



Carbon Tax and Carbon Border Adjustment: Embedded Emissions and Export Cost Exposure



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Introduction:

Carbon tax and carbon border adjustment charges now reach exporters of steel, aluminium, cement, fertiliser and hydrogen through buyer requests for product emissions data and through import-side certificate costs. Many producers cannot yet show installation-level embedded emissions, fall back on penalising default values and leave carbon cost out of export pricing and supply contracts. This Core Concept course takes tax, trade and sustainability specialists through carbon pricing design, border adjustment declarations, per-tonne product emission calculations and cost pass-through. Participants produce an Embedded Emissions and Carbon Cost Exposure Assessment for a case exporter.

Course Objectives:

- Compare carbon taxes, emissions trading and border adjustments and explain how tax base, rate and collection point decide the carbon cost a producer bears
- Determine which exported goods fall within a border adjustment by product category and identify the declarant, certificate and reporting duties that follow
- Calculate direct and indirect embedded emissions per tonne of product and justify the use of actual or default values
- Collect and check installation emissions data from suppliers and prepare evidence for independent verification
- Model carbon cost exposure under price scenarios and draft pricing and contract clauses that allocate carbon cost between buyer and seller
- Recommend decarbonisation and sourcing responses ranked by their effect on embedded emissions and border charges

Target Audience:

- Sustainability specialists responsible for product emissions data and customer carbon disclosures
 - Tax specialists responsible for indirect taxes, levies and environmental charges on production and trade
 - Trade compliance specialists responsible for customs classification, import declarations and origin documentation
 - Finance and pricing specialists responsible for export margins, cost models and carbon price assumptions
 - Commercial and procurement specialists responsible for export sales contracts and supplier data requests
 - Plant and energy specialists responsible for installation fuel, electricity and process records
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Course Outline:

Day 1: Carbon Pricing Instruments and the Environmental Tax Landscape

- Pigovian Tax Logic and the Social Cost of Carbon as a Rate Benchmark
- Carbon Tax Design: Tax Base, Upstream Versus Downstream Collection Point and Exemptions
- Emissions Trading Versus Carbon Tax: Price Certainty Against Quantity Certainty
- Revenue Recycling Options: Fee and Dividend, Tax Shifting and Earmarked Funds
- Environmental Taxes Overview: Fuel, Energy, Landfill and Pollutant Levies

Day 2: Border Carbon Adjustment Architecture and Declarant Duties

- Carbon Leakage Risk and the Rationale for Border Carbon Adjustment
- Covered Goods Screening: Steel, Aluminium, Cement, Fertiliser, Hydrogen and Electricity by Tariff Code
- Authorised Declarant Role, Importer Registration and Customs Data Linkage
- Certificate Purchase, Surrender and Deduction for Carbon Price Paid at Origin
- Transitional Reporting Phase Versus Definitive Financial Obligation

Day 3: Embedded Emissions Calculation for Exported Products

- Installation Boundary, Production Routes and Aggregated Goods Categories
- Direct Process and Combustion Emissions Attributed per Tonne of Product
- Indirect Emissions from Consumed Electricity, Heat and Steam
- Precursor Emissions in Complex Goods and Mass Balance Allocation
- Default Values Versus Actual Values: Cost Penalty and Evidence Needs

Day 4: Supplier Data, Verification, Reporting Cycles and Carbon Cost Responses

- Supplier Emissions Data Request Template and Installation Communication Sheet
- Independent Verification Evidence, Site Visits and Data Gap Handling
- Quarterly and Annual Reporting Cycle Calendar and Correction Procedures
- Carbon Cost Pass-Through Clauses in Export Sales and Supply Contracts
- Decarbonisation and Sourcing Responses: Low-Carbon Electricity, Scrap Input and Supplier Switching

Day 5: Capstone: Embedded Emissions and Carbon Cost Exposure Assessment for a Case Exporter

- Case Exporter Data Pack Review: Product Mix, Shipments and Installation Records
 - Embedded Emissions Workbook Build for Two Exported Product Lines
 - Carbon Cost Exposure Model: Certificate Price Scenarios and Origin Price Deduction
 - Export Price and Margin Sensitivity with Contract Pass-Through Options
 - Exposure Assessment Presentation and Peer Finance Challenge
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Skills You Will Gain:

- Carbon Pricing Instrument Design
- Covered Goods Classification
- Embedded Emissions Quantification
- Default Value Assessment
- Supplier Emissions Data Management
- Border Certificate Cost Estimation
- Carbon Cost Pass-Through Structuring
- Carbon Leakage Risk Analysis

Why Attend This Course:

- Return with an Embedded Emissions and Carbon Cost Exposure Assessment built on a case exporter's product lines
- Answer importer and buyer requests for product emissions data with calculations that can stand up to verification
- See where default values would overstate your products' carbon charge and what evidence replaces them
- Compare border adjustment readiness with peers from metals, cement, fertiliser, chemicals and energy producers

Conclusion:

Border carbon charges turn a producer's installation emissions into a line on the buyer's import cost, so exporters that cannot evidence their own figures end up paying for default values. The course moves from carbon tax and trading design, environmental levies and carbon leakage, through border adjustment scope, declarants and certificates, to per-tonne embedded emission calculations, supplier data, verification and reporting cycles, then to cost pass-through and decarbonisation choices. The final day produces an Embedded Emissions and Carbon Cost Exposure Assessment for a case exporter.
