ACF Academy
Open Enrollment Programs

Energy and Commodity Derivatives

Development for Finance Professionals™

A Blended-Learning Program from ACF Consultants

Welcome to ACF Academy's Open Enrollment Programs

ACF Consultants have a solid reputation for delivering innovative, top-quality training for some of the largest and most demanding financial institutions in the world. ACF Consultants are global leaders in the creation of cutting-edge financial simulations and interactive eLearning for the global financial markets.

We are the first premier financial training company to offer open seminars using our uniquely blended learning techniques.

Blended learning is a fundamental principle of the ACF approach to training. Our seminars offer a fully integrated, multi-faceted learning experience which ensures that knowledge is applied in practice and retained effectively. We limit the numbers attending each program to maximise the benefit for each delegate. Passive learning is kept to a minimum, and the emphasis is on delegates achieving a true understanding of the key concepts, and how they are applied in the real world.

Blended Learning

Blended learning is at the heart of our training philosophy. A dynamic blend of highly interactive **eLearning** using Acumen, top quality **instructor-led training**, and realistic and exciting **simulations** creates the most effective and motivating training methodology available anywhere.

Firm foundations are laid with highly interactive eLearning and dynamic instructor-led training. Hands-on workshops and simulation are then used throughout the programs allowing delegates to put theory into immediate and realistic practice.

Instructor Led Training

Our instructor-led training is of the highest quality, and we invest heavily in research and development. Our professional written materials complement trainers with first-rate communications skills, an excellent academic background and sound markets knowledge.

Our expert instructors are skilled in the art of transferring knowledge, and we make use of a variety of creative training techniques to maintain energy and focus.

We are committed to achieving exceptional results.

Energy and Commodity Derivatives

The principal objectives of this intensive three-day seminar are to:

- Give participants a clear understanding of energy and commodity derivatives
- Ensure delegates have an **intuitive understanding** of **forward curves**, and how they influence the **pricing** of energy and commodity derivatives
- Clarify the meaning of **volatility** and how it affects option prices
- **Contrast energy and commodity derivatives** markets with **financial derivatives**
- Demonstrate the **practical applications** of derivatives and their use by clients
- Consider the **needs** and perspectives of **clients**
- Promote **pro-active** and **innovative strategies** using energy and commodity derivative products that add **real value**
- **Consolidate** the learning experience by giving delegates **hands-on experience** of energy and commodity derivatives and their use in various structures

Hot Topic Opportunities and risks in an environment of volatile prices.

After attending this programme, delegates will:

- gain a clear appreciation of the range of energy and commodity derivatives
- understand how these derivatives are priced
- appreciate how to apply these products for the benefit of clients
- identify risks and understand how to manage them

Course Outline

Day One

The first day of the program covers delta-one commodity products like forwards, futures, and swaps. At the end, we will lay the foundations of options in preparation for the second day.

Introduction

- The energy and commodity markets
- Supply and demand in the markets
- Oil, Gas, and Electricity markets
- Commodity markets
- Types of transaction
- Comparison with financial markets
- Dynamics of trading in the energy and commodity markets

Forward Pricing and the Forward Curve

- Time, cash, and energy flow diagrams
- Link between spot and forward prices
- Arbitrage-free pricing
- The forward price curve

- Contango and backwardation
- Seasonality
- Energy and commodity price curves
- Theory vs. practice in the markets
- Supply and demand
- The convenience yield
- Cost and risk adjustments to spot prices
- Constructing a forward price curve

Energy and Commodity Futures

- Contract definitions
- Examples of futures prices
- Trading features
- Standardisation of contracts
- Physical delivery vs. cash settlement
- Margins
- Advantages and uses for futures
- Hedging
- Basis and convergence
- Using energy futures to hedge

Swaps

- Definitions and terminology
- Cash flows and timings for swaps
- Quotation conventions
- Indexing the floating rate
- Energy swap applications
- Fixed-floating swaps
- Basis swaps
- Multi-fuel swaps
- Swing swaps
- Spread swaps
- Embedded swaps
- Hedging with energy swaps
- Swap pricing principles
- Valuing the fixed and indexed legs
- Determining the fair swap price
- Swap prices and the forward curve
- Pricing off-market swaps
- Cancelling or reversing a swap
- Releasing value from existing trades
- Swap pricing workshop

Principles and Characteristics of Options

- Introduction to options
- Options definitions and terminology
- Calls and puts; buying and selling
- American vs. European style
- In-, at-, and out-of-the-money
- Value and profit profiles
- Intrinsic and time value

- Components of time value
- What the buyer pays for – the true cost of an option
- Profit profiles at maturity
- Profit profiles prior to maturity
- Comparison of OTC vs. exchange-traded products

Day Two

The second day of the program starts by looks at options pricing principles. Delegates then get involved in understanding how options can be combined to produce various structures, and how these structures can be used to create effective hedging programs. In the final section, we will explain swaptions, and how flexibility can be added to a standard swap contract by embedding one or more swaptions.

Options Pricing Principles

- An intuitive insight into option pricing
- Closed-form pricing models
- Binomial pricing models
- Monte Carlo pricing models
- Option pricing workshop
- Put-call parity
- American options and early-exercise
- Volatility – historical, implied experienced
- Volatility and option prices
- Volatility smiles and skews
- Measures of price sensitivity
- Delta – the hedge ratio
- Gamma – the change in delta
- Theta – the decay of time value
- Vega – the sensitivity to volatility
- Greeks workshop

Building Option Portfolios

- Horizontal, vertical, and diagonal spreads
- Straddles and strangles
- Ratio spreads and backspreads
- Strips of options – caps and floors
- Designing your own structure – a fluent transition between payoff diagrams and component parts

Option Strategy and Hedging Structures

- Protective puts & calls / caps & floors
- Price enhancement strategies
- Selling options within a hedging program
- Collars, corridors, and participations
- Reduced-cost and zero-cost structures
- Combining options, futures, and swaps
- Hedging customer energy exposure

Swaptions

- Swaptions – calls and puts
- Combining swaptions with swaps
- Extendable and cancellable swaps
- Embedding swaptions
- Pricing a cancellable swap

Day Three

The final day of the program starts by explaining how options themselves are hedged, and the links between volatility, pricing, risk, and profitability. Delegates then look at practical trading strategies, and the dynamics of the energy options market. Next, we review second-generation options, concentrating especially on those which can be used to create practical real-world solutions for clients wishing to hedge their energy exposures more effectively.

The last afternoon is then devoted to an intensive session where delegates, working in teams, are required to identify, measure, and analyse the energy risks of a specific client, assess the client's needs, design innovative and value-added solutions to meet those needs, and then make their pitch for the client's business in competition with other teams. This last session will combine all the important learning points, and provide a link with the practical problems faced by clients.

Delta Hedging

- How delta-hedging works
- Buying high and selling low to achieve delta-neutrality
- The link between delta and gamma
- The cost of being negative gamma
- The benefit of being positive theta
- Gamma and theta as mirror-images
- The trade-off between implied volatility and experienced volatility
- How traders price and trade vol
- The link between theta and vega
- Gamma hedging

Trading Strategies with Options

- Directional vs. Volatility trading
- Choice of option
- Options vs. Cash
- Energy option trading simulation

Second-Generation Options

- Introduction to exotic options
- A taxonomy of exotics
- Path-dependent options
- Options with step-like (singular) payouts
- Everyday exotics: barriers and digitals
- Other exotics: compound, average rate and average strike, lookback, chooser, contingent, forward-start, correlation products
- Exotic option workshop

Adding Value for Clients – Energy Derivatives Strategies that Work

- Identifying and quantifying energy risk
- Spotting opportunities
- Establishing client objectives – what does the client really want?
- Determining client preferences, pain thresholds, and view
- Tailoring the structure to match the need
- Designing innovative and pro-active solutions
- Cross-product ideas
- Communicating with the client

Energy risk hedging case

NB All practical sessions are highlighted like this:

means a Workshop or Simulation

means a Case study

Energy and Commodity Derivatives

www.ACFacademy.com

Registration Form

Fax to: +44 (20) 7491 3386 *or* +1 (212) 422 4640

Contact Information:

eMail: ACFacademy@acfconsultants.com
Tel: +44 (20) 7518 9830 + 1 (212) 422-4320
Fax: +44 (20) 7491 3386 + 1 (212) 422-4640

If you are interested in any financial training seminars, please visit our website(s) at:

www.acfacademy.com
www.acfconsultants.com

Accreditation: ACF Consultants Ltd is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors.

State Boards of Accountancy have final authority on the acceptance of individual courses for CPE Credit.

Complaints regarding registered sponsors may be addressed to the National Registry of CPE Sponsors, 150 Fourth Avenue North, Suite 700, Nashville, TN 37219-2417. Website: www.nasba.org.

Fees: The fee for each seminar is per participant, inclusive of refreshments, lunches and seminar materials.

Course fees do not include applicable tax, transportation, or hotel accommodation, unless otherwise indicated.

Preferential rates may be available; please mention our seminar when booking with the hotel.

Payment must be received in full at least 30 days prior to the start of the seminar.

Special prices
(participants are only eligible for one of the following):

- 5% reduction when an individual registers 60 days or more prior to the commencement of a seminar
- 10% reduction when 2 or more individuals from an organization register for the same seminar
- 10% reduction when an individual registers for more than one seminar at a time

Cancellation Policy:
Cancellations may be made up to 30 days in advance of the seminar, after which date refunds cannot be given.

Notification must be received in writing by letter, fax, or email. In the event of a participant not being able to attend, a substitution may be made at no extra cost. We reserve the right to amend the prices, or cancel a seminar at any time.

Refund Policy: For further information on our refund and complaint policy, please contact us.

I WISH TO ATTEND THE FOLLOWING PROGRAM

O London O Chicago
O New York O Toronto

Dates: ____________________

Course Schedule - Classes run from 9am - 5pm. Lunch, and morning and afternoon refreshments are provided daily. Venue details will be provided on receipt of registration form.

HOW DID YOUR HEAR ABOUT THE PROGRAM?

o Colleague o Client's Company o Email o Google
o ACF's Event o ACF's Rep o ACFacademy.com
o NASBA o Advertising o Financial Times

DELEGATE DETAILS

Name:
Title:
Department:
Company:
Address:
City: State/County: Zip/Postcode:
Country:
Telephone: Fax:
E-mail:

ADDITIONAL DELEGATE DETAILS

Name:
Title:
Department:
Company:
Address:
City: State/County: Zip/Postcode:
Country:

PAYMENT DETAILS

Payment Method: O VISA O Master Card O Invoice me at the address listed above

Card #: ____________________ Expiration: __________
CVC: __________

Cardholder Name: ____________________

Signature: ______________________________
(signature required)

ACF