Sustainable Environmental Management in Hydrocarbon Industries Training Course



20 - 24 Dec 2026

Doha

5500 € (Per Person)

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Course Introduction / Overview:

The global hydrocarbon industry stands at a critical juncture, tasked with meeting the world's energy demands while navigating the complexities of environmental stewardship and the global push for sustainability. This intensive training course is meticulously designed to equip professionals with the advanced knowledge and practical skills required to lead environmental management and sustainability initiatives within this challenging sector. The curriculum moves beyond basic compliance, delving into the strategic implementation of robust Environmental Management Systems (EMS), inspired by frameworks like ISO 14001. We will explore the core principles outlined by leading academics such as R.K. Trivedy and concepts discussed in texts like "Environmental Management in the Petroleum Industry". Participants will gain a comprehensive understanding of critical areas including greenhouse gas emissions reduction, water and waste management, biodiversity protection, and spill prevention. BIG BEN Training Center has developed this program to bridge the gap between theoretical knowledge and real-world application, empowering attendees to drive meaningful environmental performance improvements, manage risks effectively, and align their organizations with the principles of a circular economy and long-term sustainable development.

Target Audience / This training course is suitable for:

- Environmental Managers and Specialists.
- Health, Safety, and Environment (HSE/EHS) Professionals.
- Operations Managers, Supervisors, and Engineers.
- Corporate Social Responsibility (CSR) and Sustainability Officers.
- Regulatory Compliance and Permitting Coordinators.
- Project Managers in the energy sector.
- Strategic Planners and Policy Advisors.
- Geoscientists and Petroleum Engineers.

Target Sectors and Industries:

- Upstream Oil and Gas Exploration and Production.
- Midstream Transportation and Storage.
- Downstream Refining and Petrochemicals.
- Oil and Gas Service Companies.
- Energy Sector Consulting Firms.
- Financial institutions investing in the energy sector.
- Governmental environmental protection agencies and regulatory bodies.
- Non-Governmental Organizations focused on energy and environment.

Target Organizations Departments:

- Health, Safety, and Environment (HSE/EHS).
- Operations and Production.
- Engineering and Maintenance.
- Corporate Strategy and Planning.
- Corporate Social Responsibility (CSR) and Sustainability.
- Legal and Regulatory Compliance.
- Supply Chain and Logistics.
- Research and Development (R&D).

Course Offerings:

By the end of this course, the participants will have able to:

- Develop and implement an effective Environmental Management System (EMS) based on ISO 14001 principles.
- Analyze and mitigate key environmental impacts associated with hydrocarbon operations.
- Formulate strategies for greenhouse gas (GHG) emissions reduction and methane management.
- Evaluate advanced water and waste management techniques for the oil and gas industry.
- Conduct comprehensive environmental risk assessments and develop robust emergency response plans.
- Integrate Environmental, Social, and Governance (ESG) criteria into corporate strategy.
- Navigate the complexities of environmental regulations and ensure organizational compliance.
- Lead the transition towards more sustainable operational practices and a circular economy model.

Course Methodology:

This training course employs a dynamic and interactive learning methodology designed for maximum knowledge retention and practical application. The approach centers on a blend of expert-led presentations, real-world case study analysis drawn from the global hydrocarbon industry, and collaborative group workshops. Participants will engage in problem-solving exercises that mirror the challenges they face in their professional roles, fostering a deeper understanding of complex environmental issues. The sessions are designed to be highly participatory, encouraging open dialogue, peer-to-peer learning, and the sharing of experiences. BIG BEN Training Center facilitators will guide participants through practical simulations of environmental impact assessments and risk management planning. Continuous feedback and interactive Q&A sessions are integrated throughout the program to ensure concepts are clearly understood and can be confidently applied in the workplace. The methodology focuses not just on what to do, but on how to implement effective environmental and sustainability strategies within the unique operational context of the energy sector.

Course Agenda (Course Units):

Unit One Foundations of Environmental Management in the Hydrocarbon Sector

- Introduction to environmental challenges in the oil and gas industry.
- Core concepts of sustainability and the triple bottom line.
- The global environmental regulatory framework and key international agreements.
- Understanding Environmental, Social, and Governance (ESG) criteria.
- The role of stakeholders in environmental performance.
- Introduction to Environmental Management Systems (EMS).
- Key environmental performance indicators (KPIs) for the industry.

Unit Two Implementing an Environmental Management System (EMS)

- A deep dive into the ISO 14001:2015 standard.
- Steps for successful EMS implementation and certification.
- Conducting environmental aspect and impact analysis.
- Setting environmental objectives, targets, and programs.
- Documentation, operational control, and communication strategies.
- Monitoring, measurement, analysis, and performance evaluation.
- Internal auditing and management review for continuous improvement.

Unit Three Operational Environmental Control and Mitigation

- Strategies for managing air emissions and greenhouse gases (GHG).
- Advanced techniques in produced water management and treatment.
- Best practices for solid and hazardous waste minimization and disposal.
- Fugitive emissions detection, measurement, and reduction.
- Spill prevention, control, and countermeasure (SPCC) planning.
- Biodiversity conservation and ecosystem management in operational areas.
- Noise pollution control and mitigation strategies.

Unit Four Sustainability, Decarbonization, and the Energy Transition

- Developing a corporate sustainability and decarbonization strategy.
- Introduction to Carbon Capture, Utilization, and Storage (CCUS).
- The role of hydrogen and other low-carbon energy sources.
- Implementing circular economy principles in hydrocarbon operations.
- Life Cycle Assessment (LCA) for products and processes.
- Sustainability reporting standards (GRI, SASB).
- Engaging the supply chain for enhanced sustainability performance.

Unit Five Advanced Risk Management and Future Trends

- Conducting a comprehensive Environmental Impact Assessment (EIA).
- Advanced environmental risk assessment and management techniques.
- Site decommissioning, remediation, and restoration strategies.
- The role of digitalization and AI in environmental monitoring.
- Navigating the financial implications of environmental performance.
- Developing a long-term vision for sustainable energy production.
- Final project: Creating a strategic environmental improvement plan.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

Considering the immense capital investment in existing hydrocarbon infrastructure, how can companies strategically pivot towards sustainable practices without compromising economic viability and energy security?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by providing a deeply specialized and holistic perspective tailored specifically to the hydrocarbon industry's unique environmental and sustainability challenges. Unlike general environmental management programs, every module, case study, and discussion is framed within the context of upstream, midstream, and downstream operations. It moves beyond mere regulatory compliance to foster a strategic mindset, equipping participants to lead their organizations through the complex energy transition. The curriculum uniquely integrates the technical aspects of operational environmental control, such as methane reduction and water management, with high-level strategic components like ESG integration, decarbonization pathways, and circular economy principles. Furthermore, the course emphasizes the practical application of knowledge through simulated risk assessments and the development of strategic improvement plans, ensuring that participants leave not just with theoretical understanding, but with a clear, actionable framework for driving tangible and sustainable change within their organizations. It is this direct bridge between operational reality and strategic sustainability that provides unparalleled value.