

COURSE OVERVIEW HE2071 **ISO 14064-1:2018 for GHG Emission Quantification**

Course Title

ISO 14064-1:2018 for GHG Emission Quantification

Course Date/Venue

August 04-08, 2025/TBA Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference

HE2071

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of ISO 14064-1:2018 for GHG Emission Quantification. It covers the climate change context and GHG fundamentals, international agreements and protocols, structure of ISO 14064-1:2018 and key GHG principles in ISO 14064-1; the GHGs covered by ISO 14064-1 including GHG accounting and reporting concepts, organizational boundaries and operational boundaries; the GHG sources and sinks and GHG inventory design and developments, quantification methodologies and base year setting and recalculation; the data collection strategy, emission factors and conversion factors and calculation tools and techniques; and the data quality management, managing uncertainty, documentation and record keeping.



During this interactive course, participants will learn the required content of records, reporting formats, public disclosure versus internal reporting and legal and stakeholder requirements; the third-party verification, internal review and improvement and GHG performance indicators; the GHG reduction projects and offsets, types of reduction initiatives, criteria for offset eligibility, additionality and permanence and integration into inventory; communicating GHG information, sector-specific GHG practices, managing scope 3 emissions and integrating with management systems; and the emerging trends in GHG accounting covering science-based targets, Net zero commitments, digital tools and AI in GHG management and blockchain for GHG tracking.



Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on ISO 14064-1:2018 for GHG emission quantification
- Discuss the climate change context and GHG fundamentals, international agreements and protocols, structure of ISO 14064-1:2018 and key GHG principles in ISO 14064-1
- Recognize GHGs covered by ISO 14064-1 including GHG accounting and reporting concepts, organizational boundaries and operational boundaries
- Identify GHG sources and sinks and carryout GHG inventory design and developments, quantification methodologies and base year setting and recalculation
- Apply data collection strategy, emission factors and conversion factors and calculation tools and techniques
- Carryout data quality management, managing uncertainty, documentation and record keeping
- Discuss the required content of records, reporting formats, public disclosure versus internal reporting and legal and stakeholder requirements
- Apply third-party verification, internal review and improvement and GHG performance indicators
- Identify the GHG reduction projects and offsets, types of reduction initiatives, criteria for offset eligibility, additionality and permanence and integration into inventory
- Communicate GHG information, apply sector-specific GHG practices, manage scope 3 emissions and integrate with management systems
- Discuss the emerging trends in GHG accounting covering science-based targets, Net zero commitments, digital tools and AI in GHG management and blockchain for GHG tracking

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and considerations of ISO 14064-1:2018 for GHG emission quantification for environmental engineers, sustainability managers, climate change officers, HSE managers and coordinators, energy managers, corporate social responsibility (CSR) professionals, auditors (internal and external) involved in environmental reporting, consultants in environmental management and GHG accounting, quality and environmental management system (EMS) practitioners, regulatory compliance officers. project managers involved in carbon footprint and sustainability projects and other technical staff.




Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations: -

-  British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

-  The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.



Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Francis Almeida, PgDip, BSc, NEBOSH-ENV, NEBOSH-IGC, NEBOSH-IFC, NEBOSH-IOGC, NEBOSH-PSM, is a **Senior Health, Safety & Environmental (HSE) Consultant** with over **30 years** of practical experience within the **Oil and Gas** industry. He is a **NEBOSH Approved Instructor** for various certification programs. His expertise lies extensively in the areas of **Accident/Incident Investigation & Risk Management**, **NEBOSH** Environmental Management, **NEBOSH** International General Certificate, **NEBOSH** Fire Safety & Risk Management International Certificate, **NEBOSH** International Oil & Gas Certificate, **NEBOSH** Process Safety Management, **Occupational Health & Safety**, **Safety Management Specialist**, **HAZOP & HAZID**, **HAZMAT & HAZCOM** Storage & Disposal, As Low as Reasonably Practicable (**ALARP**), Process Hazard Analysis (**PHA**), Process Safety Management (**PSM**), **Hazardous Materials & Chemicals** Handling, **Pollution Control**, **Environment**, **Health & Safety** Management, **Process Risk** Analysis, Effective Tool Box Talks, Construction Sites Safety, **HSSE** Management System, **HSSE** Audit & Inspection, **HSEQ** Procedures, **Authorized Gas** Testing, **Confined Space Entry & Rescue**, Risk Management, **Quantitative & Qualitative Risk** Assessment, **Working at Height**, **Firefighting** Techniques, **Fire & Gas** Detection System, **Fire Fighter & Fire** Rescue, **Fire Risk** Assessment, **HSE** Industrial Practices, **Manual Handling**, **Rigging** Safety Rules, **Machinery & Hydraulic** Lifting Equipment, **Warehouse** Incidents & Accidents Reporting, **Incident & Accident** Investigation, **Emergency** Planning, **Emergency Response & Crisis** Management Operations, **Waste** Management Monitoring, **Root Cause** Analysis, Hazard & Risk Assessment, Task Risk Assessment (**TRA**), **Incident Command**, **Job Safety** Analysis (**JSA**), **Behavioral Based** Safety (**BBS**), **Fall Protection**, **Work Permit & First Aid** and various international codes and standards such as the ISO 9001, OHSAS 18001, ISO 14001, SA8000, ISO 9001-2000 and ISO 9002. He was the **Offshore Safety Specialist** of **Chevron** wherein he was in-charged in HSE inspections, hazard analysis, incident investigation and implementing corrective actions.

During his career life, Mr. Almeida has gained his practical and field experience through his various significant positions and dedication as the **Quality Manager**, **HSE Specialist/Acting On-Scene Commander**, **Quality Auditor**, **Quality Supervisor**, **QHSE Engineer**, **Metallurgical Engineer**, **HSE Coordinator**, **Suppliers Auditor**, **Senior Instructor/Consultant**, **Oil & Gas Construction Specialist**, **Business Administration Specialist** and **Oil & Gas Management Technology Specialist** for various international companies and institutions such as the IBEC, Lopes & Almeida, IMA, EXPRO Group, UNESA, Vetco Aibel, ABB Oil & Gas, Brazilian Aluminum Foundry, DNV and ABIFA.

Mr. Almeida has a **Bachelor** degree in **Metallurgical Engineering** and a **Post Graduate** Diplomas in **Safety Engineering** and **Industrial Administration**. Further, he is a **Certified Instructor/Trainer**, an **Approved Lead Tutor** in **NEBOSH** Environmental Management Certificate, **NEBOSH** International General Certificate, **NEBOSH** International Oil & Gas Certificate and **NEBOSH** Process Safety Management Certificate and an **Approved Practical Assessor/Lead Tutor** in **NEBOSH** Fire Safety & Risk Management. Moreover, he is a **Certified ISO 9001:2000 Lead Auditor**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership and Management (ILM)** and has further delivered numerous trainings, courses, seminars, conferences and workshops globally.



Course Fee

US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Monday, 04th of August 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Climate Change Context & GHG Fundamentals Drivers of Climate Change • Global Warming Potential (GWP) of Key Gases • Impacts on Ecosystems & Industries • Regulatory & Voluntary Responses
0930 – 0945	Break
0945 – 1030	International Agreements & Protocols UNFCCC, Kyoto Protocol, Paris Agreement • GHG Protocol versus ISO 14064 Family • Nationally Determined Contributions (NDCs) • Role of International Carbon Markets
1030 – 1130	Structure of ISO 14064-1:2018 Scope & Purpose • Clause Overview • Organizational versus Project-Level Focus • Intended Users
1130 – 1215	Key GHG Principles in ISO 14064-1 Relevance & Completeness • Consistency & Transparency • Accuracy & Conservative Estimation • Documentation Integrity
1215 – 1230	Break
1230 – 1330	GHGs Covered by ISO 14064-1 The Seven Gases Under Kyoto Protocol • CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ , NF ₃ • Conversion to CO ₂ e • Impacts on Inventory Design
1330 – 1420	GHG Accounting & Reporting Concepts Definitions: Emissions, Removals, Reductions • Boundaries (Organizational, Operational) • Control vs Equity Share Approach • Reporting Levels & Frequency
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One



Day 2: Tuesday, 05th of August 2025

0730 – 0830	Organizational Boundaries Equity Share Model • Financial Control • Operational Control • Hybrid Approaches
0830 – 0930	Operational Boundaries Scope 1: Direct Emissions • Scope 2: Energy Indirect Emissions • Scope 3: Other Indirect Emissions • Category Breakdown of Scope 3
0930 – 0945	Break
0945 – 1100	Identification of GHG Sources & Sinks Combustion Sources • Process Emissions • Fugitive Emissions • Removal Activities
1100 – 1215	GHG Inventory Design & Development Inventory Plan Structure • Data Requirements • Methodology Selection • Consistency Over Time
1215 – 1230	Break
1230 – 1330	Quantification Methodologies Direct Measurement • Calculation Methods (Emission Factors) • Modeling Approaches • Hierarchy of Data Source Preference
1330 – 1420	Base Year Setting & Recalculation Establishing Base Year • When Recalculation Is Required • Methodology for Adjustments • Documenting Base Year Data
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

Day 3: Wednesday, 06th of August 2025

0730 – 0830	Data Collection Strategy Identifying Data Sources • Primary vs Secondary Data • Data Management Systems • Data Gaps & Assumptions
0830 – 0930	Emission Factors & Conversion Factors Selection Criteria • National vs International Databases • Handling Updates to Factors • Uncertainty Considerations
0930 – 0945	Break
0945 – 1100	Calculation Tools & Techniques Equations & Parameters • Unit Conversions • Aggregation Methods • Handling Multiple Facilities
1100 – 1215	Data Quality Management QA/QC Principles • Verification of Data Sources • Internal Audits of Data • Addressing Anomalies
1215 – 1230	Break
1230 – 1330	Managing Uncertainty Sources of Uncertainty • Quantifying Uncertainty • Reducing Uncertainty • Reporting Uncertainty Transparently
1330 – 1420	Documentation & Record Keeping Required Records • Retention Period • Format & Accessibility • Linking Evidence to Reports
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three



Day 4: Thursday, 07th of August 2025

0730 – 0830	GHG Reporting Requirements <i>Required Content of Reports • Reporting Formats • Public Disclosure versus Internal Reporting • Legal & Stakeholder Requirements</i>
0830 – 0930	Third-Party Verification <i>Levels of Assurance • Verification Process • Role of Verifiers • Handling Verification Findings</i>
0930 – 0945	Break
0945 – 1100	Internal Review & Improvement <i>Conducting Internal Reviews • Identifying Improvement Opportunities • Continuous Improvement Cycle • Learning from Audits</i>
1100 – 1215	GHG Performance Indicators <i>Absolute vs Intensity Metrics • Custom KPIs • Linking to Corporate Targets • Benchmarking</i>
1215 – 1230	Break
1230 – 1330	GHG Reduction Projects & Offsets <i>Types of Reduction Initiatives • Criteria for Offset Eligibility • Additionality & Permanence • Integration into Inventory</i>
1330 – 1420	Communication of GHG Information <i>Stakeholder Engagement • Reporting to Regulatory Bodies • Voluntary Disclosure Platforms • Managing Sensitive Information</i>
1420 – 1430	Recap <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow</i>
1430	Lunch & End of Day Four

Day 5: Friday, 08th of August 2025

0730 – 0830	Sector-Specific GHG Practices <i>Energy Sector • Petrochemical Sector • Manufacturing Sector • Transport Sector</i>
0830 – 0930	Managing Scope 3 Emissions <i>Value Chain Mapping • Supplier Engagement • Estimating Scope 3 Emissions • Reducing Scope 3 Impacts</i>
0930 – 0945	Break
0945 – 1100	Integration with Management Systems <i>ISO 14001 Linkage • Aligning with ESG Reporting • GRI & CDP Alignment • Integrated Reporting Models</i>
1100 – 1215	Emerging Trends in GHG Accounting <i>Science-Based Targets • Net Zero Commitments • Digital Tools & AI in GHG Management • Blockchain for GHG Tracking</i>
1215 – 1230	Break
1230 – 1300	Practical GHG Quantification Exercises <i>Develop Inventory for a Sample Company • Base Year Recalculation Practice • Scope 1/2/3 Emissions Quantification • Data Gap Analysis</i>
1300 – 1345	Case Studies & Lessons Learned <i>Successful GHG Reporting Examples • Common Pitfalls & Errors • Sector-Specific Challenges • Best Practices for Continuous Improvement</i>
1345 – 1400	Course Conclusion <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course that were Covered During the Course</i>
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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