

Argus Workshop: Crude Oil Trading and Risk Management



Course date

10 – 13 October 2022

Duration

4 days. Online required – 4 hours (practical session included)

Target audience

Crude oil marketers, traders; refining industry planners; banking, finance executives; lawyers, accountants; oil company graduate trainees; power companies with exposure to oil prices; refined product end-users; banks with a presence in commodity markets; swaps sales and marketing staff; regulatory and taxation authorities; oil refiners; national oil companies; independent exploration companies; oil and commodity traders; business development staff at futures exchanges; fund managers; private equity executives.

Course objective

How does this course benefit you?

- Gain a broad perspective on the global oil business from crude production to oil product consumption
- Understand how physical crude oil contracts are structured
- Master the calculations you need to understand gross product worth, gross refining margins and crack spreads; oil transportation costs; and arbitrage calculations
- Understand the trading and pricing structures for crude oil and master the calculations you need to negotiate prices relative to benchmarks within contractual structures
- Understand the system of crude oil benchmarks and differentials, including how the Dated Brent, Oman/Dubai and WTI/LLS prices are calculated
- Be aware of risk management and the basic structures for hedging crude oil sales and purchases, and for locking in a trading margin
- Confidently discuss technical terms, concepts and buzzwords with your peers and clients.

Course overview

To provide detailed knowledge of the trading of crude oil and how the value of refined petroleum products derived from crude oil affects values of the feedstock

This workshop follows a logical order in looking at the fundamentals of crude oil supply; the structure of a physical crude oil transaction; how refiners make a valuation of the different grades competing in the market; how the deal parameters such as quality, timing, location, quantity and logistics affect the physical transaction; the derivative instruments available for trading crude oil on a speculative basis and for hedging; and perhaps most importantly, how the value of physical crude oil and futures, options and swaps that are traded as derivatives interact.

The drivers of crude oil prices in relation to refined product prices are explained, as well as the changing drivers of market volatility, and how these are relevant to trading and risk management. The basic structures of commodity trading are systematically introduced, including physical, forwards, futures, options and swap markets. The course explains the role of trading in ensuring an efficient flow of goods between producers and end-users. The structure of oil and its pricing are explained, as well as how the main benchmarks provided by price reporting agencies such as Argus are used.

The programme provides hand-on exercises that allow delegates to confidently use volume, mass and energy conversion factors; to understand the quality specifications of the different types of crude oil and their suitability for various end-users; as well as basic commercial calculations such as crack spreads, gross product worth, margins and differentials.

Course outline

Module 1 – Pricing crude oil

- The spot market and term contract market
- The use of pricing benchmarks
- Traditional benchmarks (Brent, Dubai, WTI etc)
- Crude differentials
- How pricing agencies operate
- Official Selling Prices
- The future of benchmarks in the oil market

Module 2 – How crude oil qualities affect differentials

- How quality parameters affect oil value
- Crude oil differentials
- Reading a crude oil assay
- Quality and volume measurement
- Specification parameters and optionality
- Timing impacts on differentials

Module 3 – Contractual arrangements

- Writing a physical crude oil contract
- Key parameters of a crude oil deal
- Quality, timing, volume
- Pricing basis, loading point, delivery point
- Optionalities for buyer and seller
- Nomination system and documentation
- The bill of lading and crude oil pricing

Module 4 – Crude oil transportation and logistics

- Pipeline transportation
- Tanker transportation
- Types of crude oil tanker
- Freight calculations
- The Worldscale system
- Vessel quality
- Demurrage costs

Module 5 – Crude oil valuation

- How refined product values affect crude oil prices
- Calculating crack spreads and gross product worth
- Calculating gross refining margin
- How refinery configuration affects value to a refiner
- Forecasting crude oil differentials from gross product worth
- Seasonality and refined product qualities
- How valuation and market prices differ

Module 6 – Crude oil derivative markets

- Volatility and price risk
- Speculation and hedging
- Forward markets
- Futures markets
- Options
- Swaps
- Relationship between physical and derivative markets

Module 7 – Hedging and speculation

- Concept of price long and price short
- Taking an offsetting position in a related market
- Hedging instrument selection
- Basis risk and correlation measures
- Determining hedge ratios
- Hedging strategies: examples
- Defining risk management strategy

Module 8 – Arbitrage

- Taking simultaneous trading positions in different markets
- Time arbitrage and location arbitrage
- Using derivatives to lock in a physical arbitrage
- Trading arbitrage using futures markets and swaps
- Hedging examples and real-life pitfalls
- Regulatory issues and compliance

Trainer Profile

Peter Stewart is a highly experienced analyst in oil and gas markets. He is a director of the British Institute of Energy Economics and has written extensively for the Oxford Institute of Energy Studies and the Oxford Energy Forum. He runs training and consulting firm Resource Economist and has worked as an associate with a number of consulting firms, including IPA Advisory. He was also a chief economist at KBC Energy Economics. He has been an expert advisor to the energy ministries of Norway and Angola on the short-term oil and gas outlook and oil trading. Peter has many years of experience in the trading and pricing of oil and gas, having worked for nearly 20 years with pricing agency Platts in London, the Middle East and Asia. Peter is a qualified executive leadership coach. He has a relaxed and interactive tuition style and seeks to maximise the learning experience of delegates through the use of coaching techniques.

Timetable

Agenda	Time zone		
	UAE	SGT/CN	JPT/KRT
Module 1/3/5/7	10:00	14:00	15:00
Discussion & Q&A (30 min)	11:15	15:15	16:16
Break (30 min)	11:45	15:45	16:45
Module 2/4/6/8	12:15	16:15	17:15
Discussion & Q&A (30 min)	13:30	17:30	18:30
END	14:00	18:00	19:00

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