achieving Canada's Kyoto target of reducing annual greenhouse gas (GHG) emissions by 240 megatonnes (Mt). Through regulations and covenants, large final emitters (LFEs) will be required to reduce GHG emissions by 55 Mt each year during the First Commitment Period. The Plan proposes an offset system that would provide a market incentive for the identification and development of projects that reduce and/or remove greenhouse gases (GHG) not covered under Large Final Emitters (LFE's) covenants. In this regard, the federal interdepartmental Working Group on Offsets (WGO) prepared an *Offset System Discussion Paper*<sup>1</sup> in May 2003 and consulted with Provinces/Territories and stakeholders in June 2003.

The WGO is currently doing further work on the design of the Offset System with the objective of having a design paper completed by late 2004/early 2005. As one consideration in the proposed design, the WGO wishes to explore the option for partial early issuance of offset credits.

Early issuance credits could be provided to certain registered projects up to two years before *ex post* distribution of offset credits would otherwise occur. The credits would be irrevocable and certified by the Government of Canada. Otherwise, the potential design of an early issuance feature remains open.

While the design of the proposed Offset System, and in particular the option for Early Issuance Credits, is examined independently in this assessment, the system remains closely linked to the LFE system. This linkage was emphasized in the comments of many of those interviewed for this study, with many views also offered on the LFE system and the linkage. Where relevant to the assessment of proposed early issuance credits, those views are included in this report.

### 1.2. Purpose of Study

The WGO wishes to identify and assess the benefits and costs of early issuance from the perspective of different stakeholder groups. Secondly, the WGO also wishes to identify key design issues and criteria. With this study, Eos Research & Consulting Ltd., on behalf of the WGO, is compiling the views of a range of stakeholders regarding these issues. The objective of the work is to identify and assess the benefits and costs of early issuance based on the perspectives of different stakeholder groups.

### 1.3. Approach

The assessment of early issuance credits is based on two types of information. Most importantly, the consultant surveyed a range of stakeholders including project developers, financiers, companies and individuals providing support services (e.g. emissions brokerage, consulting and legal), provincial government staff and environmental non-governmental organizations (A breakdown of respondents by constituency and geographically is provided in Table 1, below). Individuals were

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<sup>1</sup> Offset System Discussion Paper [http://www.climatechange.gc.ca/english/publications/offset\\_dp/dp/](http://www.climatechange.gc.ca/english/publications/offset_dp/dp/). See also, Information from the 2003 consultations, [http://www.climatechange.gc.ca/english/publications/offset\\_consultations/](http://www.climatechange.gc.ca/english/publications/offset_consultations/).

interviewed using a standard questionnaire (See Appendix 1) over four weeks in late November and early December, 2004. Generally, the respondents were provided with the questionnaire in advance of a 20 minute to 40 minute telephone interview. To encourage a frank exchange of views, respondents were informed that interview information was to be generalized and that while they and their organization would be acknowledged no comments would be specifically attributed.

Information from interviews was supplemented with a focused literature review. Among the sources that form the basis of this work are included:

- The Government of Canada's Climate Change Plan for Canada;
- Offset System Discussion Paper;
- Reports from the 2003 consultations regarding the Offset Discussion Paper; and
- Timing/Frequency of True-up and Permit Distribution (LFE Group Discussion Paper);

Additional sources that were examined included materials developed by the National Round Table on Environment and the Economy, Center For Clean Air Policy, Pew Center for Climate Change.

#### **1.4. Organization of Report**

The report is organized into five principal sections:

- Introduction;
- Approach (explanation of the steps taken to complete the survey and report);
- Study Results
- Discussion and Conclusions (general conclusions and assessments of the benefits and risks relating to the early issuance of offsets); and
- Appendices (includes the questionnaire used for stakeholders, survey respondents and literature review bibliography).

## 2. STUDY RESULTS

The survey of interested stakeholders included conversations with 47 individuals in 12 different categories, including project developers, offset buyers, financial specialists, environmental commodity brokers, various support services, provincial representatives and environmental NGO's that focus on climate change issues.

**Table 1. Geographic and Sectoral Segmentation of Respondents.**

Sector	BC	Prairies	Central	Maritimes
Agriculture		5	1	
Forestry	1	1	2	
Landfill Gas			2	
Other (Clean Energy)	2	1	2	1
Buyers	1	4	1	
Financial	1		4	
Brokerage		2	1	
Legal			1	
Support Services			2	
Provincial	3	1	5	
ENGO's			3	

### 2.1. Benefits

#### 2.1.1. "Pushing" Development of the Offsets System

By far the most commonly cited benefit of proceeding with an early issuance crediting system was the imperative that early issuance would create for getting the proposed offset system up and running. A strong theme in many of the conversations was the desire to see what the system will look like, i.e. to understand what kinds of projects and activities will be included, what requirements will have to be satisfied to enter into the system and what the likely costs of satisfying those requirements will be. Within this theme, some of the specific benefits that were identified include:

- Reducing uncertainty for potential project developers; Respondents pointed to the significant timelines to develop many energy and sequestration projects which could potentially provide offsets Canada will need for Kyoto compliance. Timelines of three years to develop significant energy projects were considered optimistic while forest and agricultural sink proponents suggested that creating such sinks could take as much as 25 years. For such projects to have any impact during 2008-2012, respondents suggested that development would have to begin well before 2008 (i.e. immediately), but there is insufficient certainty to do so in Canada. There were several suggestions that the level of certainty is even lower now than it was 18 months ago because of concerns over what that period of limited or no progress on the part of the federal government means. Implementation of EIC would address such certainty at both the broad system level and force early development of specific criteria, protocols, etc. that are currently seen as the major impediment to project development.
- Permitting government the time to test and tweak the system; Benefits to government were seen in the ability to test the system ("pilot the architecture") while there is still time to adjust prior to the 2008-2012 compliance period. One ENGO

respondent indicated that this benefit and government's need to manage the risk of system failure was the only legitimate reason for proceeding with EIC.

Specific concerns that were cited are addressed more fully below, but issues such as potential cost, complexity (particularly in combination with the LFE system) and participants inexperience led some to specifically identify the need for testing. Several other respondents suggested the EIC option would provide governments with an early signal of the volumes and types of offset projects the system could expect and provide early warning of significant problems or shortfalls.

- Allowing (or perhaps more correctly pushing) potential offset buyers to begin planning for compliance and developing awareness internally; Both LFE and financial sector respondents suggested that companies need to begin compliance planning, make risk management decisions and develop internal awareness.
- Allow participants to gain experience developing offsets and trading emissions; With the exception for calls for rules, etc. the benefits of experience were among the most frequently cited benefits of associated with early issuance among all groups of respondents. Several (see also below) raised concerns for falling behind European entities, which will begin participating in pre-commitment period trading in 2005.

### **2.1.2. Support for Financing**

The financial benefits of providing EIC were widely cited but seen as secondary to the benefits noted above. While many respondents reflected the view that "anytime another revenue stream is created it adds value", the opinion that certainty of rules was more important dominated. Financial, brokerage and other knowledgeable respondents appear to agree on the following:

- Ability of lenders to directly monetize credits in support of borrowing will be low; Although, the proposed credits would be irrevocable and thus guaranteed by the government of Canada, the value remains subject to an as yet undeveloped market. As such, the uncertainty around value remains too great for the credits to impact assessments of borrowers' ability to repay. (One knowledgeable respondent suggested that some niche financiers, such as emerging offset aggregators, clean energy funds, etc., may be more willing to ascribe value than the traditional finance sector. Funds in these niches that were contacted did not respond.)
- The ability to monetize purchase agreements for credits, when the agreement is with a credit-worthy<sup>2</sup> buyer, is high and the most likely path to obtaining debt financing. Where a contractual agreement to pay exists, the bank is also able to rely on the resources of the buyer rather than just the resources of the project developer.
- EIC would increase funding to developers and in particular, provide potential revenue right from project inception dependant on the final criteria.
- The promise of revenues associated with receiving and selling credit appears to be more attractive to smaller proponents than for credit-worthy corporate entities. Corporate entities expecting to be net offset credit developers generally indicated less interest in credits for financing purposes. For example, forest sector respondents suggested that the future value of credits was small by comparison with other benefits

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<sup>2</sup> I.e. generally large, publicly traded corporations with strong financial capacity, including a history of predictable revenues and earnings, acceptable balance sheets and ready access to capital markets.

that might accrue from a planned project and would have limited impact other than at the margin. Conversely, smaller developers routinely pointed to the benefits of immediate earnings (versus the promise of future earnings) that the proposed EIC would provide.

### **2.1.3. Market Development**

A significant number of respondents pointed to the value of the proposed EIC for accelerating the development of the emissions trading market in Canada. Specifically, respondents pointed to the following:

- Provision of EIC would increase liquidity in the system early in its life;
- EIC would remove the performance risk associated with non-credit worthy proponents, which one potential buyer described as the single biggest impediment to market development (and another described as a concern for some buyers but not others);
- Facilitate the development of a business community that is experienced and capable with respect to emissions trading;
- Would attract potential participants from the sidelines.

Generally, taking specific action that would contribute to the eventual full-scale implementation of the offsets system was seen as a good way to motivate potential project developers and other market players. In addition to the benefits noted above, EIC would also address the uncertainty and even scepticism reported by some respondents regarding the likelihood that the Government of Canada will act on the climate change plan work completed to-date. While two respondents explicitly discussed this issue, others suggested it, however briefly, in their comments.

### **2.1.4. Competitiveness**

Benefits were cited for competitiveness of Canadian offset projects and ability to retain investment in Canada rather than seeing early development dollars gravitate to CDM (some also suggested investment could flow to the European Emissions Trading System, see Section 3.3 below). Many of those spoken to, particularly among the agricultural, forestry and brokerage communities perceive greater certainty associated with CDM and thus proponents and buyers can invest in such projects without fear of the projects not counting. One respondent also pointed out that agricultural, forestry and landfill projects were inherently more attractive in much of the third world because of longer growing seasons and size (for landfills) of potential projects.

With respect to the European ETS, concerns were twofold:

- The loss of investment and/or project opportunities to the much more certain environment that system offers; and
- Allowing Canadians to keep pace with Europe as the EU implements its ETS.

Several forest sector respondents related the story of a project currently being developed in BC in which wood pellets will be manufactured and shipped to the UK for use in a renewable electricity generation project, a project that reportedly qualifies for renewable energy credits in the European system.

### **2.1.5. Other Benefits**

Other EIC benefits that were cited include:



- Legitimizing companies' investments in climate change and greenhouse gas management to-date as well as validating those people who are currently internal champions for action within many large emitters.
- Opportunities to support a variety of complimentary programs including the federal Wind Power Production Incentive, the BC Clean Electricity requirement and potentially, Ontario's retirement of coal-fired electricity generation.
- For buyers, EIC would likely bring forward a supply of 2008-2012 credits at a time when various uncertainties continue to keep prices lower than might be expected during the compliance period.

#### **2.1.6. No Benefit!**

The detailed outline above is based on respondents' views concerning the benefits of implementing EIC. However, two out of 47 respondents expressed the view that there would be little or no benefit associated with introduction of early issuance. Briefly, the respective reasons are as follows:

- For renewable energy related projects, the monopoly electrical utilities in the provinces are capturing existing and future potential incentives in the power purchase agreements with little or no benefit flowing back to the proponent. Several respondents indicated that it is difficult to incent renewable energy development when at least several of the monopoly electrical utilities (New Brunswick, Ontario and BC were specifically cited) are using Power Purchase Agreements to capture potential future incentives. However, only one suggested that the practice completely negated the value of EIC.
- Projects require a minimum of seven to eight years payback, which the proposed program does not provide. The individual stating this requirement argued for providing additional credit for emission reductions in the 2005-2007 period to address this requirement, arguing that EIC will otherwise have only a "trivial" impact. Other respondents discussed the payback period projects must satisfy, one suggesting five to seven years, but did not draw the same conclusion regarding worth of the proposed program.

#### **2.2. Risks**

When respondents were asked to discuss the risks and costs that might be associated with implementation of EIC, four categories were identified. Not all relate to concerns for the system proceeding. The categories of risk discussed are as follows:

- Performance or delivery risk;  
It was widely recognized that the government, in offering to provide irrevocable credits prior to the actual emissions being reduced/sequestered, was offering to assume the risk of projects not performing as expected or of emission reductions failing to be delivered for other reasons (e.g. reversal of a particular sink due to fire, drought, etc., bankruptcy, etc.). One respondent explicitly indicated that this was not a risk government should in principle take on, but that as a practical matter, some such risk was worth taking and some EIC worth granting to allow early testing of the offsets system.

In a contrary position, one potential buyer urged the government to take on such risk to the fullest extent possible as a means of removing, in their view, a large impediment to further market development. Otherwise most respondents understood that there was a

need to strike a balance between the level of risk the government could reasonably take on and the need to provide a stimulus to the development of offsets in Canada (although, the range of views on where that balance lay ranged across the whole possible spectrum – see Section 2.3 below for further discussion).

- Risk of system failure; Respondents expressed concerns that the offsets system could be at risk of failure for a variety of reasons, including:
  - As a result of failure of the larger domestic emissions trading system based on concerns that the LFE system may be too segmented.
  - That the complexity, bureaucracy and/or costs associated with the system could make it unattractive to proponents and driving investment to alternatives such as CDM or the European ETS.
  - The system may be too little/too late for certain types of projects.
  - To the extent the offsets system is seen to provide credits for little or no action, public support for the system could be undermined.

One particular issue raised by several respondents was the risk that with government assumption of project performance risk, as is implied by irrevocable credit, the project acceptance mechanism required by government could be overly cumbersome. That is, the need to manage performance risk could become a more important than acceptability of the project overall, leading to an overly registration/certification process.

As noted above, in the opinion of an ENGO respondent, the risk of system failure and the need to manage that was the only legitimate reason for proceeding with EIC.

- Supply risk; Although, not a formal question in the course of the interviews, many respondents indicated a view that there would be insufficient domestic credits during the Kyoto compliance period. Reasons given were generally related to the late date at which regulatory certainty was anticipated – an essential pre-condition for many of the possible projects. This is largely an argument for proceeding with EIC rather than cause for concern if it is implemented.
- Price risk. As noted above, the financial and other knowledgeable specialists spoken to suggested that credits would have little direct lending value because of the uncertainty over price. Addressing this uncertainty will require significant market development.

Other than the three respondents who saw little or no benefit associated with EIC, none of those interviewed suggested that the potential risks and costs would be significant enough to warrant not proceeding. On the contrary, many specifically stated that the risks associated with proceeding were minimal relative to benefits.

### 2.3. Design

Respondents were asked to identify features they thought important to incorporate if the proposed early issuance system was to yield the benefits sought by the government of Canada, i.e. to encourage increased development of offsets over what might otherwise occur if the offsets system was not put in place until 2008. Respondents were also asked their views on three specific design questions:

- What proportion of the total emissions offset estimated for a particular project should be available for early issuance? (e.g. 10%, 50% or 100% of the anticipated emissions reductions) Why?

- At what stage of project development should early issuance offset credits be made available? (e.g. on registration of a design, completion of construction or on confirmation of operating results) Why?
- Should *Early Issuance* be a feature only during 2006 to 2008, i.e. before the Offset System and Emissions Trading programs start-up or should it also be provided as an incentive supplementing *ex post* issuance throughout the period to 2012? Why?

### 2.3.1. Key Features

In conversations regarding the design of the EIC element of the offset system, the key features identified generally fell into one of five categories. The categories and some specific issues are as follows.

#### Early Release of Rules & Requirements

The most frequently cited requirements for successful implementation of EIC related to early release of the proposed offset system components. This is consistent with the view of the majority of respondents that early identification of the rules and requirements for the proposed offset system is both the most important requirement for early issuance and the most pressing need for reducing the uncertainty that is currently impeding offset development in Canada. Some specific elements were identified, including:

- Program authorities, clear processes, criteria and validation.
- Approved project methodologies.
- Mechanism for timely validation of projects.
- Penalty mechanism for performance failure.
- Conversion rate for offset credits per megawatt hour of renewable power generated.

#### Minimising Complexity & Costs

As noted in the discussion of risks, respondents were generally concerned for the level of complexity and resultant transaction and administration costs that both early issuance and the offset system as a whole may entail. The GERT process was specifically cited as an example of how difficult it may be to adjudicate projects for early issuance and the federal gun registry as an example of a costly, complex registry.

#### Consistency, Fungibility, etc.

A significant proportion of the respondents urged that both EIC and the broader offset system be designed to be consistent with approaches embedded in CDM, the LFE system and the EU-ETS. Going further, most of these same individuals recommended that the system allow for fungibility of credits between each of these systems. Several knowledgeable respondents identified the benefits of fungibility with the EU-ETS in particular as being immediate liquidity and market transparency once the offset system starts up. Individuals suggesting consistency with CDM methodologies for assessing offsets were in several cases careful to identify the need to avoid CDM-like bureaucracy.

#### Timing

Approximately 10 respondents, and in particular those in the agricultural sector argued the need for an earlier start to both the EIC and the period for which credits would be granted (i.e. earlier than 2008-2012, when it proposed emission reductions would be credited). Most wished to see EIC begin in 2005, arguing that there is a need to provide certainty for a great many projects that will take time to develop and/or produce significant offsets.

Particularly those in the agricultural sector also argued for crediting of emission reductions during the 2005 to 2008 period, in addition to those during the Kyoto compliance period. The rationale given for the earlier date was the negative incentives created for farmers. First, it was explained by several in the agri community that while soil sinks take up to 25 years to reach saturation, the greatest increases occur in the initial years. To the extent that proponents develop soil sequestration in the years before 2008, the EIC as currently proposed would deny them significant offsets. Secondly, if farmers are currently using progressive soil management techniques, there is every incentive to stop or adopt less favourable practice until 2008.

A respondent outside of these sectors argued for moving the baseline year for offsets from 2002 to 2000 to be consistent with the starting point for the Business As Usual forecast used as a basis for the LFE system.

#### LFE Compliance Requirements

Lastly, numerous respondents indicated the strong need for communicating firm compliance requirements to the LFE's if the proposed credits were to have any value. Without demand, the issuance of EIC was frequently argued to be moot. Certainly, respondents from across the range of sectors included in this survey suggested that LFE's are not currently actively buying for compliance – reportedly (and understandably) because their requirements and understanding of the proposed system remains incomplete.

#### **2.3.2. How Much?**

Most respondents acknowledged the need to strike a balance between the level of risk the government could reasonably take on and the need to provide a stimulus to the development of offsets in Canada. However, the range of views on where that balance lay ranged from the opinion that no credits should be advanced until confirmation of operating results, through to 100% of possible credits be advanced up-front. Generally those arguing for the bottom end of that range focused on the level of performance risk that might exist and often, the risks of proponents gaming or defrauding the system should too much credit be made available too early.

Conversely, with most respondents suggesting a shortage of domestic credits in the Kyoto compliance period, some argued the need to provide the maximum incentive to project developers. (And there were those that argued that credits were the least important element of the EIC and thus the proportion advanced at an early stage was not important.)

While most small project proponents argued for the maximum incentive, otherwise there were no discernable sector specific patterns. Some of the specific comments made were as follows:

- The federal government needs to determine its goal and how strong of a signal it wants to send;
- Base the proportion advanced on the risk profile of the proponents, i.e. high risk developers would receive few or no credits while low risk developers would receive the maximum proportion offered;
- As the credits themselves have little incentive value for most corporate entities, provide credits to where the greatest need is, i.e. small developers;
- Develop a dynamic limit that responds to the level of market development and liquidity;
- Make the proportion great enough so that paperwork costs don't erode the majority of potential value;
- An IPP developer suggested that 15-20% was the minimum required to make the incentive worthwhile;
- A second IPP developer suggested 50% as enough to show real commitment on the government's part but low enough to manage the risk of non-performance or performance that is less than projected;
- Current forward contracts cover 50-80% of anticipated offsets to allow a cushion for performance risk.

Several respondents suggested a staged allocation of credits with an increased proportion provided as projects became more certain. This option is addressed further in Section 2.3.3, below.

### **2.3.3. When?**

As noted above, a number of the respondents linked the issue of what proportion of potential credits might be offered to the stage in the project life-cycle when credits are first offered. The possibilities range from acceptance of a design (i.e. registration of a project that exists solely on paper rather than in any tangible form on the ground) through confirmation of operating results, i.e. ex-post distribution. The majority of respondents that gave a clear response to this question (14) opted for a clear incentive to proponents and suggested granting credit at a relatively early stage in the development of projects. Some specific suggestions included:

- At registration of a design but before construction starts in order to assist financing;
- At the financing stage (like an option payment);
- Prior to upfront costs;
- A project financing specialist suggested that for IPP's, EIC (and related income) would have the greatest effect 12 to 15 months before project completion as this is when the bulk of development costs are incurred;

These suggestions primarily relate to assisting the project in securing financing, which is particularly an issue for smaller developers (whereas, one forest industry respondent suggested that many of the integrated companies in the industry are largely self-financing). Assuming there is a market and credits can be monetized, either by direct sale or through a purchase agreement, they offer the potential for an additional revenue stream and thus reduce risk/uncertainty that may face a prospective financier. For example, one developer predicted that EIC would be THE event that precipitated project financing. While this may be an optimistic view, knowledgeable respondents generally agreed on the value of confirmed revenue early in the development cycle.

Seeking to manage performance risk, several respondents identified project milestones that fall early in the development cycle, but at which the risk of project completion drops sharply, including:

- On confirmation of a Power Purchase Agreement (at that point proponent must decide to proceed or release the agreement);
- On confirmation of an agreement for the purchase of emission reductions;
- On receipt of environmental/regulatory approvals.

Nine respondents suggested a staged release, delivery increasing proportions of total available credits as specific milestones in the project cycle are completed. For example, issuing 10% on registration of an acceptable design, a further 20% on completion of financing and/or confirmation of PPA, etc.

Lastly, a significant number of the respondents (5) suggested that EIC not be provided until confirmation of operating results. In two instances this approach was justified to protect the credibility of the offset system.

#### **2.3.4. For How Long?**

The majority of respondents that provided a view on this issue, suggested leaving the EIC system in place through 2012, i.e. leaving in place the ability to provide EIC early in the project development cycle for at least some types of projects (e.g. the “gold standard”). Specific comments that were made in this regard include:

- Why go to all the trouble of setting the program up only to shut it down two years later – it may take that long to get the kinks out of the system;
- Many uncertainties remain and there is no knowledge of post-2012;
- It makes sense to continue to try increasing liquidity;
- [EIC] should only be required to increase initial liquidity but it may take longer than expected to achieve this goal.

Five individuals advocated bringing the EIC system to an end in 2008. One respondent felt that to continue the program would add too much complexity to a domestic emissions trading system that “will already be burdened with an overly complex LFE program”. At least two specifically assumed that the normal course of Kyoto Protocol implementation would provide the offsets required in the market and for Canada’s compliance. This view seems to be at odds with the expectation of many that there will be a shortage of domestic credits available during the commitment period and this may be why one individual that advocated EIC in 2006-2007 only also suggested that the government may want to continue the program but with a reduced proportion of credits provided to any single project.

#### **2.4. Alternatives**

During the course of the interviews, interviewees were asked for their views on the alternatives to EIC. Specifically the following question was posed:

*Are there design alternatives other than early issuance that you would recommend for incenting increased numbers of offset projects?*

Responses addressed the question at two levels: first, many respondents provided alternatives to EIC and even the offsets system overall; second, with limited prompting,

as many respondents dissected the elements of EIC and discussed the relative merits of providing credits versus stopping at provision of project validation.

With respect to the alternatives to EIC and/or the offsets system, the following suggestions were provided in no particular order:

- Allow JI in Canada post-2006;
- Government could take a position in projects through an offer to purchase all approved projects;
- Government should purchase offsets generated in 2005 through 2007;
- Government could act as a market maker, funding projects and subsequently reselling them but retaining the performance risk;
- Subsidies;
- Establish a pre-compliance commitment period like that in the EU;
- Agricultural sequestration credits could be aggregated through discounts in crop insurance or changes to income tax requirements;
- [greater use of] green electricity tags;
- implementation of Renewal Portfolio standards; and
- extension of the Wind Power Production Incentive to other renewables.

As noted in the discussion in Section 2.1, above, most respondents saw the greatest benefit from EIC not in the actual credits, rather in the need to clarify rules and requirements and in project validation. Some went so far as to suggest no value in the credits themselves.

Consistent with those suggestions, in the discussion regarding alternatives, a significant number of respondents (seven) saw no need or perhaps only a limited need for the issuance of credits once rules and requirements were published and a system for project validation were in place. Comments in this regard, included:

- Forward contracts are not as good but may be good enough;
- A really strong project validation system may get government 90% of the way;
- Clear criteria and clarification of LFE requirements would negate the need for early issuance.

Implicit in these comments is that clear rules and requirements together with validation would permit emergence of forward contracting, i.e. a mechanism for monetising anticipated credits. While forward contracting was seen as inferior to marketable credits for incenting project development, it is noted that it avoids the need for government to assume and manage performance risk.

To the contrary, five respondents suggested that the final step in EIC, i.e. the issuance of irrevocable credits, was indeed required. The reasons that credit issuance was said to be required included the following:

- To provide reassurance to buyers that the system is real;
- Incent market start-up;
- Provide an advantage over CDM, retaining offset investment in Canada;
- Without, the financial sector may consider the proposed system uncertain;
- To provide the option for fungibility with the EU-ETS.

## 2.5. Anticipated Impact of EIC

When asked to estimate the impact of EIC relative to what would otherwise occur with 2008 implementation of the offset system, only 27 out of 47 (57%) respondents were able and/or willing to provide a useful answer. Generally, those willing to provide an answer in this regard were able to estimate the magnitude of the impact when prompted to consider as high, moderate or low. However, two respondents limited their answer to "Yes", agreeing that there would be an impact but were unwilling to estimate magnitude.

	Number of Respondents
<b>Yes</b>	2 <sup>3</sup>
<b>Low</b>	9
<b>Low to Moderate</b>	2
<b>Moderate</b>	1
<b>Moderate to High</b>	1
<b>High</b>	12 <sup>4</sup>

Consistent with discussion regarding benefits and alternatives, above, the majority of those commenting on expected impact suggested that the biggest portion of the impact would result from the accelerated development of the system. In this regard, several knowledgeable respondents commented on the high level of frustration among potential participants because of the continued uncertainty.

<sup>3</sup> One respondent suggested that impact is dependant on confirmation of LFE compliance requirements.

<sup>4</sup> Two respondents suggested a high impact is contingent on an earlier start-up than 2006.



### 3. DISCUSSION AND CONCLUSIONS

#### 3.1. Summary of Stakeholders' Perspectives

##### Benefits

Key benefits identified in association with EIC, include:

- Getting the offset system up and running, reducing uncertainty for developers allowing government to test the system and engaging the private sector.
- Providing financial benefits to proponents (although, limits to usefulness in connection with securing debt were noted);
- Accelerating emissions trading development by increasing early liquidity, assuming project performance risk and engaging private sector participants;
- Addressing competitiveness concerns vis-à-vis CDM and the EU-ETS;

That being said, several respondents suggested there would be no benefit associated with EIC.

##### Risks

Four categories of risk were discussed in association with EIC, including:

- Performance or delivery risk;
- Risk of system failure or insufficient success;
- Supply risk, i.e. insufficient domestic offsets for Canada's compliance needs;
- Credit price risk in a nascent, early market.

Very few respondents suggested that the potential risks and costs would be significant enough to warrant not proceeding and many specifically stated that the risks associated with proceeding were minimal relative to benefits.

##### System Design

Key features identified by respondents for a successful EIC included:

- Early release of rules and requirements;
- Minimise the complexity of the system and the associated costs;
- Consistency with crediting approaches in CDM, LFE, the EU-ETS and other credit based systems and fungibility of credits between these systems.
- Revise proposed timing to increase the length of the EIC and/or crediting periods;
- Finalize LFE compliance requirements.

In addition to respondents' views on key system features, three specific design questions were asked:

With respect to **how much** credit, respondents understood the need for balance between the level of risk the government should accept and the stimulus required to accelerate offsets development. However, there was a wide range of views on where that balance lay.

With respect to **when** to provide EIC, the majority of respondents opted for providing a clear incentive with crediting early in the project development cycle. Suggestions were also received for a staged release of credits.

Regarding **how long**, the majority also argued for leaving some form of EIC in place through 2012.

### **Alternatives**

Respondents provided two levels of alternatives: alternatives to EIC and the offset system and alternatives within EIC, i.e. identifying the most important system elements.

Alternatives to EIC, while interesting do not directly relate to this assessment.

With respect to alternatives within EIC, most respondents saw the greatest benefit in the need to clarify rules and requirements and validate projects. Some suggested no value in the credits themselves. Implicit in these views is that forward contracting would emerge for monetizing anticipated credits.

Alternatively, a significant number of respondents argued that the issuance of irrevocable credits was required, for government credibility, provide advantage over CDM and allow fungibility with the EU-ETS

### **Impact**

Of the 57% of respondents willing to address this issue, 12 or 44% felt that EIC could have a high impact on offset development in Canada.

## **3.2. Literature Review**

Considerations related to the costs and benefits of the early issuance of offsets have been documented in various publications which formed the focus of a literature review for this study.

The “Offset System Discussion Paper” was prepared by the WGO in June, 2003. Regarding the early issuance of credits a few points were raised, with the intention of highlighting the issues for consideration in the eventual design of a system. These points included the following:

- It will be important to ensure that the offset system design does not provide an incentive to delay implementation of economically attractive actions in order to create more credits during 2008 – 2012; and
- The design of an early issuance of offset credits would need to address issues related to the risk of non-delivery, and dates for issuance and true-up. Restrictions on the use of these offset credits prior to true-up (if any) would have to be clarified.

In 2003 the WGO hosted a series of stakeholder consultation sessions across Canada, with one objective being to obtain feedback on design considerations. The report entitled “Consultations on the Design of a GHG Offset System for Canada – 2003”<sup>5</sup> summarized stakeholder comments which included the following issues:

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<sup>5</sup> “Consultations on the Design of a Greenhouse Gas Offset System for Canada – 2003”. Marbek Resource Consultants Ltd. And Stratos Inc. Prepared for the Working Group on Offsets, Government of Canada. October 2003.

- Participants noted that many emission reduction projects required investment prior to 2008 to produce emission reductions over the 2008-2012 period, and that these pre-2008 investments needed to be encouraged;
- Participants generally expressed support for an offset system that would encourage the establishment of an options/futures market to advance revenue to project proponents. A few participants, in particular those representing forest sector interests, noted the exceptionally long timeframes associated with project activities in that sector and noted their preference for a formal mechanism that would allow for early issuance of credits anticipated to accrue through 2012 and beyond;
- Participants generally expressed the view that the risk of non-delivery of credits related to early issuance should be managed through external, private contractual arrangements and offered, in their written submissions, a number of suggestions on how such arrangements could be constructed. For these participants, the role of the Program Authority would involve establishing requirements for each project to describe how the risk of non-delivery is being managed under that project;
- In the Quebec session, there was support for the view that credits should be available for early issuance, as such action increases market liquidity, reduces risk for investors and allows industry to plan for future purchases. At the same time, it was thought that a futures market should be capable of meeting most of these needs. The views on when early issuance could begin ranged, with one consideration being the need by industry to produce inventories of its own emissions before could begin purchasing offsets; and
- In the Saskatchewan session, several participants expressed concerns over the option in the Discussion Paper<sup>6</sup> of early issuance of credits. Of paramount concern was the risk of non-delivery within the crediting period, and the lack of certainty beyond 2012. One participant suggested that the risk of non-delivery could be reduced by including carbon credits as property in land titles and/or securities systems.

With respect to costs of early issuance, the “Timing/Frequency of True-up and Permit Distribution”<sup>7</sup> paper produced as one of the Discussion Papers of the LFE group suggests that purchasing credits early (and selling them later) would increase the cost of compliance due to the associated interest expense. This analysis was largely associated with consideration of a single compliance target during the first commitment period, i.e. one compliance target at the end of the five year period. This analysis points to a potential cost associated with providing credits earlier than they would be required for compliance purposes. However, this cost was not identified by respondents to this survey whereas the potential benefits were generally seen to be significant.

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<sup>6</sup> “Offset System Discussion Paper”. Federal Interdepartmental Working Group on Offsets. May 2003.

<sup>7</sup> “Timing/Frequency of True-up and Permit Distribution”. Large Final Emitters Group Discussion Papers. Natural Resources Canada. November 2003. [http://www.nrcan-rncan.gc.ca/lfeg-ggef/English/timing\\_en.pdf](http://www.nrcan-rncan.gc.ca/lfeg-ggef/English/timing_en.pdf)

In the Center for Clean Air Policy (CCAP) report entitled “Design of a Practical approach to Greenhouse Gas Emission Trading Combined with Policies and Measures in the EC”<sup>8</sup> the issue of trading prior to 2008 was addressed. One recommendation included was the suggestion that the units were identical to Kyoto units (CO<sub>2</sub>e) in order to eliminate the confusion of having one type of unit prior to 2008 and another afterward. It was stated that the purchase of credits for pre-2008 would provide an environmental benefit by effectively tightening the overall cap for the first Kyoto commitment period. Further it was thought that pre-2008 trading would be beneficial as the flexibility over time would reduce compliance costs in the same way that flexibility over space does. It is important to note that these are international considerations and therefore may have limited bearing on the design of an early issuance of offsets system within the Canadian context, although, the suggestion that units (credits) be Kyoto consistent is in line with the recommendations of a number of respondents to this survey.

As noted in Section 1.3, Approach, a variety of other sources were examined. However, for the most part, the papers prepared by these sources did not address Early Issuance Crediting or the costs, benefits and design of an EIC option in association with project based systems.

### 3.3. Consultant’s Assessment

Before summarizing the results of this work, it seems appropriate to provide a brief interpretation of what was heard in the course of interviews with 47 knowledgeable stakeholders and what those views might mean.

The single strongest message from respondents was the need for “rules”, i.e. clearly outlined criteria that allow potential developers to know what kinds of projects will be accepted for offset credit. The certainty that early development of published rules would provide was cited in virtually all of the survey conversations as the most significant benefit to be expected from an early issuance program.

The lack of rules led many respondents to suggest that potential domestic investment for Kyoto compliance was thus likely to flow to CDM projects and some even suggested that a loss of competitiveness relative to the EU-ETS. Undoubtedly some Canadian entities are investing in CDM projects at this time. There is also the example in the forest sector of a BC producer of wood pellets shipping to Europe for use under a renewable energy incentive program rather than selling for domestic use (although, how investment might otherwise leave Canada for the EU-ETS is difficult to understand at this time, as the ETS is a cap and trade based system). In an open economy like Canada’s, such examples are likely to occur with even the most favourable domestic regime.

However, the point being made – that *the current uncertainty is a significant impediment to investment in domestic projects* that would reduce greenhouse gas emissions and facilitate the transformation of the Canadian economy in a more climate friendly direction – is an important one. This point is particularly important in light of the time required for many projects to be developed and implemented. For example, three years may be an optimistic time frame in which to develop a simple power generation facility, such as a combined cycle gas turbine or small hydro facility. With the Kyoto commitment period now three years away, many projects that could contribute to Canada’s compliance may

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<sup>8</sup> “Design of a Practical approach to Greenhouse Gas Emission Trading Combined with Policies and Measures in the EC”. Center for Clean Air Policy. November 1999.

not be developed early enough provide a significant compliance contribution or to earn their developers sufficient economic return<sup>9</sup>.

This focus on the need for certainty led many respondents to suggest that the most important elements of an early issuance program would be (1) the published “rules” and (2) a mechanism for project validation. Generally, the views of the stakeholders suggest the largest proportion of the benefits sought with the introduction of EIC in 2006 could be achieved with a simpler system limited to these two elements, leaving monetization of early registration (i.e. crediting) to the private sector marketplace through the means of forward contracting.

This is not to say that there are not benefits associated with taking the final step of issuing credit. However, those benefits come at a cost. Government is likely to be required to assume performance or deliverability risk. Managing performance risk would likely entail creation of a mechanism for assessing it and legitimate concerns were raised about the administrative cost and complexity this mechanism would entail. Managing performance risk could easily become the focal point of EIC to the detriment of encouraging greater offset development.

It was also clear that among potential offset project developers, it is the small, more entrepreneurial entities which have the greatest need for the financial benefits early crediting would provide. However, these are also the entities likely to have the highest associated performance risk – and thus least access to EIC.

Overall, there is clear and strong support for early movement to provide project developers with certainty regarding what types of projects will be credited through published rules and project validation. However, the support among respondents and the rationale for developing early credit issuance is less clear.

### **3.4. Summary**

This assessment involved interviews with 47 individuals representing 37 organizations. All but two of these found value in the concept of EIC. Support was primarily based on the imperative EIC would provide for early development of rules and requirements, the lack of which was seen as the major impediment to offset development in Canada today. The opportunities EIC would provide for financing was also seen as important. Other benefits relate to competitiveness and emissions market development.

Respondents are generally seeking an EIC system which provides a significant proportion of credits in 2006-2007, early in the project development cycle and would like to see the system persist through 2012. Discussing alternatives, a significant number of respondents argued that with published rules and requirements and a mechanism for validating specific projects, the final step of credit issuance was not necessary. This approach would eliminate the need for government to assume project performance risk and allow forward contracting to emerge as the primary means of early monetisation of project benefits.

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<sup>9</sup> Several respondents discussed the brevity of the five year commitment period relative to the time required to generate a positive return for many projects. If developers must wait until 2008 for certainty on whether to develop a project, many could be uneconomic simply because there is too little time available when the project revenues could payback the investment required. Generally, respondents concluded that there was too much uncertainty vis-à-vis post 2012 to ascribe any value to emission reductions in that time.

That being said, almost as many respondents argued for credit issuance for reasons related to the credibility of the Canadian government's response to Kyoto in general and the offsets system in particular. Several also saw the opportunity for government to assume project performance risk to the benefit of the market (although, government assumption of such risk raised concerns among some for the cost and complexity of the system that would be needed to manage it).

Overall, a majority of respondents felt the impact of the proposed option would be in the upper half of the scale (moderate to high).

Survey findings are generally consistent with the results of the limited literature review, although, the literature review did suggest that project performance risks be addressed through private sector contractual means, while the implication of the proposed irrevocable EIC approach is that government would assume such risk.

## **APPENDICES**

### **1. Questionnaire and Study Background.**

## Appendix 1. Study Questionnaire and Background

### Preamble

The Government of Canada's *Climate Change Plan for Canada* proposes an offset system that would provide a market incentive for the identification and development of projects that reduce and/or remove greenhouse gases (GHG) not covered under the Large Final Emitters (LFE's) system of regulations and covenants. In this regard, the federal interdepartmental Working Group on Offsets (WGO) prepared an *Offset System Discussion Paper* in May 2003 and consulted with Provinces/Territories and stakeholders in June 2003.

The WGO is currently doing further work on the design of the Offset System with the objective of completing a design paper by late 2004/early 2005. As one consideration in the proposed design, the WGO wishes to explore the option for partial early issuance of offset credits. Early issuance is being considered as a means of incenting a greater number of offsets projects and thus more emissions reductions than would otherwise occur.

Early issuance credits (credits) could be provided to project proponents with registered projects up to two years before *ex post* distribution of offset credits would otherwise occur. These credits would be issued by the Government of Canada. Credits would be irrevocable and acceptable for compliance in the LFE regime. Credits would have to be "repaid" by the project proponent from those actually earned during the crediting period (i.e. 2008 through 2012). Otherwise, the potential design of an early issuance feature remains open.

That being said, consideration is being given to the following basic design:

- Registration of projects could occur as early as 2006;
- Projects must generate their initial reductions/removals after January 1, 2002;
- only reductions/removals achieved after January 1, 2008 from registered offset projects would be eligible for credits;
- Credits could be issued in 2006 and 2007 for some portion of the credits projects were expected to generate in 2008 and 2009. Early issuance credits would be 'repaid' from credits generated during the commitment period (2008-2012)
- Consideration might be given to extending the early issuance feature beyond 2006 and 2007.

An early issuance feature for the proposed Offset System is not to be confused with "credit for early action". As noted above, early issuance is simply provision of registration for credits that would be generated in 2008 through 2012 rather than any crediting of reductions prior to 2008.

At this time, the WGO wishes to identify and assess the benefits and costs of early issuance from the perspective of different stakeholder groups. In particular, would early issuance of offset credits increase opportunities for financing emissions offset projects. Secondly, the WGO also wishes to identify key design issues and criteria. With this survey, Eos Research & Consulting Ltd., on behalf of the WGO, is seeking the views of a range of stakeholders regarding these issues. The following questions are intended to elicit stakeholder views:



## Questions

1. What would be the anticipated benefits associated with receipt of early issuance credits for proposed offset projects – for the project proponent? – for buyers of offset credits? - for the Government of Canada?
2. How would registration of projects and early issuance offset credits affect access to financing for potential projects that reduce or remove greenhouse gas emissions?  
For example:
  - i. *Would early issuance provide significant revenue opportunities for projects?*
  - ii. *Would early issuance credits affect perceptions of risk associated with financing potential projects?*
  - iii. *Would early issuance credits provide acceptable/useful collateral for debt financing?*
  - iv. *How would early issuance credits affect current forward contracting of emission reductions?*
3. How important are the potential benefits of early issuance likely to be for project developers? – financial institutions? – buyers of offset credits?
4. What key features would registration and early issuance credits need to incorporate in order for benefits to be realized? And why?
5. What costs and what risks would you expect to be associated with early issuance of Offset System credits – for the project proponent? – for buyers of offset credits? for the Government of Canada?
6. What proportion of the total emissions offset estimated for a particular project should be available for early issuance? (e.g. 10%, 50% or 100% of the anticipated emissions reductions) And why?
7. At what stage of project development should early issuance offset credits be made available? (e.g. on registration of a design, completion of construction or on confirmation of operating results)
8. Should *Early Issuance* be a feature only during 2006 to 2008, i.e. before the Offset System and Emissions Trading programs start-up or should it also be provided as an incentive supplementing *ex post* issuance throughout the period to 2012? Why?
9. Can you estimate how great an effect an early issuance option would have on the number of offset projects developed in Canada? (e.g. no impact/low/medium/high or 10%, 20%, 50%, etc.)
10. Are there offset system design alternatives other than early issuance that you would recommend for incenting increased numbers of offset projects?