LNG Contracts, Pricing and Shipping Economics: SPAs, Trading and Netback Modelling

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Paris - Right Bank business hotel



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Introduction:

LNG contracts, pricing and shipping economics decide whether a cargo earns or loses money, yet many gas companies negotiate volume flexibility, price formulas and charter terms in separate silos, leaving take-or-pay exposure, diversion value and boil-off losses unpriced. This Core Concept course takes commercial, trading, shipping and legal staff through LNG sale and purchase agreement structure, oil-indexed, hub-indexed and hybrid pricing, spot trading, portfolio optimisation, freight and netback calculation, and charter party, hedging and insurance terms. Participants negotiate and deliver an LNG SPA Term Sheet and Netback Model.

Course Objectives:

- Structure LNG sale and purchase agreement volume terms, including ACQ, downward quantity tolerance, take-or-pay and make-up rights, to match a buyer or seller portfolio
- Calculate contract prices under oil-indexed slope, hub-indexed and hybrid formulas with S-curves, floors and ceilings
- Build freight, boil-off and netback calculations that compare FOB and DES sales and diversion options
- Evaluate spot tenders, master sale agreement confirmations and cargo swaps to optimise a multi-source LNG portfolio
- Assess price review, force majeure, charter party, insurance and hedging provisions for commercial and legal risk
- Negotiate an SPA term sheet and present a supporting netback model to internal approvers

Target Audience:

- Commercial and marketing staff responsible for originating and negotiating LNG supply and offtake agreements
- Trading and portfolio staff responsible for spot cargoes, swaps and optimisation of contracted volumes
- Shipping and chartering staff responsible for LNG carrier fleets, charter terms and voyage costs
- Legal and contracts staff responsible for drafting and administering SPAs, master agreements and charter parties
- Commercial finance and risk staff responsible for pricing models, credit exposure and hedging of gas contracts

Course Outline:

Day 1: Gas and LNG Market Structure and Commercial Roles

- Gas Market Models: Pipeline Supply, Portfolio Players, Aggregators and Tolling Liquefaction
- LNG Project Commercial Structures: Integrated, Merchant and Tolling Models
- SPA, GSA and Terminal Use Agreement Contract Chain Mapping
- LNG Buyer and Seller Mix: Utilities, Portfolio Traders and New Importers
- Commercial Team Baseline: Current Contract Portfolio and Exposure Inventory

Day 2: LNG SPA Structure and Volume Terms

- SPA Anatomy: Conditions Precedent, Contract Term, Build-Up Period and Plateau
- Annual Contract Quantity ACQ, Downward Quantity Tolerance DQT and Upward Flexibility
- Take-or-Pay Deficiency Payments, Make-Up Rights and Carry Forward Mechanics
- Annual Delivery Programme, Rolling Schedule and Cargo Nomination Procedure
- Seller Shortfall, Off-Specification LNG Rejection and Quality Remedies

Day 3: Delivery Terms and LNG Pricing Formulas

- FOB Versus DES Delivery: Title, Risk Transfer and Shipping Responsibility
- Destination Clauses, Diversion Rights and Diversion Profit Sharing Mechanisms
- Oil-Indexed Slope Formula: Crude Basket Lag, Slope and Constant Term
- Hub-Indexed Formula: Multiplier on Gas Hub Price Plus Liquefaction Fee
- Hybrid Formulas, S-Curves, Price Floors and Ceilings Worked Calculations

Day 4: LNG Shipping Economics and Freight Calculation

- LNG Carrier Fleet Parameters: Containment Type, Capacity and Propulsion Cost Effects
- Boil-Off Rate Assumptions, Heel Retention and Delivered Energy Calculation
- Spot Voyage, Time Charter and Long-Term Dedicated Tonnage Structures Compared
- Freight Cost Build: Charter Hire, Fuel, Port Charges and Canal Transit Fees
- Netback Spreadsheet: Delivered Price Less Freight, Regasification and Boil-Off Losses

Day 5: Week-One Integration: Guided SPA and Cargo Economics Case

- Guided Case: Mid-Term FOB SPA Volume and Pricing Terms Review
- Guided Case: DES Cargo Delivered Cost and Seller Netback Comparison
- Oil-Indexed Versus Hub-Indexed Price Scenario Table Across Contract Years
- Take-or-Pay Exposure Calculation Under Reduced Buyer Demand
- Week-One Contract Terms Glossary and Issue Log Consolidation

Day 6: Spot, Short-Term Trading and Portfolio Optimisation

- Master Sale and Purchase Agreement Framework and Cargo Confirmation Notices
- Spot and Short-Term Cargo Tender Process and Bid Evaluation Grid
- Portfolio Optimisation: Cargo Swaps, Time Swaps and Location Swaps
- Inter-Basin Arbitrage Window Analysis Using Freight-Adjusted Spreads
- Supply and Demand Matching Model for a Multi-Source LNG Portfolio

Day 7: Price Review, Force Majeure and Hedging Overview

- Price Review Clause Triggers, Review Windows and Expert Determination Route
- Force Majeure Definitions, Notice Requirements and Relief from Delivery
- Dispute Resolution: Arbitration Seat, Governing Law and Expert Referral Choices
- Hedging Overview: Commodity Swaps on Hub-Linked and Oil-Linked Exposure
- Options at Overview: Caps, Floors and Collars for LNG Price Risk

Day 8: LNG Charter Party Clauses and Stakeholder Negotiation

- LNG Time Charter Speed and Boil-Off Warranties and Performance Claims
- Off-Hire, Cool-Down, Gassing-Up and Heel Clauses in LNG Charter Parties
- Ship-Shore Compatibility, Port Liability Agreements and Terminal Access Terms
- Negotiation Preparation Matrix: Interests, Walk-Away Points and Trade-Offs
- Internal Approval Paths: Legal, Credit, Shipping and Commercial Sign-Off

Day 9: Commercial Performance, Insurance and Claims

- Contract Performance KPIs: Delivered Volume Against ACQ and Cargo Cancellation Count
- Realised Price Benchmarking Against Hub and Oil-Linked Reference Prices
- Marine Insurance at Overview: Hull and Machinery, P&I Cover and Cargo Insurance
- Cargo Quantity and Quality Claims: Custody Transfer Measurement Disputes
- Credit Support Instruments: Letters of Credit, Parent Guarantees and Exposure Limits

Day 10: Capstone: SPA Term Sheet Negotiation and Netback Model

- Term Sheet Drafting: Volume, Delivery, Price and Flexibility Positions
- Negotiation Role-Play Rounds Between Seller and Buyer Teams
- Netback Model Build Linking Formula Price, Freight and Boil-Off Inputs
- Netback Sensitivity Testing on Slope, Hub Price and Charter Rate
- LNG SPA Term Sheet and Netback Model Presentation and Peer Challenge

Skills You Will Gain:

- LNG SPA Structuring
- Volume Flexibility Analysis
- Gas Price Formula Modelling
- LNG Freight Estimation
- Cargo Netback Valuation
- Portfolio Optimisation
- Charter Party Risk Review
- Commercial Negotiation Planning

Why Attend This Course:

- Return with an LNG SPA Term Sheet and Netback Model negotiated and tested against seller and buyer positions
- Put a value on destination flexibility, downward quantity tolerance and make-up rights before conceding them at the table
- Check whether a spot tender, cargo swap or diversion earns more than delivering under the existing contract
- Work through LNG contract, shipping and pricing cases with commercial, legal and shipping peers from producers, portfolio players and importers

Conclusion:

Every LNG cargo carries value set by its contract terms, its price formula and the cost of moving it. Week one covers market structure, SPA volume and delivery terms, pricing formulas and shipping economics, closing with a guided case. Week two adds spot trading, portfolio optimisation, price review, force majeure, hedging, charter party clauses, insurance, claims and commercial KPIs. The capstone brings these together in an LNG SPA Term Sheet and Netback Model that each participant negotiates, builds and defends.