



Oil and Gas Trading and Pricing: Crude Benchmarks, Physical Cargoes and Price Hedging



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Introduction:

Oil and gas trading and pricing decisions go wrong when commercial teams quote cargoes off the wrong benchmark, misread differentials or leave price exposure unhedged between loading and sale. This Core Concept course gives commercial, trading support, planning and finance staff a working method to read supply and demand balances, price crude against Brent, WTI and Dubai benchmarks and price reporting agency assessments, value refined products and gas, and hedge exposure with futures, swaps and options under clear trading controls. Participants build an Oil and Gas Price Exposure and Hedging Plan for their own portfolio of physical flows.

Course Objectives:

- Interpret oil and gas supply and demand balances, inventories and forward curve structure to explain price movements to management
- Price physical crude cargoes against Brent, Dated Brent, WTI and Dubai benchmarks with quality and freight differentials
- Compare term and spot sales, pricing periods and price reporting agency assessments when agreeing formula prices
- Calculate refined product cracks, the 3-2-1 crack spread and gas prices on hub-based and oil-indexed formulas
- Design hedges with futures, fixed-for-floating swaps and options and measure their result through mark-to-market reporting
- Apply trading controls, position limits and segregation of duties and compile an Oil and Gas Price Exposure and Hedging Plan

Target Audience:

- Commercial staff who negotiate crude, product and gas sales and purchase prices
 - Trading support and operations staff who schedule cargoes, confirm deals and track pricing periods
 - Supply planning staff who balance feedstock, production and product placement against market prices
 - Risk management and middle office staff who monitor positions, limits and mark-to-market results
 - Finance and treasury staff who budget on price assumptions and account for hedges and physical sales
 - Market analysts who prepare price outlooks and supply and demand balances for decision makers
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Course Outline:

Day 1: Oil and Gas Market Fundamentals and Supply and Demand Balances

- Global Crude Supply Sources: Producer Groups, Spare Capacity and Output Decisions
- Oil Demand Drivers by Sector: Transport Fuels, Petrochemical Feedstock and Power
- Inventory Levels and the Supply and Demand Balance Sheet Build
- Forward Curve Shape: Contango, Backwardation and Storage Economics
- Natural Gas and LNG Trade Flows Compared with Seaborne Crude Flows

Day 2: Crude Benchmarks, Differentials and Price Reporting Agencies

- Brent Blend Basket and Dated Brent Assessment of Cargoes Loading Ahead
- WTI Light Sweet Futures and Cushing Delivery Mechanics
- Dubai Sour Crude and the OPEC Reference Basket as Regional Markers
- Quality Differentials from API Gravity and Sulphur Content with Freight Adjustments
- Price Reporting Agency Assessment Methods, Market Windows and Published Price Use

Day 3: Physical Crude, Refined Product and Gas Trading

- Term Contracts Versus Spot Cargoes: Volume Tolerance, Nominations and Pricing Periods
- Formula Pricing Build: Benchmark Average Plus Differential Worked Examples
- Cargo Operations Overview: Laycan, Bill of Lading Date and Demurrage Exposure
- Refined Product Markets: Gasoline, Middle Distillate and Fuel Oil Cracks and the 3-2-1 Crack Spread
- Gas and LNG Pricing: Hub-Based Indices Versus Oil-Indexed Slope Formulas

Day 4: Paper Markets, Hedging Instruments and Trading Controls

- Exchange-Traded Crude and Product Futures: Contract Specifications, Margining and Expiry
- Fixed-for-Floating Swaps and Average Price Settlement Against Published Assessments
- Options for Price Protection: Puts, Calls, Collars and Premium Cost
- Basis Risk, Timing Mismatch and Hedge Effectiveness Testing
- Trading Control Framework: Position Limits, Mark-to-Market, Value at Risk and Segregation of Duties

Day 5: Price Forecasting, Hedging Plan Modelling Build and Review

- Price Scenario Building from Balance Sheet, Curve and Crack Spread Inputs
 - Physical Exposure Mapping Across Crude Sales, Product Placement and Gas Contracts
 - Hedge Ratio and Instrument Selection Modelling in a Spreadsheet
 - Refiner, Producer and Gas Buyer Case Exercises on Hedging Outcomes
 - Oil and Gas Price Exposure and Hedging Plan Assembly and Peer Challenge
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Skills You Will Gain:

- Supply and Demand Balance Analysis
- Crude Differential Calculation
- Formula Price Construction
- Crack Spread Valuation
- Gas Contract Price Indexation
- Derivative Hedge Structuring
- Position Limit Monitoring
- Price Scenario Modelling

Why Attend This Course:

- Return with an Oil and Gas Price Exposure and Hedging Plan built in a spreadsheet around your own physical flows
- Check deal confirmations and invoices against the benchmark, pricing period and differential actually agreed
- Explain to management why a benchmark, crack or hedge result moved, using the same terms traders and analysts use
- Compare trading and pricing practice with peers from producers, refiners, gas buyers, shipping and finance teams

Conclusion:

Every oil and gas sale carries a price exposure from the day it is agreed until the day it is priced and paid. The course moves from supply and demand fundamentals and forward curves, through Brent, WTI and Dubai benchmarks and price reporting agency assessments, to physical crude, product and gas trading, then to futures, swaps, options and trading controls. Participants leave with an Oil and Gas Price Exposure and Hedging Plan ready for review with their commercial and finance teams.