



COURSE OVERVIEW HE0549

Strategy & Action Plan for Transition Toward Carbon Neutral

Course Title

Strategy & Action Plan for Transition Toward Carbon Neutral

Course Date/Venue

October 27-31, 2025/Ajman Meeting Room,
Grand Millennium Al Wahda Hotel, Abu
Dhabi, UAE

Course Reference

HE0549

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies 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 Strategy & Action Plan for Transition Toward Carbon Neutral. It covers the carbon neutrality, net-zero, carbon footprint assessment and policy and regulatory frameworks for decarbonization; the low-carbon technologies and innovations, corporate sustainability strategies and carbon reduction targets; the stakeholder engagement for a carbon-neutral transition, energy efficiency and operational optimization; and the carbon capture, utilization, and storage (CCUS) as well as hydrogen as a key decarbonization solution.



Further, the course will also discuss the renewable energy integration in petroleum operations; the circular economy and waste management strategies, sustainable transportation and logistics and carbon offsetting and compensation; the role of nature-based solutions in decarbonization, emission trading systems (ETS) and carbon markets; the green finance and investment in decarbonization; the risk management and business resilience in a low-carbon economy; and the corporate social responsibility (CSR) and decarbonization.



During this interactive course, participants will learn the role of digitalization in carbon management; the AI-driven carbon reduction strategies, smart grid and decarbonized energy infrastructure; the advanced materials and nanotechnology for emission reduction, blockchain for carbon accounting and transparency and future trends in low-carbon technologies; the organizational decarbonization strategy, decarbonization action plan and change management for carbon neutral transition; and the performance monitoring and continuous improvement.

Course Objectives

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

- Apply and gain an in-depth knowledge on strategy and action plan for transition toward carbon neutral
- Discuss carbon neutrality, net-zero, carbon footprint assessment and policy and regulatory frameworks for decarbonization
- Recognize low-carbon technologies and innovations and apply corporate sustainability strategies and carbon reduction targets
- Carryout stakeholder engagement for a carbon-neutral transition, energy efficiency and operational optimization
- Discuss carbon capture, utilization, and storage (CCUS) as well as hydrogen as a key decarbonization solution and renewable energy integration in petroleum operations
- Apply circular economy and waste management strategies, sustainable transportation and logistics and carbon offsetting and compensation
- Define the role of nature-based solutions in decarbonization and discuss emission trading systems (ETS) and carbon markets
- Explain green finance and investment in decarbonization and apply risk management and business resilience in a low-carbon economy
- Carryout corporate social responsibility (CSR) and decarbonization and discuss the role of digitalization in carbon management
- Apply AI-driven carbon reduction strategies and describe smart grid and decarbonized energy infrastructure
- Determine advanced materials and nanotechnology for emission reduction, blockchain for carbon accounting and transparency and future trends in low-carbon technologies
- Build an organizational decarbonization strategy, create a decarbonization action plan and apply change management for carbon neutral transition
- Employ performance monitoring and continuous improvement

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 strategy and action plan for transition toward carbon neutral for executive leadership and decision-makers, environmental and sustainability experts, operations and supply chain teams, research and development, finance and budgeting teams, engineers, corporate social responsibility (CSR) managers, energy managers, facilities managers, supply chain managers, environmental managers and specialists, sustainability officers and compliance officers, external stakeholders, marketing and communications teams, legal and risk management teams.

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.



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:



Dr. John Petrus, PhD, MSc, BSc, is a **Senior HSE Consultant** with over **30 years of onshore & offshore** experience within the **Oil & Gas, Refinery and Petroleum** industries. His wide experience covers in the areas of **HAZOP & HAZID, HAZMAT & HAZCOM** Storage & Disposal, As Low as Reasonably Practicable (**ALARP**), Process Hazard Analysis (**PHA**), Process Safety in **Hydrocarbon** Industry, **Carbon** Foot Print and Energy Efficiency, LNG & Liquefied **Hydrocarbon** Fire Protection & Response, 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, Incident Command, Job Safety Analysis (JSA), Behavioral Based Safety (BBS)**. Further he is also well versed in Materials for **Construction & Repair of Concrete, Concrete Structures & Building Rehabilitation, Reinforced Concrete Structures** Protection, **Building Construction Technology, Construction Operations & Civil Engineering Services, Building Management, Building Maintenance, Construction & Concrete Works, Construction Management, Construction Materials & Testing, Construction Safety, Predictive Maintenance** in Construction, **Construction & Facilities Development, Buildings & Diverse Plant Infrastructure, Planning & Monitoring** the Progress & Quality of Work, **Physical Planning & Operations, Rotating Machinery Principles & Applications, Rotating Equipment Selection, Operation, Maintenance, Inspection & Troubleshooting, Rotating Machine/Equipment** in Industry, **Control Valves & Actuators, Data Analytics** for Managerial Decision Making, **Business Process Analysis**, Mapping & Modeling, **Research Methods & Analysis, Statistical Data Needs Analysis, Oil & Gas Industry Business Environment & Competitive Intelligence Gathering & Analysis, Petroleum Economics & Risk Analysis, Certified Data Analysis**.

During his career life, Dr. Petrus held significant positions and dedication as the **Executive Director, Senior Geoscience Advisor, Exploration Manager, Project Manager, Manager, HSE Engineer, Mechanical Engineer, Maintenance Engineer, Chief Geologist, Chief of Exploration, Chief of Geoscience, Senior Geosciences Engineer, Senior Explorationist, Senior Geologist, Geologist, Senior Geoscientist, Geomodeller, Geoscientist, CPR Editor, Resources Auditor, Project Leader, Technical Leader, Safety Supervisor, Team Leader, Senior HSE Consultant, Scientific Researcher** and **Senior Instructor/Trainer** from various international companies and universities such as the Dragon Oil Holding Plc., ENOC, MENA, ENI Group of Companies, Ocre Geoscience Services (OGS), Burren RPL, Ministry of Oil-Iraq, Eni Corporate University, Stanford University, European Universities, European Research Institutes, NorskHydro Oil Company, Oil E&P Companies, just to name a few.

Dr. Petrus has a **PhD in Geology and Tectonophysics** and **Master and Bachelor** degrees in **Earth Sciences** from the **Utrecht University, The Netherlands**. Further, he is a **Certified Instructor/Trainer**, a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management (ILM)**, a Secretary and Treasurer of Board of Directors of Multicultural Centre, Association Steunfonds SSH/SSR and Founding Member of Sfera Association. He has further published several scientific publications, journals, research papers and books and delivered numerous trainings, workshops, courses, seminars and conferences internationally.

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.

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 Program

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

Day 1: Monday, 27th of October 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Understanding Carbon Neutrality in the Petroleum Sector Definition of Carbon Neutrality & Net-Zero • Global Commitments & Climate Goals (Paris Agreement, COP) • Challenges for the Petroleum Industry in Decarbonization
0930 – 0945	Break
0945 – 1030	Carbon Footprint Assessment Identifying Major Emission Sources (Scope 1, 2, 3) • Calculating Carbon Intensity in Oil & Gas Operations • Benchmarking Against Industry Best Practices • Tools & Standards for Emission Measurement
1030 – 1130	Policy & Regulatory Frameworks for Decarbonization International Climate Regulations & Compliance • Regional & National Policies • Environmental, Social & Governance (ESG) Considerations • Role of Carbon Pricing, Taxation & Cap-and-Trade
1130 – 1230	Low-Carbon Technologies & Innovations Role of Renewable Energy in Petroleum Operations • Electrification of Oil & Gas Equipment • Carbon Capture, Utilization & Storage (CCUS) Technologies • Hydrogen as a Future Fuel
1230 – 1245	Break

1245 – 1330	Corporate Sustainability Strategies & Carbon Reduction Targets Setting Science-Based Targets (SBTs) for Net-Zero • Integrating Carbon Reduction into Business Strategy • Current Sustainability Initiatives • Collaboration with Stakeholders for Carbon Neutrality
1330 – 1420	Stakeholder Engagement for a Carbon-Neutral Transition Engaging Investors & Shareholders on Decarbonization • Collaboration with Governments & Policymakers • Building Partnerships with Research Institutes • Communicating Sustainability Goals to Employees & Customers
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, 28th of October 2025

0730 – 0830	Energy Efficiency & Operational Optimization Reducing Flaring & Methane Emissions • Improving Process Efficiency in Refineries • Energy Management Systems (ISO 50001) • Digitalization & AI for Energy Optimization
0830 – 0930	Carbon Capture, Utilization & Storage (CCUS) Principles & Technologies of CCUS • CCUS Applications in Company's Operations • Challenges & Cost Analysis of CCUS • Global CCUS Case Studies
0930 – 0945	Break
0945 – 1100	Hydrogen as a Key Decarbonization Solution Green versus Blue versus Grey Hydrogen • Hydrogen Production & Storage • Hydrogen Infrastructure Development • Market Potential & Global Hydrogen Demand
1100 – 1230	Renewable Energy Integration in Petroleum Operations Solar & Wind Energy Applications • Offshore Renewable Energy & Floating Solar Farms • Battery Storage for Energy Management • Hybrid Renewable Systems in Remote Oil Fields
1230 – 1245	Break
1245 – 1330	Circular Economy & Waste Management Strategies Reducing Carbon Emissions Through Circular Economy • Waste-to-Energy Technologies • Recycling & Reusing Industrial Byproducts • Circular Economy Initiatives
1330 – 1420	Sustainable Transportation & Logistics Electrification of Fleet & Heavy Equipment • Sustainable Aviation Fuel (SAF) & Biofuels • Reducing Carbon Footprint in Supply Chain • Adoption of Smart Logistics for Emission Reduction
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, 29th of October 2025

0730 – 0830	Understanding Carbon Offsetting & Compensation Principles of Carbon Offsetting • Types of Carbon Credits & Trading Mechanisms • Potential Carbon Offset Strategies • Criticism & Challenges of Carbon Offsetting
0830 – 0930	Role of Nature-Based Solutions in Decarbonization Afforestation, Reforestation & Blue Carbon Projects • Soil Carbon Sequestration & Biodiversity Conservation • Carbon Farming & Sustainable Land Management • Case Studies on Nature-Based Solutions in Oil & Gas
0930 – 0945	Break
0945 – 1100	Emission Trading Systems (ETS) & Carbon Markets Basics of Carbon Markets & Cap-and-Trade • Position in Emission Trading Schemes • Voluntary versus Compliance Carbon Markets • Lessons from EU ETS & Other Global Systems
1100 – 1230	Green Finance & Investment in Decarbonization ESG Investments & Green Bonds • Attracting Sustainable Financing for Net-Zero Projects • Role of Financial Institutions in Decarbonization • Evaluating ROI for Carbon Reduction Investments
1230 – 1245	Break
1245 – 1330	Risk Management & Business Resilience in a Low-Carbon Economy Identifying Climate-Related Risks • Scenario Planning for Carbon Pricing & Regulations • Integrating Climate Risk into Corporate Strategy • Business Resilience & Adaptation Strategies
1330 – 1420	Corporate Social Responsibility (CSR) & Decarbonization Linking CSR with Sustainability Goals • Employee Engagement in Green Initiatives • Community Outreach for Carbon Neutrality Awareness • Reporting CSR Achievements in Sustainability 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, 30th of October 2025

0730 – 0830	Role of Digitalization in Carbon Management Digital Twins for Optimizing Carbon Footprint • IoT & AI in Emission Monitoring • Blockchain for Carbon Trading & Transparency • Predictive Analytics for Energy Management
0830 – 0930	AI-Driven Carbon Reduction Strategies AI for Process Optimization in Oil & Gas • Machine Learning for Energy Efficiency • AI-Based Carbon Footprint Forecasting • Digital Tools for Real-Time Emission Tracking
0930 – 0945	Break
0945 – 1100	Smart Grid & Decarbonized Energy Infrastructure Microgrids for Remote Operations • Grid Integration of Renewable Energy • AI-Based Demand Response Systems • Case Studies on Smart Grid in Petroleum Industry
1100 – 1230	Advanced Materials & Nanotechnology for Emission Reduction Nanomaterials for Carbon Capture • Low-Emission Catalysts for Refining Processes • Hydrogen Storage Using Advanced Materials • Innovations in CO ₂ Utilization Technologies

1230 – 1245	Break
1245 – 1330	Blockchain for Carbon Accounting & Transparency Role of Blockchain in Carbon Credit Trading • Smart Contracts for Decarbonization Initiatives • Ensuring Transparency in ESG Reporting • Blockchain Use Cases
1330 – 1420	Future Trends in Low-Carbon Technologies Emerging Carbon Removal Technologies • Next-Generation Renewable Energy Solutions • AI & Automation in Carbon Management • Roadmap for Future Innovation
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 Four

Day 5: Friday, 31st of October 2025

0730 – 0930	Building an Organizational Decarbonization Strategy Leadership Commitment to Carbon Neutrality • Defining Net-Zero Timeline & Goals • Identifying Key Performance Indicators (KPIs) • Aligning Sustainability with Business Growth
0930 – 0945	Break
0945 – 1100	Creating a Decarbonization Action Plan Phased Approach to Emission Reduction • Short-Term, Medium-Term & Long-Term Goals • Cross-Departmental Collaboration & Responsibility • Measuring & Reporting Progress
1100 – 1230	Change Management for Carbon Neutral Transition Overcoming Resistance to Sustainability Initiatives • Employee Training & Capacity Building • Creating a Culture of Sustainability • Incentivizing Innovation for Carbon Reduction
1230 – 1245	Break
1245 – 1300	Performance Monitoring & Continuous Improvement Implementing Carbon Management Software • Data Collection & Analytics for Emission Reduction • Third-Party Verification & Audits • Continuous Refinement of Carbon Reduction Strategies
1300 – 1345	Practical Implementation of Decarbonization Strategies Case Study: Current Decarbonization Initiatives • Hands-On Exercise: Designing a Carbon Neutrality Plan • Group Discussions on Overcoming Implementation Barriers • Presentation of Decarbonization Action Plans
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about Topics that were Covered During the Course
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

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org