TECHNICAL
EDUCATION
ACADEMY

School of Business and Management

COURSE PROGRAMME

000602

IOGB002 - Carbon Management for Energy Business



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

The "Carbon Management for Energy Business" training programme is expertly crafted to equip professionals in the energy sector with the essential skills and knowledge needed to manage and drive climate change initiatives effectively within their organisations.

This comprehensive training encapsulates a series of interlinked modules that cover the entire spectrum of carbon management, from the fundamentals of climate change and carbon management strategies to the intricacies of emissions analysis and carbon sequestration. Participants will engage with topics such as the role of the energy sector in climate change, greenhouse gases, renewable energy integration, and the practicalities of implementing emissions reduction measures.

Key aspects of the programme include hands-on exercises for carbon footprint calculation, simulations for climate risk scenarios, and detailed discussions on regulatory compliance and carbon trading. The course also delves into adaptation and resilience strategies, providing participants with the tools to assess risks and build organisational resilience against climate impacts.

Designed to foster a transformative understanding, this programme aims not only to inform but also to inspire participants to lead effective sustainability initiatives. With a blend of expert instruction, practical training, and interactive learning, professionals will emerge from this programme prepared to advance their organisations' sustainability agendas and make substantial contributions to global carbon management efforts.

Who it is for and how it helps

For the "Carbon Management for Energy Business" training programme, attendees from ministries and companies should ideally include individuals who are in positions to influence, manage, or implement policies and practices related to energy and environmental management. Here are specific roles and departments from both sectors that would benefit from attending this course:

• Environmental Policy Makers: Individuals involved in crafting policies that regulate and guide carbon management and climate adaptation strategies.

• Regulatory Affairs Officers: Those responsible for developing, enforcing, and updating regulations related to environmental standards and carbon emissions in the energy sector.

• Sustainability Advisors: Personnel who advise on sustainability initiatives and ensure that environmental considerations are integrated into national policies and projects.

• Climate Change Analysts: Analysts focused on assessing climate change impacts and developing response strategies at a national or regional level.

• Energy Department Officials: Officials who oversee energy production and consumption policies, ensuring they align with sustainability goals.

Course overview — continued

• Corporate Sustainability Executives: Senior leaders who oversee the integration of sustainability into corporate strategies and operations.

• Environmental Managers: Those responsible for managing a company's environmental performance and implementing practices to reduce environmental impact.

• Health, Safety, and Environment (HSE) Professionals: Individuals who ensure that the company's operations comply with environmental laws and standards.

• Operations and Facility Managers: Managers in charge of day-to-day operations, particularly in sectors like oil and gas, where operations have significant environmental impacts.

• R&D Managers: Research and development managers involved in innovating and implementing technologies for reducing carbon footprints.

• HR and Corporate Social Responsibility (CSR) Professionals: Those who drive internal change through training programs and CSR initiatives focusing on environmental sustainability.

• Supply Chain and Procurement Specialists: Professionals involved in optimizing the supply chain to reduce carbon emissions and ensure compliance with environmental standards.

What you will learn

- Understand the Fundamentals of Climate Change and Carbon Management: Delegates will have a comprehensive understanding of climate change, its impact on the environment and specifically on the energy sector, and the foundational concepts of carbon management
- Analyse and Calculate Carbon Footprints: Participants will gain the skills needed to measure and analyse carbon emissions across various operations within the energy sector. This includes calculating carbon footprints and understanding the sources and flows of greenhouse gas emissions
- Implement Carbon Management Strategies: Delegates will learn how to develop and apply carbon management strategies within their organisations. This includes the adoption of technologies and practices for carbon reduction, sequestration, and storage
- Navigate International Climate Policies and Frameworks: Participants will be equipped to understand and navigate through the complex landscape of international climate policies and frameworks, enabling them to ensure compliance and leverage these policies for strategic advantage
- Develop Adaptation and Resilience Strategies: Delegates will be able to assess climate risks and design resilience strategies to mitigate these risks in their operations, ensuring business continuity and environmental compliance
- Utilise Modelling Tools for GHG Footprinting: Training will enable participants to use various greenhouse gas (GHG) modelling tools and software effectively, helping them to benchmark progress and make informed decisions based on emissions data
- Engage with Renewable Energy Solutions: Participants will explore the integration of renewable energy solutions into existing energy systems, understanding the benefits, challenges, and trade-offs involved

Course overview — continued

- Manage and Trade Carbon Credits: Delegates will learn the dynamics of carbon credits, including how to calculate, trade, and manage them effectively within the regulatory environment
- Drive Sustainability in Corporate Culture: By the end of the programme, delegates will be capable of leading initiatives that promote sustainability and drive cultural change within their organisations, enhancing employee engagement in sustainability efforts
- Prepare for Regulatory Changes: Participants will be equipped to anticipate and adapt to future regulatory changes, maintaining compliance and leveraging new opportunities in carbon management

Curriculum

Modules 01–04

01 Introduction to climate change and carbon management

- Introduction to Climate Change and Carbon Management
- Case study: Successful carbon management strategies in the industry
- Key Terminology in Climate Change
- Global Climate Dynamics
- International Climate Policies and Frameworks
- Measurement and Reporting
- Supply Chain and Carbon Flow
- Adaptation and Resilience to Climate Change
- Interactive session on global climate resilience initiatives

02 Emissions through the system

- Role of the Energy Sector in Climate Change
- Understanding Energy Sector Systems
- Practical exercise: Calculating carbon footprints of different systems
- Emissions Analysis by Source and Sector
- GHG Emissions in Supply Chains
- Synergies and Trade-offs
- Carbon Leakage

03 Sources of emissions

- Types of Greenhouse Gases
- Emission Timeframes
- Global Warming Potential (GWP) Metrics
- Carbon and Nitrogen Cycles
- Sources of Emissions in the Energy Sector
- Emissions Variation
- Impact of System Changes on Emissions

04 Impacts of climate change

- Climate Impacts Overview

Curriculum

Modules 04–07 · Module 04 — continued

- Impacts on Natural Environment and Biodiversity
- Human Impacts
- Sector-specific impact analysis: Oil and gas operations
- Energy Sector
- Detailed sector impact discussion

05 Adaptation and resilience

- Understanding Adaptation and Resilience
- Climate Change Risk Assessment
- Adaptation Strategies
- Simulation: Responding to hypothetical climate risk scenarios
- Building Resilience
- Strategies for resilience in oil and gas

06 Carbon sequestration and storage

- Basics of Carbon Sequestration and Storage
- Key Concepts in Sequestration and Storage
- Options for Carbon Removal and Storage
- Ecosystem Carbon Balance
- Carbon Removal and Storage Practices
- Update on new technologies and methods
- Thresholds and Plateaus in Carbon Storage
- Prioritizing Emission Reductions

07 Assessing emissions: modelling

- Importance of GHG Modelling
- GHG Accounting Methods
- Modelling Assumptions
- Benchmarking Progress
- Tools for GHG Footprinting
- Training on specific GHG modelling software

Curriculum

Modules 07–11 · Module 07 — continued

- Strengths and Weaknesses of Modelling Tools
- Using Tools for Decision Support

08 Renewable energy sources

- Introduction to Renewable Energy
- Integration of Renewable Energy
- Discussion of integration challenges and solutions
- Renewable Transport Options
- Energy Storage Solutions
- Trade-offs of Renewable Energy

09 Implementation of emissions reduction measures

- Mitigation Strategies for Specific Situations
- Assessment of Mitigation Measures
- Funding and Support for Mitigation
- Integrating Lower Carbon Strategies
- Regulatory compliance and its impact

10 Carbon credits: overview and role

- Introduction to Carbon Credits
- Value and Dynamics of Carbon
- Carbon Credits in the Energy Sector
- Business Value of Carbon

11 Carbon credits: production and trading

- Calculating Carbon Credits
- Measurement Units for Carbon Credits
- Trading Carbon Credits
- Challenges in Carbon Credit Trading
- Insetting
- Evolving opportunities and risks for insetting

Curriculum

Modules 12–13

12 Regulatory and compliance training

- Global and Regional Regulations
- Compliance Strategies
- Navigating Future Regulatory Changes

13 Cultural change management

- Driving Sustainability in Corporate Culture
- Strategies for Cultural Change Management
- Employee Engagement in Sustainability Efforts

Joining the programme

Contact the Academy and quote course code 000602 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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