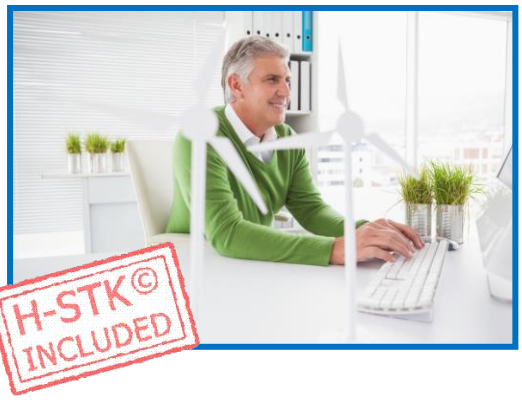
COURSE OVERVIEW HE0901
Carbon Measurement, Footprinting and Management

Course Title
Carbon Measurement, Footprinting and Management

Course Reference
HE0901

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs



Course Date/Venue

Session(s)	Date	Venue
1	May 05-09, 2025	Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
2	August 17-21, 2025	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
3	November 09-13, 2025	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
4	December 08-12, 2025	Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

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 carbon footprint calculation and reporting. It covers the carbon footprints of heat and various combined heat and power schemes including emission factors of common fuels; and the practical application of energy and CO_2 emission indicators along with the detailed energy efficiency trends.

During this interactive course, participants will learn the overall energy efficiency performance, CO_2 emissions from energy combustion, burner management system and BMS design; the industrial system energy use and energy savings potential including motor systems and steam systems; the barriers of industrial system energy efficiency; and the recycling, reuse and energy recovery.

Course Objectives

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

- Apply systematic techniques and procedures on carbon foot print and energy efficiency
- Discuss carbon footprints of heat and various combined heat and power schemes including emission factors of common fuels
- Employ practical application of energy and CO_2 emission indicators along with the detailed energy efficiency trends
- Analyze overall energy efficiency performance, CO_2 emissions from energy combustion, burner management system and BMS design
- Explain industrial system energy use and energy savings potential including motor systems and steam systems
- Illustrate the barriers of industrial system energy efficiency
- Carryout recycling, reuse and energy recovery

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 wider understanding and deeper appreciation of carbon foot print and energy efficiency for engineers, energy managers, consultants and those who require an understanding on energy efficiency and carbon footprint, its complexities and on how an organization could implement energy efficiency solutions. The course is a must for all environmental management members and staff including environmental managers, environmental engineers, environmental officers, HSE professionals and those in charge of minimizing carbon emission to the environment.

Accommodation

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

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.

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

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**. 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.

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. John Burnip, EHS, SAC, STS, NEBOSH-ENV, NEBOSH-IGC, NEBOSH-IFC, NEBOSH-PSM, NEBOSH-IOG, TechIOSH, is a **NEBOSH Approved Instructor** and a **Senior HSE Consultant** with over **30 years** of practical **Offshore & Onshore** experience within **Oil**, **Gas**, **Refinery**, **Petrochemical** and **Nuclear** industries. His wide experience covers **NEBOSH** International General Certificate in Occupational Health & **Safety**, **NEBOSH** National Certificate in Construction Health & Safety, **NEBOSH** Certificate in Process Safety Management, **NEBOSH** Environmental Management Certificate, **NEBOSH** Certificate in Fire Safety, **NEBOSH** International Oil & Gas Certificate, **PHA**, **HAZOP**, **HAZCOM**, **HAZMAT**, **HAZID**, **Hazard & Risk Assessment**, **Emergency Response Procedures** Behavioural Based Safety (**BBS**), **Confined Space Entry**, **Fall Protection**, **Emergency Response**, H_2S, Safety Management System (**ISO 45001**), **Accident/Incident Investigation** System and Report PSM, **Risk Assessment**, **SCE FMEA Failure Investigations**, Site Management Safety Training (**SMSTS**), **Occupational Health & Safety and Industrial Hygiene, Crisis Management & Damage Control** in Oil & Gas Industry, **Enhancing HSSE Safety Performance & Effectiveness**, **HSSE Principles & Practices Advanced**, **Lifting & Rigging Equipment** Lifting Tackles Inspection License/Relicense, **Advanced Process Safety Management** with PHA, **Quantitative and Qualitative Risk Assessment**, IADC/API **Mobile Drilling Rig Inspections**, **Maintenance and Audits**, **H2s Training and Rescue with Respiratory Equipment**, Job Safety Analysis (**JSA**), **Work Permit & First Aid**, Ergonomics, Lockout/Tagout, Fire Safety & Protection, Spill Prevention & Control, **Tower & Scaffold Inspection**, **Scaffolding** Operations, **Scaffolding** Equipment, Bracket Scaffolds, **Scaffolding** Labelling, **Pre-fab Scaffolding**; Erecting, Maintaining & Dismantling **Scaffolding** in accordance with the **British Standards Code of Practice 5973**; **Heavy Lifting** operations, Cantilevered Hoists, **Offshore** Operations, **Offshore** Construction, Basic **Offshore Safety** Induction & Emergency Training (BOSIET), **Onshore** Fabrication & **Offshore** Pipelaying & Hook-Up, **Crane** Inspection, **Crane** Operations, Oilfield Startup & Operation, Steel Fabrication, OSHA, **ISO 9001**, **ISO 14001**, **OHSAS 18001** and **IMO** (**SOLAS**) Regulations. Mr. Burnip has greatly contributed in upholding the highest possible levels of safety for numerous International Oil & Gas projects, Generation Systems & Platform Revamp, LPG & Gas Compression, Marine, Offshore and Power Plant Construction. Currently, he is the **HSE Advisor** of Solvay wherein he is responsible in planning and implementation of the corporate safety program (OSHA codes).

During Mr. Burnip's long career life, he had successfully carried out numerous projects in **Europe**, **North America**, **South America**, **Southeast Asia**, **Middle East** and the **North Sea**. He had worked for Delta Offshore Group, Solvay Asia Pacific, Likpin Dubai, SADRA/DOT, **ZADCO**, **McDermott** International (USA, Qatar, Egypt, India, Oman, Dubai and Abu Dhabi), **PDO**, **Shell**, **ARAMCO**, Salman Field, Leman Offshore Gas Field, GEC, Harland & Wolff PLC Belfast in North Ireland, Howard Doris – Kishorn in Scotland, **Westinghouse** Electric in Brazil and South Korea and **Chevron** Oil in Scotland as the **Commissioning Project Engineer**, **Project & Safety Engineer**, **Estimating Engineer**, **Senior Instrument Engineer**, **Instrument Field Engineer**, **Lead Instrument Engineer**, **Instrument Engineer**, **Engineer**, **Emergency Response Training Manager**, **HSE Advisor**, **HSE Instructor**, **HSE Supervisor**, **Instrumentation Supervisor**, **Instrumentation Specialist**, **Project Coordinator**, **Instrumentation Technician** and **Tank Farm Instrumentation Technician**.

Mr. Burnip has a **Bachelor's** degree in **Business Studies** from the **Somerset University** (**UK**). He is a **Certified/Registered Tutor** in **NEBOSH Certificate in Environmental Management**, **NEBOSH International General Certificate**, **NEBOSH International Certificate in Fire Safety & Risk Management**, **NEBOSH Process Safety Management Certificate** and **NEBOSH International Oil & Gas Certificate**; a **Certified Safety Auditor** (SAC); a **Certified ISO 45001** Auditor; an **Environmental Health and Safety Management Specialist** on Fall Protection, Elevated Structures, Material Handling, Trenching & Excavations; a Welding Brazing Safety Technician; a **Certified Safety Administrator** (**CSA**) - General Industry; a **Safety Manager/Trainer** – General Industry; a **Petroleum Safety Manager** (**PSM**) - Drilling & Servicing; a **Petroleum Safety Specialist** (**PSS**) - Drilling & Servicing; a **Safety Planning Specialist**; a **Safety Training Specialist**; a **Certified Instructor/Trainer**; a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and further holds a Certificate in **Mechanical Engineering Craft Practice** from the **City & Guilds of London Institute**; a **NEBOSH Level 3** Construction Certificate (UK); and holds a **Cambridge Teaching Certificate**. He is a well-regarded member of the **National Association of Safety Professionals**, the **Association of Cost Engineers** (**UK**), **Institution of Occupational Safety & Health** (**TechIOSH**) and an **Associate Member** of **World Safety Organization**. Further, he has conducted innumerable trainings, workshops and conferences worldwide.

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

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0915	***Carbon Footprint: What it is & How to Measure it***
0915– 0930	*Break*
0930– 1100	***Carbon Footprints of Heat & Various Combined Heat & Power Schemes***
1100 – 1200	***Emission Factors of Common Fuels***
1200 – 1215	*Break*
1215 – 1420	***Practical Application of Energy & CO_2 Emission Indicators***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0915	***Energy Efficiency Trends***
0915 – 0930	*Break*
0930 – 1100	***Energy Efficiency Indicators: Objectives & Methodology***
1100 – 1200	***Overall Energy Efficiency Performance*** *Industry*
1200 – 1215	*Break*
1215 – 1420	***Overall Energy Efficiency Performance (cont'd)*** *Transport*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0915	***Overall Energy Efficiency Performance (cont'd)*** *Household and Service Sectors*
0915 – 0930	*Break*
0930 – 1100	***CO_2 Emissions from Energy Combustion***
1100 – 1200	***CO_2 Emissions from Energy Combustion (cont'd)***

1200 – 1215	*Break*
1215 – 1420	***Burner Management Systems***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0915	***Considerations for BMS Design***
0915 – 0930	*Break*
0930 – 1100	***Industrial System Energy Use & Energy Savings Potential*** *Motor Systems*
1100 – 1200	***Industrial System Energy Use & Energy Savings Potential (cont'd)*** *Steam Systems*
1200 – 1215	*Break*
1215 – 1420	***Barriers to Industrial System Energy Efficiency***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0915	***Recycling & Reuse***
0915 – 0930	*Break*
0930 – 1100	***Energy Recovery***
1100 – 1200	***Energy Recovery (cont'd)***
1200 – 1215	*Break*
1215 – 1345	***Life Cycle Improvement Options***
1345 – 1400	***Course Conclusion***
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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