



Alberta Offset System

Background:

There is increasing concern about high levels of greenhouse gases in the atmosphere. Although the main greenhouse gases (GHGs) consist of carbon dioxide (CO₂), nitrous oxide (N₂O) and methane (CH₄), the higher global warming potentials of N₂O and CH₄ (see sidebar) are usually converted to carbon dioxide equivalents or CO₂e for ease of calculation of total GHGs.

Gas	Global Warming Potential
CO ₂	1
CH ₄	21
N ₂ O	296

Alberta is the first jurisdiction in North America to have regulations in place to reduce greenhouse gas emissions.

In July 1, 2007, Alberta's [Climate Change and Emissions Management Amendment Act](#) required companies that emit more than 100,000 tonnes (T) of CO₂e per year, to reduce their emission intensity by 12 per cent annually. If these companies are unable to meet this target reduction, they have options:

- Go beyond their 12% reduction target, earning Performance Credits they may choose to sell;
- Contribute \$15/tonne to the Climate Change and Emissions Management Fund, earning a 'Fund Credit' against their compliance;
- Use carbon offsets or credits bought from Project Developers in the Alberta Offset market.

An offset must originate from a voluntary action in a non-regulated sector or operation. Additional criteria include:

- result from actions taken on or after January 1, 2002;
- be real, demonstrable and quantifiable;
- not be required by law;
- have clearly established ownership;
- be counted once for compliance purposes;
- be verified by a qualified third party; and,
- have occurred in Alberta.

These are minimum criteria. It is important to note that meeting these criteria does not guarantee that an offset will be eligible for compliance use. To ensure that Projects meet the above criteria, a number of quantification protocols have been developed by the Government of Alberta to 'seed' the market. Some agricultural management systems such as reduced tillage management will qualify as carbon offset projects in Alberta, and are identified through these quantification protocols (www.carbonoffsetsolutions.ca; Offset protocols tab).

Approved Quantification Protocols:

Agro-Forestry/Afforestation
 Beef Feeding (edible oils)
 Beef Lifecycle (reduced age to slaughter)
 Biogas/Anaerobic digestion
 Biomass Combustion
 Compost (non-Ag materials)

Landfill Gas
 Pork Operations
 Reduced Tillage
 Waste Heat Recovery (multiple entity),
 Waste Heat Recovery (single entity)
 Energy Efficiency (Pork, Dairy, Poultry)



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Additional protocols are available in draft form

- * Biofuels
- * Enhanced Oil Recovery
- * Enhanced Oil Recovery - Streamlined

The protocols are based on the best scientific knowledge available.

To qualify for compliance in the Alberta Offset Market, the carbon offsets created by a project must be real, measurable and verified by a third party. There are four key steps to offset creation. Understanding these steps will lead to an understanding of the Alberta Offset System (see www.carbonoffsetsolutions.ca).

1. Offset Project Plan – describes the project, including referencing the Alberta government approved quantification protocol for measurement of offsets. A third party verifier will use this information to verify against. A Buyer will likely want to see this Plan before they engage.
2. Project Implementation – While underway, it is important for the project developer to follow proposed monitoring plans and implement a data management system. Both buyers and verifiers will need this information.
3. Project Reporting – a detailed project report should outline the activities of the project, any changes from the initial project plan, methods and calculations for greenhouse gas emission reductions/removals, time period for the report, and any associated documentation and signatures. Central to reporting is the GHG assertion, where the developer makes a claim to a certain number of potential offsets. Verification will be done against this Project Report and the Project Plan, resulting in a Verification Statement.
4. Offset Submission – once the Project Report and Verification Statement are complete, the GHG assertion, Project Report and Verification Statement are interlinked and cannot be separated. They are submitted together to Alberta Environment along with the regulated emitter's Compliance Report. Government will recognize these verified emission reductions for compliance purposes. Random audits will occur periodically of Compliance Reports and if issues with particular emission offsets arise, then the Government will be asking for clarification/resolution from the regulated entities.

NOTE: In Alberta, offset credits will not be issued by the government. Rather, regulated entities can submit verified offsets and related reports with their annual compliance report under the Specified Gas Emitters Regulation.

For greater detail on the Alberta Offset system please review the [Alberta Offsets Guidance Document](#) and the [Alberta Verification Guidance Document](#).

Additional Resource Information:

Carbon Offset Solutions: <http://www.carbonoffsetsolutions.ca/index.htm>

Climate Change Central: <http://www.climatechangecentral.com/>

Alberta Environment – Climate Change: <http://www3.gov.ab.ca/env/climate/index.html>

Alberta Agriculture – Climate Change:

<http://www.agric.gov.ab.ca/app21/seltopic?cat1=Weather+%26+Climate&cat2=Climate+Change>



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