



# Gas Trader Academy

A unique learning programme for the European and Global gas markets

When: 23-27 June | Where: ICE Futures Europe, London

Register at: theice.com/gastraderacademy

#### **COURSE OVERVIEW**

Welcome to the Gas Trader Academy brought to you by ICE Education and IBH. The academy is delivered by an expert team of analysts and recent market practitioners where their knowledge and skills have been translated into a highly practical course covering the European and increasingly global gas markets. You'll certainly leave this course with a genuine set of practical tools to take back to your organization. Interactive lectures will instil both physical and paper gas market knowledge and associated trading techniques.

Enhanced learning through the use of the innovative trading simulator will turn the theory into practice.

During days 3 to 5 you will have the full trader experience, undergoing the full range of emotions. You will receive one-to-one coaching, from members of the delivery team, where appropriate to ensure you have full understanding of the trading concepts and get the most from the simulation exercises.

#### **ABOUT THE SPEAKERS**

#### Julian Lee

#### Senior Energy Analyst, Centre for Global Energy Studies

Mr Lee joined the Centre for Global Energy Studies at its creation in 1989. He specialises in global oil and energy market analysis and the oil industries of the former Soviet Union and sub-Saharan Africa, overseeing all the CGES' work in these latter areas. Mr Lee has written extensively on many aspects of the energy industry of the former Soviet Union, including the production prospects for both Russia and the Caspian region, the export options for oil and gas producers in both regions and the dynamics of and prospects for Russian oil demand. Mr Lee writes for the CGES on a wide range of subjects outside his areas of special interest, including the geopolitics of energy, the political and economic problems faced by major energy producers in the Middle East and general OPEC issues. Julian Lee is a graduate in Mathematics from the University of Warwick and received his Master Degree in Operational Research from the London School of Economics.

#### **Chris Holmes**

Chris Holmes was most recently Head of Gas Trading at JP Morgan and was involved in all aspects of the physical and derivative gas business from proprietary trading through to asset optimisation. Prior to this he held the position of Head of Gas Trading

at RBS Sempra. Chris began trading at BP and has a wealth of experience in physical gas storage and transport optimisation as well as an excellent understanding of embedded options, physical LNG trading and derivative experience.

#### **David Glasspool**

David Glasspool has ten years experience in the front office, operating and then trading gas for Enron, BP and EGL and has presented and assessed on courses whilst at both BP and SGT. David was involved in all aspects of the value chain, booking physical and virtual storage, managing European swing contracts, upstream assets, and executing orders for internal customers such as LNG.

#### Damian Faulkner

Damian has over ten years experience in the gas and power industry working for ExxonMobil, Enron and BP in a variety of back and front office roles. During his time at BP, Damian was a Contract Manager for a large Power Station as well as the senior UK power trader, trading the prompt, curve and interconnector electricity markets, as well as the carbon emissions element of the clean spark spreads. Later moved on to trade the UK gas curve and finally the European gas curve covering France, Italy, Germany, the Netherlands, Belgium and France.

## WHO IS IT FOR?

Aspiring energy traders • Junior traders • Risk Managers • Operators • I.T. professionals • Business Analysts • Compliance professionals

#### DAY 1

#### Natural Gas — Introduction

- Natural gas in the hydrocarbons sequence: from methane to complex long-chain hydrocarbons
- Where natural gas, LPGs, and crude oil fit and how they are related
- Natural gas, associated gas, shale gas: is there any difference?
- What is shale gas and why is it 'unconventional'?
- Natural gas liquids and liquefied petroleum gases (NGLs & LPG)
- Measuring natural gas
- Introducing the differences between oil and gas from a materials & energy point of view
- LNG

#### Natural Gas and Oil

- Different energy properties: different uses (energy density, volume considerations, containment and pollution)
- The question of transportation: how oil and gas are transported to market, the difference between transportation methods

#### Natural Gas — Reserves and Production

- Distribution of global natural gas reserves and Kazakhstan's place in the hierarchy
- Regional gas production histories
- Natural gas production
- · Associated gas and the pressures to reduce flaring
- Shale gas production techniques and how they differ from traditional methods
- The impact of problems of gas storage on production
- Turning raw wellhead gas into saleable products

#### Natural Gas — Transportation

- Transporting natural gas: pipelines, compression, liquefaction
- Gas pipelines
- · Major gas pipelines of the world
- LNG
- LNG delivery chain: liquefaction, transportation, regasification
- Worldwide liquefaction and regasification terminals
- Recent trends and the impact of shale gas
- Advantages and disadvantages of pipelines vs. LNG
- Compression as an alternative to liquefaction

#### **Gas Consumption**

- The world's major gas users
- By region / country
- By sector power generation / industrial heat / domestic heating and cooking / transportation?
- Gas distribution and use power generation, petrochemicals, industrial heat, domestic heat, future vehicle fuels) gas-topower and gas-to-liquids (GTL)
- Gas as a petrochemicals feedstock

# **Gas Storage and Distribution**

- Gas storage facilities
- · The seasonal nature of gas demand
- Managing gas flows

#### DAY 2

## The Shale Gas Phenomenon

- North American resources and production
- Can the North American experience be repeated elsewhere?

## **Commercialisation of Natural Gas**

• Gas sales and marketing strategy, negotiations

#### **Gas Pricing and Contracts**

- Gas market structures
- Gas-on-gas competition/liberalised markets: North America/UK
- Prices linked to competing fuels Europe / SE Asia
- Prices linked to oil: Japan / Korea / Taiwan
- Regulated prices: Middle East / Russia / China

## **Gas Sales Arrangements**

- Long-term contracts
- Spot sales

## **Gas Sales and Transportation Contracts**

- Gas sales agreements
- · Length of term
- Quantity
- Price terms
- Delivery point
- Delivery obligations
- Take-or-pay / ship-or-pay obligations
- Gas quality
- Renegotiation opportunities

# Pricing and Formulas Used In Gas Industry, Benchmark Prices

- US: Henry Hub
- Europe: oil price linkage vs. hub pricing (NBP, TTF, etc.)
- Asia: Japanese Crude Cocktail

#### DAY 3

## **Negotiation Exercise**

· Game theory

#### **Natural Gas Price Drivers**

- Heating/Cooling Demand
- Power Generation
- Macro Factors
- Interconnections
- LNG imports
- Sentiment
- Price of competing fuels

## **Good Trading Discipline**

- Trading Terminology
- Trading rules
- What can go wrong?

## **Flat Price Trading**

- Challenges of flat price trading
- Trading Simulation

# **Technical Trading Techniques**

- Different types of charts
- Trends
- Support and Resistance
- Retracements
- Candlestick patterns
- Moving Averages
- Trading Simulation

## DAY 4

## **Speculative Spread trading**

- What are spreads?
- Why do traders use spreads?
- Geographical gas spreads
- Gas time spreads
- Contango/Backwardation
- Trading Simulation

## **Monetising Transport Capacity**

- Transport Costs
- The impact of FX
- Valuing transport capacity
- The importance of volatility
- Trading Simulation

## Valuing a storage asset

• Storage Costs

- Standard Bundled Units
- Intrinsic and Extrinsic Value
- Hedging storage capacity

# **Monetising Storage Capacity**

- How do traders make money?
- Rolling hedges
- · Considerations when optimising
- Trading Simulation

## DAY 5

## Introduction to LNG Trading

- How is LNG traded?
- Price Drivers
- Shipping Terminology

## Simple LNG Arbitrage

- Fixed price arbitrage
- · Chartering a vessel
- The impact of FX
- Trading Simulation

## **Floating Prices**

• Marker Prices

## **Complex LNG Arbitrage**

- Hedging
- Trading Simulation