Carbon Management and GHG Accounting: Carbon Footprint and Net Zero Targets

27 – 31 December 2026
Riyadh - KAFD district five-star



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Introduction:

Carbon management and GHG accounting start with a greenhouse gas inventory that decision makers can trust, yet many organisations still hold emissions figures built from incomplete activity data, mixed boundaries and unexplained emission factors. Without a sound baseline, reduction targets and net zero claims cannot be tested or defended. This Core Concept course equips managers to account for scope 1, 2 and 3 emissions, set science-based targets, rank decarbonisation options by cost and judge carbon credit quality. Participants build a working carbon model and leave with a Carbon Management Plan for their organisation.

Course Objectives:

- Define organisational and operational boundaries and select an equity share or control consolidation approach for the carbon footprint
- Calculate scope 1, scope 2 and relevant scope 3 emissions from activity data and documented emission factors
- Compile a GHG inventory with a base year, recalculation policy and data quality controls ready for verification
- Set near-term and long-term reduction targets and a net zero pathway in line with the SBTi Corporate Net-Zero Standard
- Rank decarbonisation levers with a marginal abatement cost curve and assess the role and quality of carbon credits
- Produce a Carbon Management Plan combining the inventory, targets, abatement roadmap and carbon reporting approach

Target Audience:

- Sustainability and environment managers accountable for the organisation's carbon footprint and climate targets
- Energy and facilities managers responsible for fuel, electricity and site emissions data
- Operations and engineering managers who own the assets and processes behind direct emissions
- Finance and planning managers evaluating the cost of abatement projects and carbon credit purchases
- Risk, compliance and internal audit managers reviewing the reliability of emissions figures

Course Outline:

Day 1: Carbon Management Foundations and Emissions Baseline

- Greenhouse Gases, Global Warming Potential and Tonnes of CO2 Equivalent
- Carbon Management Drivers: Investors, Customers, Lenders and Carbon Pricing
- GHG Protocol Scope 1, Scope 2 and Scope 3 Definitions
- Emission Source Mapping Across Sites, Fleets and Processes
- Carbon Management Maturity Self-Assessment

Day 2: GHG Accounting Standards and Boundary Setting

- GHG Protocol Corporate Standard Accounting Principles
- Organisational Boundaries: Equity Share, Financial Control and Operational Control
- Operational Boundaries and Scope Classification Decision Tree
- GHG Protocol Scope 2 Guidance: Location-Based and Market-Based Methods
- ISO 14064-1 Organisation-Level Quantification and Reporting Requirements

Day 3: Calculating the Carbon Footprint and Building the Inventory

- Activity Data Collection Templates for Fuel, Refrigerants and Electricity
- Emission Factor Selection, Sources and Documentation Log
- Stationary Combustion, Mobile Combustion and Fugitive Emission Calculations
- Screening the Fifteen Scope 3 Categories for Relevance
- Base Year Selection and Recalculation Policy

Day 4: Data Quality, Verification, Targets and Abatement

- Data Quality Scoring, Uncertainty and Estimation Methods
- ISO 14064-3 Verification Process and Evidence Readiness
- SBTi Near-Term, Long-Term and Net Zero Target Setting
- Marginal Abatement Cost Curve Construction and Interpretation
- Carbon Credit Quality Against the ICVCM Core Carbon Principles

Day 5: Carbon Model Build and the Carbon Management Plan

- Manufacturing Case Build: Scope 1 and 2 Inventory Model
- Services Group Case Build: Scope 3 Hotspot Estimate
- Decarbonisation Roadmap and Abatement Cost Model
- Carbon Management Plan Drafting with Carbon Reporting Approach
- Verifier-Style Peer Review and Plan Defence

Skills You Will Gain:

- GHG Inventory Compilation
- Boundary and Consolidation Setting
- Emission Factor Management
- Emissions Data Quality Control
- Science-Based Target Setting
- Abatement Cost Analysis
- Carbon Credit Due Diligence
- Verification Readiness

Why Attend This Course:

- Leave with a Carbon Management Plan that links a working inventory model to targets and a costed abatement roadmap
- Answer verifier, investor and customer questions on how each emissions figure was calculated
- Spot weak offsetting and net zero claims before they reach a public statement
- Compare carbon accounting practice with managers from manufacturing, energy, logistics and services organisations

Conclusion:

Credible carbon management rests on numbers that can be traced from activity data to reported totals and on targets that follow from them. This course moves from emissions foundations and the GHG Protocol and ISO 14064 requirements, through boundary setting, calculation, inventory building and verification readiness, to target setting, abatement cost analysis and carbon credit quality. The final day brings these elements into a working carbon model and a Carbon Management Plan that participants take back to steer reductions and reporting.