

Course No.: EHS-CM01

Duration: 2 days

GHG Accounting at the Organization Level Based on ISO14064-1

Course Value:

With the continuous increase of the international community's commitment to the implementation of the *Paris Agreement*, more and more Asian countries have embarked on a profound transformation into a low-carbon economy. China gradually has a clear objective location in the control and management policy of GHG emissions, that is, to control GHG emissions through the market mechanism, promote green and low-carbon development, and improve the level of ecological civilization construction in China. Therefore, the actions taken by industry and other organizations to reduce their respective carbon footprint are essential for countries to reduce GHG emissions. Such GHG emission reduction initiatives rely on the quantification, monitoring, reporting and verification (MRV) of GHG emissions and/or removals.

The *Interim Regulations on the Administration of Carbon Emission Trading* issued by China requires key emission enterprises to monitor GHG emission, strengthen the management of GHG emission, and reasonably control the GHG emissions; and impose penalties on key enterprises in violation of the above-mentioned provisions. The new regulatory mechanism for control and management of GHG emissions will put forward new capacity requirements for key GHG emission control enterprises and GHG verification institutions.

The effectiveness of all these actions is premised on the consistent and accurate accounting of GHG emissions by organizations. At present, a number of international accounting frameworks have been issued, including the *GHG Protocol* and the ISO 14064 series standards. ISO 14064-1 guides the preparation of GHG inventory, which can be compared with other inventories of other organizations. ISO 14064-3 establishes a process for verifying GHG inventory report.

This course mainly introduces relevant standards for organization-level GHG quantification based on ISO14064-1 and the application. Based on the requirements of domestic and foreign GHG emission control and management standards and practical experience, and focusing on improving the ability of enterprise institutional personnel to make internal GHG inventory, the trainees can master the following contents through this course:

- Identify, summarize and classify the sources of GHG emission;
- Quantify the emission level and create organizational GHG inventory;
- Develop and implement an information management system to collect and ensure the accuracy of emission data;
- Prepare and submit GHG inventory report in an internationally recognized format;
- Verify or certify GHG inventory according to ISO 14064-3.

Targeted Participants:

- Personnel in low-carbon management, sustainable development management, enterprise GHG management, environmental management and energy management positions;
- Company personnel interested in identifying emission points within their organizations and on the value chain of their core products and seeking opportunities to reduce GHG emissions;
- ISO 14064-1 GHG Verifiers, Internal Verifiers
- Enterprise personnel who are about to establish a GHG management system conforming to ISO 14064-1 international standard.
- Professionals working in government and non-profit organizations to promote carbon emission reduction between industry and other economic sectors.
- Personnel who want to know the application of ISO 14064-1 international standard and knowledge and obtain the Rheinland PersCert registration qualification
- Personnel with ISO 14000 background and desiring to learn ISO 14064-1 international standard and knowledge

Course Contents:

- Background information on carbon inventory
- Criteria for GHG management and related activities
- Introduction to ISO 14064-1
 - Foreword
 - Introduction
 - 1. Scope
 - 2. Normative References
 - 3. Terms and Definitions
 - 4. Principles
 - 5. GHG inventory boundaries
 - 6. Quantification of GHG emissions and removals
 - 7. Mitigation Activities
 - 8. Quality Management of GHG Inventory
 - 9. GHG Report
 - 10. Role of Organization in Verification Activities
- GHG Accounting Exercise
- Knowledge and Methodology Based on ISO 14064-3 for GHG Validation/Certification

Course No.: EHS-CM02

Duration: 1 day

GHG Accounting at the Project Level Based on ISO14064-2

Course Value:

By inventorying their own carbon emissions, enterprises become truly aware that the greenhouse gas (GHG) concentration in the atmosphere can only be limited by developing measures and taking actions at international, regional, national, local and industrial levels, as well as in organizations, upstream supply chains, value chains and beyond. These measures and actions depend on the quantification, monitoring, reporting and verification of GHG emissions and (or) removals. ISO14064-2 aims at projects (or project-based activities) specifically designed to reduce GHG emissions or enhance GHG removals. It includes the principles and requirements for determining the baseline scenarios of projects and for monitoring, quantifying and reporting against baseline scenarios, and provides the basis for certification and verification of GHG projects.

Upon completion of this course, the trainees will be able to:

- Carry out project accounting according to ISO 14064-2 and GHG Protocol;
- Develop verifiable quantitative procedures for GHG projects;
- Develop quantitative procedures by applying good practice guidelines according to ISO 14064-2;
- Recognize the inherent flexibility of ISO 14064-2 to make wise decisions for GHG project accounting;
- Summarize the importance of selecting appropriate and credible baseline scenarios;
- Demonstrate how to select, establish, apply, prove, explain and record procedures, standards and tools for conformance to the requirements of ISO 14064-2 and ISO 14064-3.

Targeted Participants:

- Personnel in low-carbon management, sustainable development management, enterprise GHG management, environmental management and energy management positions;
- Company personnel interested in identifying emission points within their organizations and on the value chain of their core products and seeking opportunities to reduce GHG emissions;
- ISO 14064-2 GHG emission reduction project implementation and management personnel;
- Personnel and professionals who are interested in providing accounting and verification in respect of carbon emission reduction activities for the industry and other types of organizations;
- Professionals working in government and non-profit organizations to promote carbon emission reduction between industry and other economic sectors.
- Personnel who want to know the application of ISO 14064-2 international standards and knowledge and have obtained Rheinland PersCert registration qualification;
- Personnel with ISO 14000 background and desiring to know ISO 14064-2 international standards and knowledge.

Course Contents:

- Concept and Significance of GHG Project Emission Reduction

- Content of ISO 14064-2
 - Foreword
 - Introduction
 - 1 Scope
 - 2 Normative References
 - 3 Terms and Definitions
 - 4 Principles
 - 5 Introduction of GHG Projects
 - 6 Requirements for GHG Projects

- Case Analysis of Emission Reduction Projects

- Knowledge and Methodology Based on ISO 14064-3 for GHG Validation/Certification

Course No.: EHS-CM03

Duration: 2 days

Product Carbon Footprint Calculation - Based on ISO14067/14040/14044

Course Value:

Downstream customers and environmental regulators increasingly request enterprises to provide reliable information on GHG emissions from their main products; on the other hand, the "millennial" consumers intensify this trend as they would like to obtain more information on life-cycle carbon emissions from their consumed products and services. The trend mentioned above is attributed to the need for industries to develop the "cradle-to-gate" and "cradle-to-grave" carbon footprints for their core products or services. In the future, enterprises must not only face the public's attention to the carbon footprint of products, but also face the competition among enterprises for the carbon footprint of similar products, and even face the orientation issue of relevant government policies.

The calculation of the carbon footprint of products (CFP) is a method for calculating the life-cycle emissions of a product or service. For a product, the CFP includes an analysis of different life-cycle phases of the product - from raw material exploitation and processing, manufacturing, distribution and use to disposal after the end of life. At present, many enterprises adopt this method to better identify efficiency opportunities through a better understanding of carbon emissions in their supply chains.

There are already a number of international accounting frameworks, including PAS 2050, GHG Protocol and ISO 14067 standard published in 2018, aiming to facilitate enterprises to meet the growing demand of downstream customers or consumers for disclosure of CFP information. Among them, ISO 14067 *Greenhouse Gases - Carbon Footprint of Products - Requirements and Guidelines for Quantization* provides clarity and consistency in quantifying the carbon footprint of products. Specifically, the method adopts life cycle assessment in accordance with ISO 14040/14044 standard, with climate change as a single impact category.

The objective of this course is to make trainees have a knowledge and understanding of the requirements and guidelines for quantification of the carbon footprint of products based on ISO 14067, as well as Product Category Rule (PCR) and Environmental Product Declarations (EPD) based on ISO 14040/14044. The course will also help participants to better identify the opportunities for carbon emission reduction in their value chains.

Targeted Participants:

- Personnel in low-carbon management, sustainable development management, enterprise GHG management, environmental management and energy management positions;
- Company management and technical personnel responsible for accounting the carbon footprint of core products, especially those seeking independent third-party verification;
- Company personnel interested in identifying emission points on the value chain of their core product and seeking opportunities to reduce GHG emissions;
- People who want to know the application of ISO 14067 international standard and knowledge and obtain the Rheinland PersCert registration qualification
- People with ISO 14000 background and desiring to learn ISO 14067 international standards and knowledge

Course Contents:

- Basic Concept of Carbon Footprint of Products
 - Science and Policy Development in Climate Change
 - Criteria for Carbon Footprint of Products
 - International Development Trend of Carbon Footprint of Products
- Life Cycle Assessment and Related Standard Requirements (ISO 14040/14044)
 - Introduction to Standards Involved in LCA
 - LCA Evaluation Framework
 - LCA Process Framework
- Introduction to ISO 14067 Requirements and Guidelines for Quantization of Carbon Footprint of Products
 - 1 Scope
 - 2 Normative References
 - 3 Terms, Definitions and Abbreviations
 - 4 Application
 - 5 Principle
 - 6 Quantification Method of CFP and Partial CFP
 - 7 Study Report on Carbon Footprint
 - 8. Key Reviews
- Introduction to Database and Platform for Carbon Footprint of Products
- Introduction to PCR and EPD
- Calculation Exercise for Carbon Footprint of Products