Compendium of Federal Offset Protocols

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Canada's Greenhouse Gas Offset Credit System

Environment and Climate Change Canada
Environnement et Changement climatique Canada

Canada

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Environment and Climate Change Canada
Public Information Centre
Place Vincent Massey building
351 St-Joseph boulevard
Gatineau Quebec K1A 0H3
Toll free: 1-800-668-6767
Email: enviroinfo@ec.gc.ca

Aussi disponible en français

Document revision history

Version number	Publication date	Summary of changes
4.0	May 6, 2024	Inclusion of *Improved Forest Management on Private Land*, *Version 1.0*
3.0	December 8, 2023	Inclusion of *Reducing Greenhouse Gas Emissions from Refrigeration Systems*, *Version 1.1*
2.0	February 24, 2023	Inclusion of: • *Reducing Greenhouse Gas Emissions from Refrigeration Systems*, *Version 1.0*; and • *Landfill Methane Recovery and Destruction, Version 1.1*
1.0	June 8, 2022	Initial version including *Landfill Methane Recovery and Destruction*, *Version 1.0*

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1.0 Introduction

Canada's Greenhouse Gas (GHG) Offset Credit System is established under Part 2 of the *Greenhouse Gas Pollution Pricing Act* (GGPPA) to provide an incentive to undertake projects that result in domestic GHG reductions that would not have been generated in the absence of the project, that go beyond legal requirements and that are not subject to carbon pollution pricing mechanisms.

Canada's GHG Offset Credit System consists of:

- the *Canadian Greenhouse Gas Offset Credit System Regulations* (the Regulations), which establish the system, implement the operational aspects and set the general requirements applicable to all project types
- federal offset protocols, included in the *Compendium of Federal Offset Protocols* (the Compendium), each containing requirements for project implementation and methods for quantifying GHG reductions for a given project type, and
- the Credit and Tracking System (CATS) to register offset projects, issue and track offset credits, and share key information through Canada's GHG Offset Credit System Public Registry

The Regulations apply to a proponent of a project which is of a type for which a protocol has been included in the Compendium; that aims to generate GHG reductions by preventing GHG emissions or removing GHGs from the atmosphere; and with respect to which the GHG reductions are real, additional, quantified, verified, unique and permanent. Offset credits will be issued to a proponent of a project for the period covered by a project report in the amount determined in accordance with subsection 29(2) of the Regulations if requirements of subsection 29(1) of the Regulations are met.

2.0 Protocols

The Regulations require a proponent to register their project using the most recent version of a federal offset protocol that applies to the project when the application for registration is submitted. This version of the protocol will apply to the project for the duration of its crediting period unless after an update to a protocol, the proponent opts to use the new version of the protocol. The proponent using the new version of the protocol must ensure their project meets all requirements of this new version and must specify any updates to the registration information in the project report. Note that only one version of a protocol may be used per reporting period.

The proponent must meet requirements set out in the applicable protocol and the Regulations, including those to quantify and report GHG reductions generated from the eligible project activities. The federal offset protocols are designed to ensure projects generate GHG reductions that are real, additional, quantified, verified, unique and permanent. The protocols are also developed in accordance with the principles of ISO 14064-2:2019 *Greenhouse gases – Part 2 – Specification with guidance at the project level for quantification, monitoring and reporting greenhouse gas emission reductions or removal enhancements* to ensure reported GHG reductions generated as a result of implementing a project are relevant, complete, consistent, accurate, transparent, and conservative.

2.1 Landfill Methane Recovery and Destruction

Methane emissions from landfills are generated by the anaerobic decomposition of organic material in the buried waste. The installation of a landfill gas (LFG) recovery and destruction system enables the landfill methane to be converted into biogenic carbon dioxide instead of allowing it to be passively released to the atmosphere.

The *Landfill Methane Recovery and Destruction* federal offset protocol is intended for use by a proponent undertaking a project to actively recover and destroy LFG to generate GHG emission reductions for which federal offset credits may be issued under the Regulations.

GHG emission reductions generated by a project under this protocol can only result from avoided methane emissions achieved through active recovery of LFG from within the project site and its destruction in an eligible destruction device, which can include open and enclosed flares, boilers, turbines, internal combustion engines, stations for the direct injection of upgraded LFG into a natural gas network, or stations for the compression or liquefaction of upgraded LFG prior to its transport and injection into a natural gas network.

Version number	Publication date	Eligible for project registration	Protocol download
1.1	February 24, 2023	February 24, 2023 – present	• HTML • PDF
1.0	June 8, 2022	June 8, 2022 – February 23, 2023	• HTML • PDF

2.2 Reducing Greenhouse Gas Emissions from Refrigeration Systems

Emissions of hydrofluorocarbons (HFCs) from industrial and commercial refrigeration or air conditioning systems are caused by releases during equipment installation, when charging equipment with refrigerant, either initially or when re-filling (top-up), and leaks from equipment operations. Lowering the global warming potential (GWP) of refrigerants used in these systems in Canada ensures that the associated impacts on climate change from unavoidable equipment leaks are minimized to the extent possible.

The *Reducing Greenhouse Gas Emissions from Refrigeration Systems* federal offset protocol is intended for use by a proponent undertaking a project to transition away from refrigerants with high GWP values in their commercial and industrial refrigeration or air conditioning systems, in order to generate GHG emission reductions for which federal offset credits may be issued under the Regulations, from the following eligible project activities:

1. retrofitting a pre-existing refrigeration or air conditioning system to use an eligible refrigerant, or
2. installing a new refrigeration or air conditioning system containing an eligible refrigerant

Additional GHG emission reductions can be generated by destroying HFCs contained within high-GWP refrigerant from a pre-existing refrigeration or air conditioning system that is being retrofitted or replaced in 1. or 2. above, respectively. HFC destruction must occur in Canada to be eligible for credit issuance.

GHG emission reductions generated from destroying, reducing or replacing ozone-depleting substances are not eligible for credit issuance under this protocol.

Version number	Publication date	Eligible for project registration	Protocol download
1.1	December 8, 2023	December 8, 2023 – present	• HTML • PDF
1.0	February 24, 2023	February 24, 2023 – December 7, 2023	• HTML • PDF

2.3 Improved Forest Management on Private Land

Forests have a large capacity to sequester carbon by removing carbon dioxide (CO_2) from the atmosphere and converting it into biomass through photosynthesis. This carbon is stored in the forest as live biomass as well as dead organic matter and forest soil. The implementation of improved forest management relative to the baseline can reduce the amount of carbon lost from managed forests and/or increase the rate of carbon sequestration in forest biomass.

The *Improved Forest Management on Private Land* federal offset protocol is intended for use by a proponent undertaking a project to carry out forest management activities on managed forestlands that go beyond a business-as-usual management scenario in order to generate GHG emission reductions and removals (GHG reductions) for which federal offset credits may be issued under the Regulations.

GHG reductions generated by a project under this protocol can only result from the implementation of improved forest management. GHG reductions under this protocol cannot be generated from afforestation/reforestation or avoided conversion of forestlands.

This protocol is applicable to projects on private land and is not applicable to projects on provincial or federal Crown lands (excluding land where a First Nation has exclusive use and occupation) and public lands in the territories.

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1.0	May 6, 2024	May 6, 2024 – present	• HTML • PDF