



ClearBlue Markets

265 Rimrock Road
Suite 201, Toronto
Ontario, M3J 3C6
Canada

Tel 416-690-6369
Email mberends@clearbluemarkets.com
www.clearbluemarkets.com

ClearBlue Markets Cap & Trade Services

Offset Strategy

Internal paper for Enbridge Gas Distribution Inc.

Updated November 1, 2017

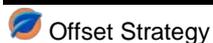


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Executive Summary & Recommendations [confidential]

We recommend keeping the Executive Summary and Recommendations confidential, see Section B for explanation.

SECTION A – Background on Offsets (non-confidential)

1. What is an Offset?

A carbon offset is a reduction in emissions or a sequestration of carbon dioxide (CO₂) or other greenhouse gases¹ occurring outside the scope of a Cap & Trade system, that after all the relevant approvals, can be used for compliance within a Cap & Trade system such as Western Climate Initiative, Inc. (“WCI”), or for compensating emissions on a voluntary basis. Once all the necessary requirements are satisfied (see Chapter 2 and Annex I) and Ontario offsets have been issued into a Compliance Instrument Tracking System Service (“CITSS”) account, they can be sold and transferred, and used for compliance by entities such as Enbridge.

A key concept in understanding an offset is that of the baseline. This is a (counterfactual) scenario that shows how greenhouse gas emissions develop over time if the offset project would not have been implemented (e.g. the digester to treat manure was not built at the farm, or the forest conservation project was not implemented).

Figure 1 below shows an example of baseline versus project emissions. In the example, the baseline emissions are increasing each year. This could represent for example a landfill that is still receiving waste with the methane emissions from the decomposition of that waste increasing year by year are shown in the orange line. When the landfill gas capture project is implemented, the methane emissions are reduced to the level of the project emissions (blue line). The difference between baseline and project emissions would represent the number of offsets that can be awarded to the project. In WCI, this awarded amount is based on monitoring and verification that is completed on an annual basis, where the green area represents the offsets generated in the first year of project operation. See Annex I for more detail on the offset process.

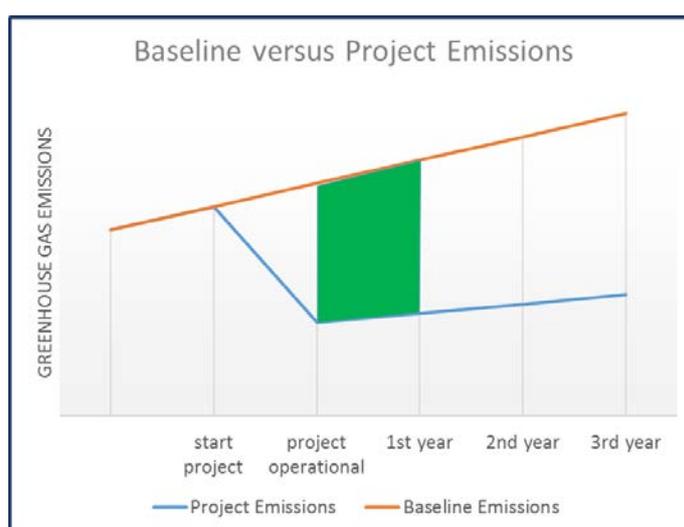


Figure 1. Baseline vs. Emissions chart.

¹ That would be calculated into CO₂ equivalent via their Global Warming Potential.

2. Offset Regulation and Protocols

The Ontario Regulation 144/16: The Cap and Trade Program (Ontario Cap & Trade Regulation) itself currently does not set out what the rules for the *creation* of Ontario offsets are, it only details how many offsets may be used for compliance (the 8% use).

On October 4, 2017, the MOECC posted an updated version of the proposed Ontario Offset Credits regulation and the one incorporated protocol- Landfill Gas (LFG). The new proposed regulation outlines the overall process, criteria and administrative requirements for the creation of an offset credit for compliance. The incorporated protocols outline the rules for each project type or class.

Currently, only the Landfill Gas Offset Protocol has been released. As future protocols are adapted by the Ontario and Quebec governments, they will be posted for public comment. Once they are approved by the Minister, they will be incorporated into the regulation (Offset Initiative Protocols for Ontario's Cap and Trade Program).

Key elements of the proposed Ontario Offset Credits regulation include:

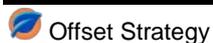
2.1. Main actors involved in the offset project

It is important to understand the (legal) role of the main actors that will be involved in offset development. The 2016 Regulatory Proposal defined an '*Offset Initiative Operator*' and an '*Offset Initiative Sponsor*'.

- The role of *Operator* was included in the 2016 Compliance Offset Credits Regulatory proposal. The Operator was defined as the project developer and had the authority to apply for offset credits e.g. in a landfill project, own the land, operate the landfill and build and operate the LFG capture system. This role is not mentioned at all the current draft regulation, but there could still be a project developer that is not necessarily also the sponsor. This entity would not have a formal role in registering the project or applying for the offsets.
- The *Sponsor* would be the entity that registers the offset group and applies for the offset credits. The Sponsor is responsible for all applications and submissions to the registry and will receive the offsets in their CITSS account.

It is important to understand that the buyer could be the Sponsor of projects. However, a party also can procure offsets without deciding to take a role as a Sponsor.

- The main advantage of being a Sponsor would be to have control over all documentation, and to be directly receiving the offsets (which can be important in case of legal dispute or bankruptcy).
- The main disadvantage would be potential liabilities in case of offset reversals. Liability can remain even when you are no longer a sponsor, if the MOECC cannot find any other sponsor to hold liable.



2.2. Start date

The start date of a single offset project or a group of offset projects is the first day the project achieves a GHG reduction, avoidance or removal. All start dates must be in-line with the relevant protocol. For group projects, once the start date is determined, that date is not impacted by subsequent projects that are added to the group.

2.3. Eligibility criteria for sponsors

A registered Cap & Trade participant, individual, a corporation, a partnership or sole proprietorship can be a sponsor of an offset project or group offset project. The sponsor is authorized to register or re-register the project with the MOECC. The sponsor must be an individual that lives within Canada or a corporation that has an establishment in Canada². A sponsor cannot have a record of cancelled offset projects.

The sponsor is responsible for applying for the Ontario offset credits for the offset project. The credits are provided based on the GHG reductions, avoidances or removals an offset project for the GHG reductions, avoidances or removals that were achieved by an offset project during a crediting period. Sponsors face risk of project reversal. In the case of a reversal where there is no sponsor associated with the project, credits will be removed the holding or compliance account of any participant that was a sponsor in the past. Therefore, a risk still exists even if the sponsor is no longer sponsoring the project.

2.4. Eligibility criteria for initiatives, both single and in groups

In order to register a project as an offset project, the project or any component of it, cannot be registered or listed in any other program that recognizes GHG reductions, avoidances or removals. The offset project is must be located in Canada with a start date of January 1, 2007 or later. For any projects located in Quebec, those projects will follow Quebec's offset regulation.

In the event that an offset project is cancelled, a new sponsor will have to re-register the project. Upon re-registration, the crediting periods for the project will remain the same as before the cancellation. The new sponsor will assume the responsibility of being the project sponsor from the first day the project was originally registered.

There are special considerations outlined for a group offset project. The sponsor of the project will also be the sponsor of any other projects in the group. When registered offset projects are in a group, they will be treated as a group in regard to the creation or cancellation of Ontario offset credits. The project is able to use the same baseline and calculations determined in the applicable protocol to calculate GHG reductions, removals or avoidances as the other projects in the group.

2.5. Registration/ Re-registration requirements

When a sponsor registers or re-registers for a project they must disclose a description of the project, what protocol it applies to, the start date or anticipated start date of the project, and

² In the 2016 proposal, the sponsor had to be based in Ontario. The current regulation proposal has expanded the requirement to all of Canada.



an estimate of the anticipated GHG avoidance, removals that will be achieved over the reporting period. The sponsor must also provide a document proving that the sponsor is authorized to register or re-register the project, and documentation that neither the project nor any component of it is already registered or listed in any other programs that recognizes GHG reductions, avoidances or removals.

In addition to the criteria above, sponsors that register or re-register a project to be part of a group offset project must provide a list of other initiatives that have already been registered or intend to be registered within the group.

2.6. Time period for application

The application for an offset project may be made before the start date of the project, but not before the day the applicable protocol is published. The application must be completed within 18 months of the later date between the start dates of the offset project, or the day the protocol is published. For example, a project that started 4 years ago, would have 18 months from the time the offset protocol is published to get all documentation in order and apply as an offset project.

2.7. Crediting periods

A crediting period for a single offset project or project in a group is the period in which offset credits may be created for GHG reductions, avoidances or removals achieved by the project or project in a group. The first crediting period begins on the start date for the project.

For non-sequestration projects, projects that reduce or avoid GHG emissions, each crediting period is 10 years or the period specified by the applicable protocol. For sequestration projects, projects that remove GHG from the atmosphere through storage, each crediting period is 30 years or the period specified by the applicable protocol.

In terms of subsequent crediting periods, non-sequestration projects can only have three consecutive crediting periods (30 years). Currently, there are no limits for sequestration projects.

2.8. Reporting periods

The reporting period for individual and group offset projects is every 12 months. The timing of the reporting period depends on whether the project start date is before or after the applicable protocol is published.

If the applicable protocol is published before or on the start date of the project, the 12-month reporting period will begin on the start date of the project and each subsequent 12-month period. If the applicable protocol is published after the project start date, the 12-month reporting period will begin on the date the project is registered, and each subsequent 12-month period. The report must include details of the reductions, avoidances and removals that occurred within the 12-month period.

2.9. Reversals

Offset projects are subject to reversal if an error, omission or misstatement was made on either a project or verification report and the number of Ontario offsets created for the project is greater than the amount of credits it should have been issued. If the Minister suspects that a reversal has occurred, the sponsor must submit a reversal report and verification report that are prepared in accordance with the applicable protocol. During this time, neither the sponsor nor the designated account representative is allowed to transfer any emissions allowances from the holding account to any other account other than their compliance account. Once the reversal is corrected, the restrictions on the sponsor and the designated account representative are lifted.

2.10. Reporting and verification requirements

The initiative report consists of the total amount of GHG reductions, avoidance or removals achieved for the reporting period expressed in tonnes of CO₂e, calculations related to GHG sources, sinks and reservoirs, a description of the leakage assessed, and any violations of legal requirements that may have an impact on the amount of GHG reductions, avoidance and removals achieved during the reporting period. The initiative report must be verified by an accredited verification body. The accredited body will visit the project site once for each initiative report.

The reversal report consists of the total amount of reversal calculated in accordance with the protocol, as well as the calculations related to the total amount of the reversal. Reversal reports must also be verified by an accredited verification body.

After verification of an initiative report or a reversal report, the verification body will issue a verification statement and report.

2.11. Record keeping requirements

For sponsors, all records related to an offset initiative in either paper or electronic format must be kept for a minimum of seven years after the end of the last crediting period for the project.

2.12. Ontario and Quebec Offset Protocols

There is currently a joint Ontario and Quebec project by a team of consultants lead by Climate Action Reserve (CAR) to adapt protocols for use by the Ontario and Quebec Cap & Trade programs. The protocols will be applicable in Ontario and Quebec, but also will be made applicable for use in the rest of Canada if possible.

Each candidate protocol is evaluated against WCI criteria defined in the *WCI Offset System Essential Elements Final Recommendations Paper*. The key criteria from WCI related to offsets are:



- **Real** – offsets are quantified using accurate and conservative methodologies, taking into account leakage³
- **Additional** – offsets only awarded for the portion of greenhouse gas emission reductions or removals that would not have happened under a baseline scenario
- **Permanent** – reductions or removals are not reversible, or provisions must be in place in case removals are reversed (replacing offsets, 100-year timeframe)
- **Clear Ownership** – the offset developer must have legal ownership of the greenhouse gas emission reduction or removal resulting from the offset project⁴
- **Verifiable** – verifiable means that a GHG reduction or removal is well documented and transparent, such that it lends itself to an objective review by a qualified verifier.
- **Enforceable** – each WCI partner jurisdiction should have sufficient compliance/enforcement mechanisms to compel compliance with its requirements and with WCI offset protocols.

The following three 'priority protocols' have already been developed and the first (and second) drafts have been published.

1. Landfill Gas Capture and Destruction
2. Mine Methane Capture and Destruction
3. Ozone Depleting Substances Capture and Destruction ("ODS")

So far only the LFG protocol has been adopted in the draft offset regulation. In this protocol, projects located in Quebec can apply in Quebec only, and projects located in Ontario or the rest of Canada can apply in Ontario.

It is anticipated that the following protocols will be developed this year:

1. N₂O Reductions from Fertilizer Management
2. Emission Reductions from Livestock
3. Anaerobic Digestion (Organic Waste and Manure)
4. Organic Waste Management
5. Forest (avoided conversion, and improved forest management)
6. Afforestation and Reforestation
7. Urban Forest
8. Grassland
9. Conservation Cropping
10. Refrigeration Systems

All of these protocols are being developed via a 'top-down' process, i.e. the Ontario and Quebec governments have chosen which protocols are being developed. There is no formal procedure for 'bottom-up' protocol developments, however, it may be possible to request

³ Leakage refers to effects outside the boundary of the project itself, for example a forest conservation project might lead to increased logging outside the project boundary.

⁴ This is not always obvious, for example, we have seen disputes between operators of landfills and the owners of the land on which the landfills were located, both claiming ownership of the offset credits.

certain protocols for other project types, to then be developed 'top down', or possibly also to submit protocols that would then have to be approved.⁵

There have been some delays in developing the protocols and we now expect most of the protocols to be finalized by the end of 2017 or early 2018.

3. Considering an Offset

Given an offset credit can be used toward compliance obligations, as an equivalent to an allowance, a discussion of why and what a compliance entity may consider in evaluating offsets may be instructive.

Offsets at this point in time may provide entities with opportunities to meet their compliance obligation at a decreased cost. An offset, depending on type, timing, and other variables may be procured at a discount to an allowance. The discount in price does need to be considered in relation to the risks and costs. Offsets do inherently require more resources, as they are a more sophisticated instrument with a number of risks. Any entity wishing to consider offsets would need to fully understand costs and benefits, and be adequately resourced to manage the level of engagement appropriately.

There are different ways of purchasing offsets. These include:

- Primary offset sourcing – purchasing directly from project owners or developers, at various stages of project development.
- Secondary offset purchasing – purchasing from the secondary market
- Hybrid options including carbon fund participation.

Each route involves very different costs and risks, with the primary route carrying the most risks as the number of offsets that will be delivered typically remains uncertain until close to each delivery date. Also, sourcing offsets from Ontario, California, or Quebec will involve different risks and somewhat different price levels.

⁵ Since there is a significant cost and effort involved in developing an offset protocol, and this would be new (no bottom-up protocol has been approved yet), we would not recommend to start developing a protocol without prior consultation with the government to assess the likelihood of approval.

SECTION B – Enbridge Offset Strategy [Confidential]

Confidentiality

We recommend that the remainder of this document (including the annexes), which contains specific information and advice related to Enbridge's offset strategy, remains strictly confidential in its entirety. Even where, for example, general market information is provided, or risks are being explained, that information is market sensitive as it could lead others to draw conclusions on how Enbridge might use that information.

It is important to realize that Enbridge will be competing in a market to purchase offsets. Enbridge would not only be competing with other compliance buyers in the market for offsets, but also with intermediaries that take their own positions in the offset market. If Enbridge's strategy would involve a preference for a certain project type or jurisdiction, or for a certain route to market, this could lead others to buy into specific offset types ahead of Enbridge to generate a profit, and project developers may see their negotiating position improved.

We have, for example, experienced in Europe when entities were looking to buy certain specific types of offsets for different reasons, the price of those types of offsets would rise significantly, as soon as others became aware of such preferences.

The remaining information in this exhibit has been filed in confidence with the Ontario Energy Board.