



**Carbon Action**



**Title: ISO 14064 Accredited Courses**

## About ISO 14064 Accredited Courses

Carbon Action is the Strategic Alliance Partner of the Canadian Standards Association (CSA). The CSA administers the International Secretariat of ISO/TC207/SC7 on GHG Management. This committee is responsible for ISO 14064 standards and the CSA's role and leadership are fundamental to ensure that these standards are up to date and meet stakeholder needs. Carbon Action is a technical expert on ISO/TC207/SC7 and has provided support to many GHG programmes in Asia, Africa, Europe and Middle East

The courses follow the ISO 14064 series of standards and are accredited by the Canadian Standards Association (CSA) who acted as the global secretariat for the compilation of the standards. Carbon Action is the strategic training partner of CSA and has worked in collaboration with them since 2009

## The ISO 14064 Series

The courses are delivered by instructor led webinar in four-hour modules. The courses are workshop orientated with emphasis on classroom discussion and practical exercises. The courses do require some pre work and there is an online exam to be taken after the course, in the student's own time. Successful completion of the course and exam allows the student to download their certificate, which is issued by the CSA. Course fees include tuition, training materials, a copy of the relevant ISO Standard and all exam and licensing fees due to the accrediting body.

**The ISO 14064 Series includes three separate courses: courses consist of the following modules:**

1. **ISO 14064-1:** Quantification and Reporting of Greenhouse Gas Emissions for Organizations
2. **ISO 14064-2:** Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancement
3. **ISO 14064-3:** Verification and Validation of Greenhouse Gas Statements

## Appendix 1

# Overview ISO 14064-1: 2018 - Quantification and Reporting of Greenhouse Gas Emissions for Organizations

Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

**Prerequisites:** None

### **Course Description**

This document specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory. The ISO 14064 series is GHG programme neutral. If a GHG programme is applicable, requirements of that GHG programme are additional to the requirements of the ISO 14064 series.

Course Agenda: Greenhouse Gas Inventories & Measuring Carbon Footprint is one course, taken in three sections:

**Section 1:** Foundational Information (self-paced, e Learning) \*must be completed prior to starting the

**Section 2** virtual training\*

- Climate Change
- Basic GHG Definitions and Concepts
- Purpose and Benefits of ISO 14064-1:18

**Section 2:** Apply the Standard (instructor-led, virtual, 3 x 4 hour sessions)

- GHG inventories
- GHG accounting and reporting principles
- Preliminary planning and base year
- Quantification of GHG emissions and removals
- Tools for emissions calculations
- GHG management handbook
- GHG information management system

**Section 3: Quiz (online)**

- You will receive a link to take the comprehensive quiz.
- You earn a Certificate of Course Completion once you complete all three sections of the 14064- 1:2018 training

## Objectives

- Describe definitions in and requirements of ISO 14064-1
- Identify concepts related to ISO 14064-1
- Explain framework and importance of design and development for verifiable GHG Inventory systems and procedures
- Describe framework and importance of a GHG management handbook and GHG Information Management System (IMS)
- Summarize tools, methods and good practice guidance related to GHG protocol for corporate accounting
- Recap tools, methods and good practice to develop inventory requirements of ISO14064-1 Who should attend?
- Accountants & Financial Professional in GHG
- Auditors
- Consultants
- Design Architects/Environmental Engineers
- GHG Inventory Developers/Inventory Quantifiers
- GHG Auditors/Verifiers.
- Public Finance Institution (PFI) practitioners.
- Impact investors.
- Government Regulators, Public workers, Regulatory Compliance Professionals
- Managers and Developers of Carbon Neutral/Offsetting projects
- Offset project developers, Project Mangers/Coordinators
- Site, Utilities, Facility Managers/Operations Managers

## What's Included

- class materials
  - a copy of ISO 14064-1:2018 Standard - Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.
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## Overview ISO 14064-2: 2019 - Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancement

— Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

### Prerequisites

Completion of ISO 14064-1 course or solid experience applying ISO 14064-1 approach to GHG Quantification.

### Course Description

This course provides a background and introduction to greenhouse gas projects - projects that reduce emissions (such as alternative energy projects) or enhance emissions removal (such as forestry projects). The course reviews the requirements of ISO 14064-2, including principles and requirements for: determining project baselines, monitoring, quantifying and reporting project performance, validation and verification requirements. Additionally, the course explores the linkages between ISO 14064-2 and other GHG protocol, such as the WBCSD/WRI Protocol for projects and the many voluntary carbon Standard/programmes. Potential linkages with the Clean Development Mechanism will also be discussed.

### Course Agenda

#### Section 1: Apply the Standard.

- Module 0: Course Overview
- Module 1: Introduction to GHG Projects
- Module 2: Introduction to ISO 14064-2
- Module 3: Identifying SSRs
- Module 4: Determining the Baseline Scenario
- Module 5: Quantifying GHG Emission or Removals
- Module 6: Emission Factors – Module 7: GHG Monitoring and Data Management
- Module 8: Documenting, Validating/Verifying and Reporting GHG Project.

#### Section 2: Comprehensive Quiz

- Complete online after the course.
- You earn a Certificate of Course Completion once you complete the 14064-2: 2019 training.

### Objectives

At the end of this course learners will be able to:

- Apply ISO 14064-2 and GHG project protocol.

- Implement the development of verifiable quantification procedures for GHG projects
- Apply good practice guidance to develop quantification procedures according to ISO 14064-2
- Recognize the inherent flexibility of ISO 14064-2 to make informed decisions for GHG Project accounting
- Summarize importance of an appropriate and credible baseline scenario selection
- Show how to select, establish, apply, justify, explain, and document procedures, criteria and tools which conform to ISO 14064-2.

### **Who should attend?**

- Accountants & Financial Professional in GHG
- Auditors
- Consultants
- Design Architects/Environmental Engineers.
- Public Finance Institution (PFI) practitioners.
- Impact investors.
- GHG Inventory Developers/Inventory Quantifiers
- GHG Auditors/Verifiers
- Government Regulators, Public workers, Regulatory Compliance Professionals
- Managers and Developers of Carbon Neutral/Offsetting projects • Offset project developers, Project Mangers/Coordinators
- Site, Utilities, Facility Managers/Operations Managers.
- Designated Operational Entities (UN CDM)
- GRI practitioners.
- Persons working in Upstream Emission Reductions.
- Those involved in the EU Fuel Quality Directive implementation.
- Oil and Gas executives. What's Included
- class materials
- a copy of ISO 14064-2:2019 - Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.

## Overview ISO 14064-3:2019 - Verification and Validation of Greenhouse Gas Statements

Specification with guidance for the verification and validation of greenhouse gas statements

### Prerequisites

ISO 14604-1 and ISO 14064-2 requirements are not covered in this course but are referred to in order to understand and apply ISO 14064-3 requirements. To be fully engaged, you must have a strong knowledge of ISO 14064-1 and ISO 14064-2 before attending this course.

### Course Description

This Standard specifies GHG Validation and Verification principles together with specific requirements and provides guidance for verifying and validating greenhouse gas (GHG) statements. It is applicable to organization, project and product GHG statements. The course provides specific examples of how the validation and verification approaches are applied to GHG inventories, project and carbon footprints of products that conform with ISO 14064-1 and 14064-2 and ISO 14067 Standards. The ISO 14064 family of standards is GHG programme neutral. If a GHG programme is applicable, requirements of that GHG programme are additional to the requirements of the ISO 14064 family of standards.

### Course Agenda

Module 1: Overview of ISO 14064-3: 2019

Module 2: Review ISO 14064 -1 and ISO 14064-2 and other standards.

Module 3: Introduction to Validation/Verification.

Module 4: Principles of Validation/Verification.

Module 5: Requirements applicable to Validation/Verification.

Module 6: Verification Planning.

Module 7: Execution and Completion of Verification Activities

Module 8: Validation

Module 9: Independent Review and Issuance of a Validation or Verification Opinion.

### Objectives

This course will allow participants to be able to:

Describe ISO 14064-3 GHG (Greenhouse Gas) Standard as it applies to the verification of GHG Statement and to the validation of a GHG Project Statement, PDD, RPD or other GHG Project Assertion.

Identify specific examples of how the verification approach is applied to GHG inventories, project and carbon footprints of products that conform with ISO 14064-1 and 14064-2 and ISO 14067 Standards

- Describe high level requirements of ISO 14064-1 and ISO 14064-2.
- Define verification/validation
- Explain how to establish and assign roles and responsibilities
- Know how verification fits in the inventory and verification/validation in project cycles
- Distinguish between validation and verification
- Identify verification/validation principles
- Explain how the five verification/validation principles are applied to a project or GHG Inventory.
- Describe verification/validation processes.
- Describe Verification Plan / Validation Plan / Evidence – gathering plan.
- Describe the various levels of assurance in GHG Validation and Verification assignments.
- Identify and mitigate Validation and Verification Risks
  - Inherent Risk
  - Control Risk
  - Detection Risk
- How to construct the Validation/Verification Statement
  - Unmodified opinion – Clause 7.3.2.2
  - Modified opinion – Clause 7.3.2.3
  - Adverse opinion – Clause 7.3.2.4
  - Disclaiming the issuance of an opinion

#### **Who should attend?**

- Accountants & Financial Professional in GHG
- Auditors
- Consultants
- GHG Inventory Developers/Inventory Quantifiers
- GHG Auditors/Verifiers
- Government Regulators, Public workers, Regulatory Compliance Professionals.
- Public Finance Institution (PFI) practitioners.
- Impact investors.
- Offset project developers, Project Managers/Coordinators
- Designated Operational Entities (UN CDM)
- GRI practitioners.
- Persons working in Upstream Emission Reductions.
- Those involved in the EU Fuel Quality Directive implementation.
- Oil and Gas executives.

#### **Participant materials provided.**

- 1) A copy of ISO 14064-3:2019 - Greenhouse gases -- Part 3: Specification with guidance for the verification and validation of greenhouse gas statements
- 2) Participant Guide or Course Manual
- 3) Case Study Part 1 – An Anaerobic Digester (AD) Case Study
- 4) Case Study Part 2 - Project Validation Report for the Anaerobic Digester.
- 5) Case Study Part 3 – First Operational Year Greenhouse Gas Report for the Anaerobic Digester
- 6) CSA Case Study – Corporate Greenhouse Gas Inventory for Global Operations



7) Ecometrica – Verification Report for a Corporate Greenhouse Gas Inventory for Global Operations.

8) Activity Answer Key (available after session 4)

## GET IN TOUCH

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## Ronan O' Conghaile



Carbon Action services is part of the Ireland and UK based Occupli where Ronan provides training and consultancy in Greenhouse Gas (GHG) Management to clients in the EMEA region and beyond.

Prior to joining Carbon Action, Ronan had 25 years of experience, working with global companies to reduce their GHG emissions and associated costs. Ronan's experience covers assignments in electronics, HVAC and general manufacturing, with clients including Siemens, Thyssen Krupp, NCR, GE, AT&T and BOSE, Thermo King among others. This provides a solid basis for the training and consultancy work he currently fulfils for Carbon Action. Ronan has completed over €25m in small and large projects all typically forming part of a broad based ESG programme.

Within these projects, Ronan managed several energy innovation projects, often in rapid change environments. In Ingersoll Rand, Ronan introduced the first carbon neutral production line - without requiring carbon credit offsets. All products were manufactured (painted welded and assembled) in a carbon positive way and using emission free energy sources. Ronan is also a Black Belt Lean 6 Sigma Practitioner and has trained various client teams in Lean.

Ronan works with companies identifying best solutions to minimise risk and ensure ESG metrics are reliably and credibly met for and with stakeholder engagement. He has project managed assignments to reduce both upstream and downstream emissions, often applying his background in multiple disciplines, including logistics and risk management.

Ronan has experience with over 20 different refrigerants minimising loss and creating large mass balance systems with high degree of accounting accuracy. He has applied his expertise to complete an emissions inventory, train and energise focused teams and prioritise capital projects to eliminate emissions.

Ronan's extensive engineering and project management experience helps him to teach others through Carbon Action's ISO 14064 training courses. Ongoing consultancy work helps ensure his training delivery reflects current best practice in GHG management.

### Qualifications and Accreditations:

- Hon BENG University of Limerick. B-Eng Honors Degree in Engineering.
- Completed Yellow Green and Black belt lean 6 Sigma course.
- Managing People – Intensive “IBEC” course
- Advanced Excel and PowerPoint
- ISO 14064 Greenhouse Gas Management accredited by Canadian Standards Association
- 14064-1 Greenhouse Gas Inventories
- 14064-2 GHG Emission Reduction Projects
- 14064-3 GHG Verification and Validation