

CARBON EMISSIONS REPORTING AND VERIFICATION COURSE

In October 2022, Singapore announced that it will raise its national climate target to achieve net zero emissions by 2050 as part of its Long-Term Low- Emissions Development Strategy (LEDS). It will also reduce emissions to around 60MtCO₂e in 2030 after peaking emissions earlier as part of its 2030 Nationally Determined Contributions (NDC).

Singapore implemented a carbon tax, the first carbon pricing scheme in Southeast Asia, on 1 January 2019. The carbon tax level was set at S\$5/tCO₂e for the first five years from 2019 to 2023 to provide a transitional period for emitters to adjust. From 1 Jan 2024, the carbon tax will be raised to S\$25/tCO₂e in 2024 and 2025, and in 2026 and 2027, further raised to S\$45/tCO₂e, with a view to reaching S\$50-80/tCO₂e by 2030. This will strengthen the price signal and impetus for businesses and individuals to reduce their carbon footprint in line with national climate goals.

ISO 14064 is an internationally recognised standard used for carbon emissions reporting and verification, and frameworks and principles from this standard can be adopted by companies that wish to voluntarily report on their carbon emissions, as well as those that are required to do mandatory reporting, e.g. the maritime sector (under the European Union (EU) shipping Monitoring, Reporting and Verification (MRV) Regulation) and the aviation industry (under the Carbon Offsetting and Reduction Scheme for International Aviation – CORSIA).

Singapore is stepping up our efforts at mitigation of climate change through industry initiatives, energy efficiency, transportation and waste and water. The first step to mitigation of climate change would be to understand how to quantify and report our greenhouse gas emissions, which is what ISO 14064 sets out to do.

The ISO 14064 course consists of the following modules:

- Quantification and reporting of greenhouse gas emissions for organizations (ISO 14064-1)
- Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancement (ISO 14064-2)
- Verification and validation of greenhouse gas statements (ISO 14064-3)

For enquiries, contact us at enquiry@sustinere.com.sg or call +65 91470395



Course schedule

	ISO 14064-1:2018	ISO 14064-2:2019	ISO 14064-3:2019
Dates/Session Time	28 - 30 January 2026 4pm - 8pm (GMT +8)	15 - 17 April 2026 5pm - 9pm (GMT +8)	11 - 14 February 2026 4pm - 8pm (GMT +8)
	11 - 13 March 2026 4pm - 8pm (GMT +8)	21 - 23 October 2026 5pm - 9pm (GMT +8)	16 - 19 June 2026 5pm - 9pm (GMT +8)
	20 - 22 May 2026 5pm - 9pm (GMT +8)		1 - 4 December 2026 4pm - 8pm (GMT +8)
	15 - 17 July 2026 5pm - 9pm (GMT +8)		
	9 - 11 September 2026 5pm - 9pm (GMT +8)		
	18 - 20 November 2026 4pm - 8pm (GMT +8)		
Duration	12 hours (3 sessions x 4 hours)	12 hours (3 sessions x 4 hours)	16 hours (4 sessions x 4 hours)
Mode of Delivery	Online	Online	Online
Course Fee	SGD 2,000	SGD 2,000	SGD 3,000

Quantification and reporting of greenhouse gas emissions for organizations

ISO 14064-1:2018

Course Content

This course provides the basic knowledge and understanding to help organisations quantify and manage their greenhouse gas emissions. It reviews the ISO 14064-1:2018 requirements for determining Greenhouse Gas (GHG) emission boundaries, quantifying an organisation's GHG emissions and removals and identifying specific company actions or activities aimed at improving GHG management. It also includes requirements and guidance on inventory quality management, reporting, internal auditing and the organisation responsibilities in verification activities. The course also reviews how the requirements of ISO 14064-1:2018 relate to existing GHG schemes and other key protocols and standards, including ISO 14001 and the World Resources Institute / World Business Council on Sustainable Development Greenhouse Gas Protocol. All participants will receive a certificate of attendance upon completion of this course.

The course will cover elements of:

- Introduction to ISO, ISO 14064 standards & WBCSD/WRI GHG Protocol
- Introduction to GHG Inventories
 - Overall introduction to GHG inventories
 - Understanding the purpose of a GHG inventory for organisations
 - GHG inventory development process
 - GHG inventory process diagram
 - Plan the development and implementation of the GHG inventory
 - Develop/Check the procedures and systems required for the GHG inventory
 - Report/Review
- 14064-1:2018 & GHG Protocol
 - Introduction and comparison of ISO 14064-1:2018 GHG Standard and WBCSD/WRI GHG Protocol for Corporate Accounting
- GHG Management Handbook
 - GHG management policies, strategies and targets
 - Company GHG policy statement, strategies
 - Risk/Opportunity analysis
 - Corporate GHG targets
 - Corporate GHG action plans
 - Inventory purpose, fundamentals, scope criteria, and intended users
 - Roles and responsibilities
 - GHG Management principles
 - GHG quantification principles
 - Inventory management
 - Objectives, targets and procedures
 - Emission management and internal actions
 - Objectives, targets, action plans and procedures
- GHG Information Management System
 - What is a GHG IMS?
 - Why develop and implement a GHG IMS?
 - How to establish a GHG IMS
 - Assessing and reducing uncertainties
 - GHG verification

Benefits of attending this course

- Obtaining knowledge and understanding of ISO 14064-1:2018
- Exploring the purpose of your GHG inventory
- Developing your GHG inventory process, e.g. for the [Carbon Pricing Bill](#)
- Quantifying and managing greenhouse gas emissions.
- Identifying specific company actions aimed at improving GHG performance.
- Identifying emission “Hot Spots” in your supply chain
- Understand how to prepare a [carbon monitoring plan](#) for your company
- Understand principles of Scope 1 and Scope 2 emissions, e.g. for preparation of environmental data in sustainability reports under [SGX Sustainability Reporting Guidelines](#), and [CORSIA](#)
- In addition to gaining competency to report the organization’s GHG emissions, attain an internationally recognized certificate to demonstrate your knowledge in GHG quantification

Who Should Attend

- Consultants
- Auditors
- Verifiers for sustainability reports
- Chartered Accountants
- Professional Engineers interested in offering quantification services to the emerging carbon marketplace or for national and international regulated GHG programs
- Regulated entities and offset project developers also may be interested to understand the processes

Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancement

ISO 14064-2:2019

This course provides a background and introduction to greenhouse gas projects. Projects that both reduce emissions (e.g. alternative energy systems) and enhance emission removals (e.g. forestry projects) are addressed. The course reviews the requirements of ISO 14064-2:2019, including principles and requirements for determining project baselines, monitoring, quantifying and reporting project performance, and validation and verification requirements. The course also explores the linkages between ISO 14064-2:2019 and other GHG protocols, such as the WRI/WBCSD GHG Protocol for projects and the Voluntary Carbon Standard. Potential linkages with the Clean Development Mechanism will also be discussed.

Who Should Attend

- Individuals involved in the management of project GHG emissions
- Energy and environmental consultants
- GHG validators and verifiers

Course Outline

The course will cover elements of:

- Introduction to GHG Projects
 - Overall introduction to GHG projects
 - Types and rationale for GHG projects
 - Key points of the GHG project cycle
- ISO 14064-2 Terms & Definitions
 - Overview of ISO 14064-2:2019 GHG Standard for Projects and WBCSD/WRI
 - GHG Protocol for Projects
 - Key terms and definitions, Principles, General requirements
- Identifying Sources, Sinks, Reservoirs
 - Identifying sources, sinks and reservoirs (boundaries and leakage)
 - Identification of SSRs relevant to the project
 - Seven Step Procedure to identify relevant SSRs for the project
 - Application of Procedure
 - Documentation of the application of the procedure
- Determining the Baseline Scenario
 - How to select a procedure
 - Project Specific procedure
 - Identification of potential baseline candidates
 - Barriers test
 - Performance standard
 - Comparison of CDM Additionality Tool and WBCSD/WRI GHG Protocol for Projects
 - Quantifying GHG Emissions or Removals
 - Quantifying GHG emissions and/or removals
 - Selection of relevant SSRs for monitoring or estimation

- Quantifying GHG Emissions or Removals
 - Quantification of GHG emission and removals
 - Use of emission or removal factors
 - Types of emission factors
- GHG Monitoring and Data Management
 - GHG Monitoring and Data Management
 - Monitoring Plan
 - Developing a Monitoring Plan
 - Quality Control, Quality Assurance
 - GHG Information Management System
- Documenting and Reporting
 - Documenting, validating, verifying and reporting the GHG project
 - ISO 14064-2 Reporting Requirements
 - Documenting the GHG project
 - Validation and/or verification of the GHG project
 - Reporting the GHG project, GHG Protocol Requirements on Reporting

Benefits of attending this course

- Understanding ISO 14064-2 Terms, Definitions, Principles and General requirements
- Identifying sources, sinks and reservoirs for the project
- Determining the baseline scenario
- Selecting specific procedures
- Prove additionality
- Quantifying your GHG emissions and removals
- Managing your GHG data
- Documenting, validating, verifying and reporting your GHG projects to allow successful validation and verification

Verification and validation of greenhouse gas statements ISO 14064-3:2019

Verification is the systematic, independent and documented process for the evaluation of a greenhouse gas assertion against agreed verification criteria. Verification provides an independent assessment of the data associated with a GHG inventory or project and typically offers an opinion on the accuracy of the estimates or measurements, thus giving confidence to others interested in the results. This course details the correct ISO approved methodology to verify Greenhouse Gas emissions. Only by using the correct verification methodology can one provide the independent and correct assessment of the data associated with a GHG inventory or project.

This course will provide detailed training on the approach to using the ISO 14064-3:2019 standard, with specific examples of how verification would be applied to a GHG inventory prepared according to the ISO 14064-1:2018 standard or a project that conforms with the ISO 14064-2:2019 standard. Topics such as principles of verification and how a verification opinion statement is produced will also be covered.

This course includes an examination component and participants who successfully pass the exam will receive a certificate of completion.

Course Content

The course will cover elements of:

- How verifiers can assess their own competencies to conduct the verification
- How a verifier can establish the verification scope, objectives, criteria and level of assurance with their client
- How to establish a materiality threshold for the verification
- How to assess GHG information systems and controls
- How to develop a verification plan including a sampling plan
- How to assess GHG information systems and controls

Who Should Attend

- Consultants
- Auditors
- Chartered Accountants
- Professional Engineers interested in offering validation or verification services to the emerging carbon marketplace or for national and international regulated GHG programs
- Regulated entities and offset project developers also may be interested to understand the processes of validation and verification so they know what to expect when engaging in them.

Benefits of becoming verifier certified

Achieving ISO 14064 training and certification is the optimum way to demonstrate your competence in GHG systems – both mandatory and voluntary schemes (CORSIA, EU ETS, UN CDM, UK MCP, and other international schemes).

- Internationally recognized certificate.
- Gain an important competitive edge in the expanding carbon emissions industry.
- Add to your professional development.
- Benefit from the practical work based on real life GHG case studies, taught by experienced experts.
- Become the recognised expert in your own workplace for GHG quantifications, emission reduction projects and GHG validation and/or verification.
- Enable employers to be recognised for their proactive approach to sustainability and emissions management.
- Be part of a global expert community.

The course includes interactive team-based exercises, a detailed case study (to reinforce key concepts throughout the course), quizzes and a final exam.