

# *Oil and Gas Training 2010*



## *Oil, gas and energy industry general portfolio*



# Oil and gas industry fundamentals

2-4 March 2010, London, UK



El member £1,880.00 inc VAT Non-member £2115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

This course comprehensively covers the oil and gas supply chains from exploration through field development, valuation and risk, production, transportation, processing and refining, marketing, contracts, trading, retailing, logistics, emerging markets and competition with alternative energies. As such, it provides understanding and insight to the processes, drivers, threats and opportunities associated with the core industry activities.

The course will benefit personnel from a range of technical, non-technical and commercial backgrounds with varying levels of experience. For example, new industry entrants and those with expertise in one area wishing to gain a broader perspective of all industry sectors will be provided with a concise knowledge base.

It also provides a valuable industry overview for those employed by financial, commercial, legal, insurance, governmental, service, supply and advisory organisations who require an informed introduction to the economic and commercial background and general trends within the oil and gas industry.

Participants will gain an appreciation of the principal activities in the international upstream and downstream petroleum industry and an understanding of how these inter-relate, as well as an awareness of the impact of external influences and the ways in which the industry is adapting to increase its competitiveness and to meet new challenges.

## The 3-day intensive course will cover:

### Day one

- Descriptions of the distinct oil and gas supply chains
- Origin and distribution of oil and gas
- Upstream production, reserves and price trends
- Petroleum product consumption trends
- Supply, demand licensing and bidding
- Seismic and drilling technologies
- Applying exploration and production technologies
- Sub-surface and above-ground risks and opportunities
- Economic evaluation of field developments
- Project planning and managing field developments
- Upstream fiscal terms, contractual and project finance
- Costs, timing, efficiency and benchmarking the industry

### Day two

- Natural gas: pipelines, storage, LNG and GTL
- Global gas trading, gas-to-power, co-generation and CHP
- Gas supply contracts, distribution networks and liberalised markets
- Range of crude oil compositions and evolving product barrel

- Basic processes of refining and product outputs
- Refinery management and optimisation operations
- Refinery economics, gross product worth, net profit margins
- Pipelines, marine transportation and costs (worldscale)
- Petrochemical industries – trends and forecasts
- Syncrudes and heavy oil technologies and economics

### Day three

- Physical oil markets and crude pricing
- The major oil and gas markets and trade movements
- Oil trading and supply operations
- Price exposure: the need to hedge
- Trading instruments: forwards, futures and swaps
- Product marketing and distribution logistics
- Wholesale, aviation, marine and LPG markets
- Retailing fuel: competitive techniques and market trends
- Evolution of C-stores and unmanned forecourts
- Renewables and alternative energies: threats or opportunities?

## Who should attend?

- Those seeking a broader knowledge of the oil, gas and energy industry and markets
- New recruits to oil, gas and energy companies
- Analysts, planners, traders, sales, marketing, engineering, refining, communications and commercial personnel
- Those requiring an understanding of the oil, gas and energy value chain
- Bankers and lawyers supporting the industry, together with management consultants providing services to oil, gas and energy companies
- Ministerial, governmental, industry bodies and development agency staff

## Delegates will:

- Identify where petroleum comes from and how and where it accumulates.
- Understand exploration and production techniques and their associated risks.
- Gain insight to petroleum economic, fiscal and project planning issues.
- Become aware of development, transport and market options for oil and gas.
- Recognise the ability of refining processes to balance product market demand.
- Perceive the importance of the trading, hedging and retailing functions to modern, integrated oil and gas companies.
- Be able to evaluate the threats and opportunities offered by non-conventional petroleum sources and alternative fuels.



# Acquiring and divesting oil and gas assets and companies

9-11 March, 1-3 November 2010, London, UK

El member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute



Access to quality international producing assets and reserves combined with infrastructure synergies, economies of scale and rapid growth potential are the key factors driving companies towards acquisitions and mergers. On the other hand portfolio rationalisation, lack of materiality and harvesting value in times of volatile commodity prices drives companies to divest assets and, in some cases, seek mergers. Whether a buyer or seller the mergers, acquisition and divestment (MA&D) process in the oil and gas industry requires careful management and a structured approach if values are to be maximised and deals completed in an efficient manner and timeframe. When conducted competently MA&D can help to promote investor confidence, growth, returns and operating efficiency in difficult and uncertain markets.

Competition for funding, cost of capital and stock market multiples in the past decade have prompted a trend towards major companies merging to remain competitive on a global scale. There have been winners and losers in this trend, and the stakes remain high for conducting MA&D effectively. Historical trends in oil and gas industry specific key performance indicators (KPIs) reveal those companies likely to prosper and those likely to become targets for acquisition. Successful companies have KPI trends that demonstrate their ability to divest of non-core assets and to concentrate on areas of core expertise based on technical, commercial and geographic focus.

This course develops the theme of optimising corporate and portfolio value focusing on the role of business development in ensuring long-term growth and improved returns through mergers and acquisitions. It concentrates on process and the recognition of the factors driving companies to merge, acquire and divest assets and the use of core competencies and asset base to provide competitive advantages. The principles, skills and techniques required for successful MA&D activity apply to both large and small companies.

## Topics covered include:

### Day one – MA&D drivers and industry performance

- Factors driving oil and gas companies to merge, acquire and divest
- Key performance indicators and benchmarking relevant to MA&D
- Exercise: evaluation of key performance indicators
- Historical performance of oil and gas sectors
- Generic strategies complemented by acquisition and divestment
- Identifying and exploiting synergies
- Case studies: mergers of major oil and gas companies
- Case studies: acquisitions and divestments that have failed
- Transition phase of ownership and control following an acquisition
- Human resource issues require careful planning
- Review criteria for success in MA&D activity

### Day two – Structured approach to acquisition and divestment process

- Asset evaluation process – fair market value concept
- Recognising and accounting for risk and opportunity
- Exercise: competitive bidding
- Data rooms and due diligence
- Reserves audits and valuations associated with upstream deals
- Formulating proposals: offers and counter-offers

- Letters of intent confirming agreement subject to conditions
- Sale and purchase agreements – key issues
- Conditions precedent, representations and warranties
- Effective dates and their significance
- Identifying and addressing trailing liabilities
- Exercise: SWOT analysis of MA&D candidates
- Independent engineering, environmental, safety (etc) audits
- Completion of agreement – what this usually entails
- Portfolio approach to MA&D evaluation and selection
- Structuring divestment programmes

### Day three – Strategic, financial and payment issues

- Competitive bidding theory and practice
- Case study: Libya bidding rounds of 2005
- Leveraging acquisition values using debt
- Project financing acquisitions
- Integrating tax pools and exploiting tax positions
- Financial management and structure of mergers and acquisitions
- Exercise: structuring takeover terms
- Valuation of long-life assets
- Limitations of discounted cash flow techniques
- Effective use of options and deferred payments
- Exercise: evaluation of acquisition alternatives
- Pitfalls in MA&D process

## Who should attend?

This course is designed for a multi-disciplined audience from commercial, technical, corporate, human resources, planning, portfolio, financial, legal and risk management backgrounds.

Course content addresses issues and skills relevant to professionals and support staff involved in mergers, acquisitions and divestment activities from across the industry. This would include, but not be limited to: acquisition advisers, asset managers, bankers, buyers, economists, engineers, geologists, financiers, insurers, investors, lawyers, negotiators, planners, portfolio managers, and risk analysts.

# Practical Workshop: Building Excel Models of Oil and Gas Fiscal Terms

13–15 April 2010, London, UK



El member £1,600.00 (£1,880.00 inc VAT) Non-member £1,800.00 (£2,115.00 inc VAT)\*

\*includes complimentary Affiliate membership to the Energy Institute

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A key task for oil and gas organisations working with upstream assets is to be able to understand and model the economic implications of varying fiscal terms on their projects. Proprietary software designed to analyse fiscal terms has many short-comings in this regard (e.g. black-box methodology and the need for expensive specialist software engineers to modify / update it). Most analysts need from time to time to build, and rapidly modify, their own models to facilitate detailed analysis. Excel offers the ideal platform for such work with its transparent and highly flexible functions, supplemented by excellent graphics and visual basic (VBA) macro options.

This course offers hands-on instruction for building, developing and applying spreadsheet models to analyse the economic performance of upstream fiscal terms. It is built around a series of workbook modules compatible with Excel 2007 and 2003 versions. **Delegates are required to bring their own laptop computers loaded with a functioning version of Excel 2003 or 2007 for use during the course.**

Delegates are not confronted with one large complex model that is difficult to interpret and audit. Rather they are provided daily with a number of workbooks to load, evaluate and develop through structured exercises into increasingly sophisticated models. Some basic knowledge of operating Excel software is required, but detailed expertise is not essential, as the workbooks provided are concise, user-friendly and structured to explain their objectives in easy-to-follow steps. The emphasis of the workshop is on providing insight to fiscal analysis rather than developing advanced spreadsheet skills, but both should be part of the learning outcomes.

The course is broken down into approximately **one-quarter theoretical instruction and three-quarters practical hands-on facilitated spreadsheet model development.** Brief PowerPoint presentations are delivered to review the key fiscal elements involved in a wide range of upstream fiscal designs. The presentations provide delegates with useful insight into how upstream fiscal systems are structured. They address mineral interest (tax and royalty) and production sharing systems and the common components used in those alternatives around the world, including R-factors, rates of return and a range of depreciation methods. Investment yardsticks are developed in some workbooks to analyse fiscal performance. These include the discounted cash-flow metrics of net present value, rates of return, profit / investment ratios, payback time and financial exposure measures.

The models are developed from the perspective of investing companies and the government's (i.e. total government take and partial government take, e.g. state-owned company positions). Concepts of state-take percentages of revenues and cash-flows are developed. Some models address the issues of inflation and buying-power valuation and explain in simple terms how nominal (money-of-the-day) and real values are derived and their significance.

The workbook modules introduce the delegates to some powerful graphics' techniques and illustrate how visual basic (VBA) macros can greatly enhance the speed and power of many fiscal models. These enable wide-ranging sensitivity analysis to be conducted and displayed rapidly.

Many companies make extensive use of proprietary economic modelling software, often requiring macros to be built to evaluate case-specific problems. In such cases, even though spreadsheets may not be used routinely, it is of enormous benefit for analysts and decision-makers to understand how such models can be built, developed and manipulated on a spreadsheet platform. Spreadsheets in conjunction with built-in functions, add-ins and VBA macros provide an extremely powerful platform for such analysis. The course practical sessions will demonstrate how such features can be simply and effectively harnessed to build quite sophisticated, but highly functional, analytical models.

**The training materials provided to delegates for this course are all in digital formats.** The course workbooks should arm the delegates with easy-to-adapt tools for building their own fiscal models.

## Detailed content covered by course

### Day one – Key Features of Upstream Licence Agreements

- Common Types of Upstream Fiscal Design
- Contracts versus Licences and Licence Agreement
- Division of Economic Rent
- Royalty, Production Taxes and Income Taxes
- Progressive and Regressive Fiscal Elements
- Time Value, Discounting and Depreciation
- Economic Performance Measurements and Yardsticks
- Net Present Value (NPV) and Mid-year Discounting
- Investor's Rate of Return (IRR) and Payback
- Production Sharing Agreements and Contracts (PSA or PSC)
- Cost Recovery Allocations: Cost Oil and Cost Gas
- Profit Oil and Gas
- Revenue Split Flow Diagrams to Illustrate Fiscal Design
- Splitting the Proceeds of One Production Unit

### Day two – Components of Multi-year Spreadsheet Fiscal Models

- Multi-year Production Sharing Contract Cash Flow Models
- Switching Production Data Profiles for Analysis Using CHOOSE Function
- Programming and Display Styles: Named Ranges Versus Nested IFs
- Gross and Net (of cost) Tax Bases
- Royalties and Their Regressive Nature
- Minor Fiscal Terms: Bonuses and Rentals
- Establishing Economic Limits and Field Shutdown / Abandonment Logic

- Fiscal Terms Driven By Production, Reserves and Economic Yardsticks
- Sliding Scales Using Simple and Compound VLOOKUP Function
- Annotating Dynamic Graphics driven by Spinners
- Inflation, Money of the Day versus Real Terms
- Issues Associated with Fiscal and Contractual Stability

### Day three – Models to Interrogate Fiscal Performance and Risk

- Sensitivity Analysis Using Multipliers Driven by Spinners
- Using Solver and Goal Seek Excel Functions for Break-even Analysis
- Detailed Sensitivity Analysis Using VBA Macro
- Risk Analysis of Project Cash Flows
- Probabilistic Analysis
- Expected Value (EV) and Expected Monetary Value (EMV)
- Farm-out Analysis Using a Decision Tree
- Tax Floors and Ceilings
- Income Taxes, Carry-forward Losses and Time Limits on Tax Allowances
- Debt Supported Cash Flows
- Developing VBA Macros for Scenario Analysis

## Who should attend this course?

This course is suitable for commercial, technical and financial analysts, tax accountants, economists, bankers, planners, lawyers and others working in the upstream oil and gas industry wishing to develop fiscal analysis skills using Excel spreadsheets to evaluate oil and natural gas projects. The material is designed to illustrate perspectives of oil and gas companies, governments, state-owned oil companies and those providing financial services to the industry.

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# Exploration and production for oil and gas: technical and commercial approaches

20–22 April 2010, London, UK



El member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

The continued evolution of exploration and production technologies helps to decrease risk, reduce costs and enhance commerciality of operations in challenging environments. The E&P industry continues to confront the difficulties of the depletion of existing reserves and the finding and development of new, material volumes of commercial reserves that can satisfy rapidly growing global demands for oil, petroleum products and gas.

In high, but volatile oil and gas price environments, the new technologies play vital roles in constraining costs and enhancing recovery. They ensure the long-term viability of many projects. Knowledge of these technologies and their commercial implications is important not only for the technical teams but also for the managers, economists and decision-makers that are involved in deploying and investing in them.

This course familiarises delegates, avoiding jargon and corporate bias, with the evolution and recent developments in a wide range of upstream technologies. It also identifies from commercial and risk perspectives the respective strengths and weaknesses of the technologies currently in use.

## Topics covered include:

### Day one – Exploration prior to drilling

- Reserves depletion and the future of exploration and production
- Basin modelling to predict prospective areas
- Sub-surface characteristics of oil and gas fields
- Reconnaissance with magnetic and gravity surveys
- Remote sensing and geochemical surveys
- Seismic methods to define prospect location and geometry
- Advantages of 3D seismic technologies
- Direct hydrocarbon indications from seismic data
- 4C seismic exploits shear waves to extract detail
- Seismic visualisation and 3D immersive environments
- Petroleum reservoir characterisation
- Managing and integrating subsurface data sets
- Exploiting cost-effective technologies

### Day two – Exploration and development drilling

- Drilling techniques, equipment and types of wells drilled
- Types of drilling rig and their uses
- Mud systems and drilling bits
- Downhole casing, tubing and expandable tubulars
- Deviated drilling: geo-steering and bio-steering
- Side-tracking wells and under-balanced drilling
- Coiled tubing and multi-lateral drilling

- Deep water drilling and sub-sea technologies
- Measurement while drilling (MWD)
- Seismic techniques to see ahead of the bit
- Wireline logging and formation testing
- Roles of contractors, suppliers and materials procurement
- Incentivised drilling contracts and alliances to share risk
- Indicative costs of drilling activities

### Day three – Field development and production

- Development options for oil and gas discoveries
- Licensing, unitisation and fiscal constraints
- Production profiles and definitions of reserves
- Reservoir modelling and simulation
- Project managing field developments and costs
- Processing to deliver sales quality oil and gas
- Artificial lift, pumping options and well completions
- Optimising oil and gas production from field facilities
- Offshore and integrated sub-sea technologies
- Floating production systems
- Reservoir pressure maintenance and secondary recovery
- Reservoir stimulation and enhanced recovery techniques
- Pipeline design, construction and operation
- Safety and environmental issues
- Enhancing commerciality of marginal fields
- Decommissioning issues and technologies



## Who should attend?

*This course is designed for a multi-disciplined audience from technical, project, operations and commercial sectors of the oil and gas industry, including both professional and support staff. The skills and industry insight provided are also of value to corporate staff involved in exploration and production.*

## Attendees would include:

- Upstream professionals, including engineers, geoscientists and planners.
- Managers, supervisors and project team members involved in planning, implementing, supervising and directing E&P projects.
- Corporate and asset managers of E&P activities.

# Oil and gas industry fundamentals

18–21 May, 22–25 November 2010, London, UK



El member £2,585.00 inc VAT Non-member £2,820.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

This 4-day course comprehensively covers the oil and gas supply chains from exploration through field development, valuation and risk, production, transportation, processing and refining, marketing, contracts, trading, retailing, logistics, emerging markets and competition with alternative energies. As such, it provides understanding and insight to the processes, drivers, threats and opportunities associated with the core industry activities.

The course will benefit personnel from a range of technical, non-technical and commercial backgrounds with varying levels of experience. For example, new industry entrants and those with expertise in one area wishing to gain a broader perspective of all industry sectors will be provided with a concise knowledge base.

It also provides a valuable industry overview for those employed by financial, commercial, legal, insurance, governmental, service, supply and advisory organisations who require an informed introduction to the economic and commercial background and general trends within the oil and gas industry.

Participants will gain an appreciation of the principal activities in the international upstream and downstream petroleum industry and an understanding of how these inter-relate, as well as an awareness of the impact of external influences and the ways in which the industry is adapting to increase its competitiveness and to meet new challenges.

## Topics covered include:

- Descriptions of the distinct oil and gas supply chains
- Origin and distribution of oil and gas
- Upstream production, reserves and price trends
- Petroleum product consumption trends
- Supply, demand, licensing and bidding
- Seismic and drilling technologies
- Applying exploration and production technologies
- Sub-surface and above-ground risks and opportunities
- Economic evaluation of field developments
- Project planning and managing field developments
- Upstream fiscal terms, contractual and project finance
- Costs, timing, efficiency and benchmarking the industry
- Natural gas: pipelines, storage, LNG and GTL
- Global gas trading, gas-to-power, co-generation and CHP
- Gas supply contracts, distribution networks and liberalised markets
- Range of crude oil compositions and evolving product barrel
- Basic processes of refining and product outputs
- Refinery management and optimisation operations
- Refinery economics, gross product worth, net profit margins
- Pipelines, marine transportation and costs (Worldscale)
- Petrochemical industries – trends and forecasts
- Syncrudes and heavy oil technologies and economics
- Physical oil markets and crude pricing
- The major oil and gas markets and trade movements
- Oil trading and supply operations
- Price exposure: the need to hedge
- Trading instruments: forwards, futures and swaps
- Product marketing and distribution logistics
- Wholesale, aviation, marine and LPG markets
- Retailing fuel: competitive techniques and market trends
- Evolution of C-stores and unmanned forecourts
- Renewables and alternative energies: threats or opportunities?

## Who should attend?

- Those seeking a broader knowledge of the oil, gas and energy industry and markets
- New recruits to oil, gas and energy companies
- Analysts, planners, traders, sales, marketing, engineering, refining, communications and commercial personnel
- Those requiring an understanding of the oil, gas and energy value chain
- Bankers and lawyers supporting the industry, together with management consultants providing services to oil, gas and energy companies
- Ministerial, governmental, industry bodies and development agency staff

## Delegates will:

- Identify where petroleum comes from and how and where it accumulates.
- Understand exploration and production techniques and their associated risks.
- Gain insight to petroleum economic, fiscal and project planning issues.
- Become aware of development, transport and market options for oil and gas.
- Recognise the ability of refining processes to balance product market demand.
- Perceive the importance of the trading, hedging and retailing functions to modern, integrated oil and gas companies.
- Be able to evaluate the threats and opportunities offered by non-conventional petroleum sources and alternative fuels.



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Successful oil and gas companies constantly review, value and risk their assets with a view to optimising the overall performance of their asset portfolio. This activity requires a strategic approach to managing uncertainty, exploiting synergies and ensuring they maintain a balanced and diversified mix of assets.

Modern portfolio techniques involve the construction of sophisticated models to value risk and characterise alternative combinations of assets. Such models can provide a range of graphical displays to aid decision-making, such as feasible envelopes and efficient frontiers defined in terms of financial and non-financial metrics over defined planning horizons. However, in order to use such techniques effectively it is important to understand their theoretical basis and practical consequences. Many companies still fail to apply portfolio optimisation techniques objectively, due to poorly constructed models, lack of understanding of potential asset interactions and a range of human and corporate organisational issues.

Using portfolio management techniques to make successful decisions can only be achieved with confidence if comprehensive technical, financial and risk assessment and ranking of the individual assets are involved.

This course addresses portfolio management from theoretical and practical perspectives applicable to assets from along the oil and gas supply chain. Exercises concentrate mainly on upstream asset portfolios, but do address the involvement of mid-stream and downstream assets and other non-petroleum energy assets in the context of balanced portfolios. Course materials include presentations, exercises and discussions facilitating delegate participation. The course information should help delegates to identify and select appropriate portfolio management techniques to suit their particular mix of assets.

## Course content:

### Day one – Asset portfolios require operational and strategic management

- Need for a portfolio approach
- Portfolio characterisation
- Strategic dimension to portfolio management
- Portfolio planning and rationalisation
- Capital allocation issues for asset portfolios
- Background to modern portfolio theory
- Rationalising exploration and production portfolios
- Winning portfolio combinations
- Organisational structures and corporate styles

### Day two – Asset portfolio analytical techniques and tools

- Selecting assets to fit with an existing portfolio
- Portfolio approach to implementing a quantified strategy
- Portfolio risk and probability of achieving key strategic targets
- Setting portfolio development objectives
- Strategic performance and implementation
- Case studies of optimising asset portfolios
- Filtering assets for portfolio selection
- Portfolio optimisation techniques
- Rank and cut, simplex and genetic optimisers

### Day three – Methodology and analysis for asset portfolio optimisation

- Competitive bidding theory versus practice
- Risk analysis, probabilities and expected values
- Portfolio management case study: a national oil company

- Rationalising an asset portfolio aided by simulation models
- Simulation analysis of a hypothetical portfolio of E&P assets
- Combining simulation, optimisation and risk and strategy analysis
- Portfolio approach to acquisition and divestment decisions
- Portfolio challenges and pitfalls to mergers and acquisitions
- Portfolio management case study: independent company

### Day four – integrating portfolio valuation, risk and the human dimension

- Key portfolio roles for estimating and forecasting
- Portfolio analysis tools: software options
- Contrasting the spectrum of possible oil and gas portfolios
- Qualitative value and risk assessment of third-party portfolios
- Analysing portfolio strategies from published reports
- Benchmarking portfolio performance
- Human factors: overcoming resistance to portfolio management
- Taking a global perspective to oil and gas portfolios
- Challenges to successful portfolio management
- Utilising efficient frontiers to guide portfolio decisions

### Who should attend?

*This course is designed for a multi-disciplined professional audience drawn from portfolio, economic analysis, strategic planning, corporate, fiscal, financial and business development divisions of oil and gas companies, institutions financing such companies, and analysts of the oil and gas sector. The skills and industry insight provided by the course will be of value to corporate, portfolio and asset-based decision-makers.*

### Attendees should include:

*Economic, technical and strategic analysts and managers involved in portfolio management; corporate and asset team members involved in acquisitions; disposals and optimisation of oil and gas*



# Excel Analysis of Oil, Gas and Power Supply Chains

14–17 June 2010, London, UK



El member £2,585.00 inc VAT Non-member £2,820.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

This course provides hands-on instruction for building, developing and applying spreadsheet economics, risk, finance and decision evaluation models to a range of projects from the oil, natural gas and power supply chains. The course is built around a series of workbook modules compatible with Excel 2007 and 2003 versions. **Delegates are required to bring their own laptop computers loaded with a functioning version of Excel 2003 or 2007 for use during the course.** Delegates are provided with a number of spreadsheet workbooks to load and then evaluate with structured exercises. Some basic knowledge of operating Excel software is required, but detailed computer modelling expertise is not essential. The emphasis is on fit-for-purpose gas industry model applications rather than developing spreadsheet skills, but both should be part of the learning outcomes.

The course is broken down into approximately **one-quarter theoretical instruction and three-quarters practical** hands-on facilitated spreadsheet model evaluation. Brief PowerPoint presentations are delivered to review the industry topics covered and these will lead swiftly into the practical sessions. The economic analysis theory sections also aim to provide insight to the key economic issues impacting the supply chains covered.

Many companies make extensive use of proprietary economic modelling software, often requiring macros to be built to evaluate case-specific problems. In such cases, even though spreadsheets may not be used routinely, it is of enormous benefit for analysts and decision-makers to understand how such models can be built, developed and manipulated on a spreadsheet platform. Spreadsheets in conjunction with built-in functions, add-ins and VBA macros provide an extremely powerful platform for such analysis. The course's practical sessions will demonstrate how such features can be simply and effectively harnessed to build quite sophisticated, but highly functional, analytical models.

Digital copies of all training materials will be provided to delegates.

## Detailed content covered by course

### Day one – Oil and Gas Project Analysis

- Overview of Cash Flow Analysis and Discounting Techniques
- Cash Flow Model For Oil and Gas Exploration, Development and Production
- Fiscal Models for Tax and Royalty and Production Sharing Terms
- Excel's VLOOKUP Function Aids Models with Sliding Scales
- Rate Building Models (Tariff Calculations) for Midstream Infrastructure
- Levelized and Rolled-in Tariffs

### Day two – Pricing Issues and Sensitivity and Scenario Analysis

- Inflation, Money of the Day versus Real Terms
- Selecting Alternative Multi-year Pricing Profiles
- Excel's Spinners and Choose Function
- Netback Pricing Models
- Establishing Break-even Prices
- Using Excel's Solver and Goal Seek Functions
- Requirements for Sensitivity and Scenario Analysis
- VBA Macros: Powerful Dimension to Excel's Sensitivity and Scenario Analysis
- Cost and Revenue Components For Constructing a Gas Liquefaction Plant
- LNG Shipping and Netback Price Model
- Risk Analysis, Probabilities and Expected Monetary Values

### Day three – Decision Trees and Simulation

- Building Oil and Gas Production Profiles Using Decline Equations
- Building Cost Escalation Using growth Equations
- Decision Trees and their Application
- Dynamic Graphics with Updating Labels Driven by Spinners
- Monte Carlo Simulation Method and input Distributions
- Statistical Analysis of Simulation Outputs
- Refinery Economics: Gross Product Worth (GPW) and Margin Analysis

### Day four – Power Generation, Debt Finance and Hedging

- Cash flow Model for Combined Cycle Gas Turbines (CCGT)
- Cash flow Model for Coal-fired Power Plant
- Carbon Capture and Sequestration (CCS) Models
- Cash flow Model for Full-cycle Nuclear Power Plant
- Cash flow Model for Offshore Wind Farm
- Debt Financing Upstream Oil and Gas Projects
- Evaluating Hedging Alternatives
- Profit and Loss Model for Futures Swaps and Options

## Who should attend this course?

Commercial, technical and financial analysts, economists, planners and decision makers plus others working in the oil, gas and power industry wishing to develop practical economic analytical skills using spreadsheets to evaluate natural gas projects.

For more information please contact Nick Wilkinson  
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[www.argusmediagroup.com](http://www.argusmediagroup.com)

# Negotiating techniques and strategies for the oil and gas industry

21-23 June 2010, London, UK

El member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

Everyone needs to negotiate in a professional context as well as in everyday life. Generic negotiating techniques provide valuable persuasive communications skills which can be widely applied and contribute to achieving effective and workable solutions and deals in complex circumstances. However, understanding how and why specific negotiation techniques and strategies are used in specific segments of an industry provides the added insight that enables negotiations to be managed in a more structured and meaningful way, often leading to better outcomes.

This course aims to provide such industry insight by combining detailed knowledge of negotiating situations that commonly arise at various points along oil and gas supply chains with the most effective negotiating techniques, strategies and tactics applied in such circumstances. The difference between this course and most other negotiations courses is that it is focused on the oil and gas industry and is delivered by practitioners that have diverse experience from across this industry.

Over three days the course covers key negotiation techniques and issues in a sequence of PowerPoint lectures and practical exercises involving group interactions and analysis. Delegates will learn about the practical skills required to negotiating successfully and, at the same time, gain some insight into how such skills can be applied within the industry.



## Who should attend?

*This course is designed for a multi-disciplined audience from all sectors of the oil and gas industry, including both professional and support staff. Individuals from diverse commercial, technical, marketing, corporate, operations, human resources, labour and community relations, HSE, planning, financial, legal and risk management backgrounds could benefit from the content.*

*Course content addresses issues and skills relevant to professionals and support staff working with or negotiating contracts and agreements or working in project teams from across the industry. This would include, but not be limited to: asset managers, bankers, buyers, contractors, engineers, geologists, government regulators and representatives, financial controllers, insurers, investors, lawyers, national oil company and ministry personnel, negotiators, planners, portfolio managers, project and operations managers and supervisors, risk analysts, strategists, taxation administrators and advisors, team leaders and traders.*

## Topics covered include:

### Day one

- Generic negotiating skills and preparations for negotiations
- Negotiations in the context of the oil and gas industry
- The need for structured planning and clear communications
- Exercise: group bargaining and compromise in an upstream case
- Harnessing cooperative, adversarial and competitive approaches
- Negotiations and upstream licence agreements
- Empathising with positions of other parties
- Planning negotiations and thinking ahead
- Exercise: negotiating commercial terms of an upstream licence
- Negotiating mergers, acquisition and divestments
- Setting objectives and agendas
- The importance of listening and questioning
- Researching the other parties – identifying their preferences

### Day two

- Strategic approaches and innovative solutions
- Generic negotiating strategies and tactics
- Broadening the solution and enlarging the rewards
- Exercise: negotiating with a disgruntled community
- Negotiating strategies to achieve workable and lasting deals
- Win-win solutions versus zero-sum outcomes
- Zones of possible agreement and bottom lines
- Negotiating joint-venture operating agreements
- Exercise: competitive bidding and EPC contract terms
- Sole risk and non-consent options and dispute resolution
- Procurement and tendering negotiation issues
- Exercise: negotiating terms for a farmout deal
- Recognising and exploiting time pressure in negotiations
- Negotiating power and perceptions of it
- Negotiating with financial institutions to secure debt
- Culture and ritual impact approaches to negotiating

### Day three

- Team versus individual approaches and closing deals
- Team negotiations, team roles and interpersonal behaviour
- Personality types and psychology can guide tactics
- Using body language and other non-verbal indicators
- Exercise: negotiations with work force
- Posturing, manipulation and diverting attention from key issues
- Dealing with late stage surprises
- Risks and opportunities associated with deadlock
- Exercise: negotiating charter terms for transportation
- Dealing with impromptu and telephone negotiations
- Closing deals and recognising how and when to do so
- Exercise: fuel retailer negotiating supply
- Documenting and learning from previous negotiations
- Conducting a negotiations health check

# Financial skills for non-financial managers

5-7 July 2010, London, UK



El member £1,880.00 (inc VAT) Non-member £2,115.00 (inc VAT)\*

\*includes complimentary Affiliate membership to the Energy Institute

## UNDERSTANDING THE KEY NUMBERS AND HELPING TO MAKE BETTER DECISIONS

A highly participative 3-day course which covers the principles, techniques and skills involved in the analysis of financial information in the oil industry, blending a clear theoretical framework with extensive use of real-life examples and case studies.

This course starts with a review of the financial language and the accounting basics, and explains the full scope of how financial analysis and accounting are interrelated. It explores how a clear understanding of the nature of the three cycles of financing, investing and operating a business will help the participants make improvements in their own businesses.

This course is focused on expanding the financial competencies of all staff who have an involvement with financial information so they can contribute to the making of better value-added decisions in their companies. The competencies emphasised include the necessary basic financial and accounting knowledge, the analytical skills needed to review financial information, and the ability to ask pertinent questions and then make good recommendations on the basis of the data analysed.

Understanding the nature of financial reports and being able to analyse and interpret financial information will offer a new perspective on business operations, which will enable a greater contribution to the success of the business as a whole.

### Course objectives

- Acquire an understanding of the fundamentals of financial information and the skills needed to use such information in order to help in the making of better value-added decisions
- Develop practical experience of how to apply financial skills in order to facilitate such value-added delivery in real life
- Raise personal financial skill levels in all four key areas

### Training methodology

There will be a strongly participative, learning-by-doing, style, making extensive use of examples and exercises/short case studies (both numeric/analytical and non-numeric/descriptive) as well as open plenary discussion sessions.

Given the financial nature of the course, and the frequent practical exercises, it is essential that participants are reasonably numerate. Ideally they should also have some prior familiarity with the financial basics (profit and loss accounts, balance sheets, discounted cash flow) – though this is not essential. Participants will make use of calculators, pencils and paper.

The course consists of several modules (see outline below). Each day will comprise several sessions, introducing new material to build on the learning in the previous sessions.

The course manual includes copies of all the slides used, as well as a Glossary of Financial Terms and a short Guide to DCF.

### Who should attend?

- *This course is designed for non-financial personnel who lack an in-depth knowledge of Accounting and Finance, and who need to acquire a broader understanding of these topics to improve their performance in their current role and/or to plan their future career.*
- *Business executives, strategic and business development planners and project managers who wish to refresh their understanding and enhance their skills in Financial Analysis and Decision Making.*



### COURSE OUTLINE – Introduction

- Seminar Objectives and Overview
- Financial Skills: Importance, Framework and Course Focus
- Corporate Framework and Objectives
- The Three Cycles of Business: Financing, Investing and Operating

### PART ONE

The Financial Language and Accounting Basics

- Accounts are not just for Accountants...
- The Fundamental Accounting Principles
- The Three Key Financial Statements
- Differentiating between Cash and Accruals Accounting
- Different Profit Measures
- The Structure of the Balance Sheet
- Basic Cash Flow Statements
- Impact of Working Capital on Cash Flow
- Accounting Exercises
- ROACE: A Measure for Everyone
- The SFS (Standard Financial Summary)
- The Impact of Inflation on Financial Performance: Case Study

### PART TWO – The Financial Statements and Financial Analysis

- The key elements of published reports and accounts
- Ratio Analysis
- Profitability and Liquidity ratios
- Disaggregating ROACE
- The Cash Conversion Cycle
- KPIs and WYMIWYG
- Ratio Exercises
- Consolidation
- Financial Benchmarking

### PART THREE – Planning, Budgeting and Cost Analysis

- The Value Model
- Planning
- The Cost of Capital
- The Time Value of Money/DCF Basics

- DCF Exercises
- Budgets and Plans
- Budgeting Approaches
- Budget Variance Analysis
- Cost Behaviour and Allocations
- Value-based Cost Analysis
- Operational Benchmarking

### PART FOUR – Analysis of Capital Investment Decisions

- What is Capital Investment
- Standard Evaluation Methodology
- The 4 Key Economic Indicators
- Defining the Right Base Case
- DCF Mini Case Studies
- Risk Management
- Sensitivity Analysis
- Alternative Evaluation Methods
- Acquisitions
- Acquisition Case Study
- The Drivers of Value
- Getting Approval

### PART FIVE – Analysis of Working Capital Decisions

- Optimise not Minimise
- Gross Working Capital Concept
- Key Issues and KPIs: Debtors, Creditors, Stocks
- The Cost of Working Capital
- The Working Capital Toolkit
- Working Capital Toolkit Exercises
- Credit Risk Management
- Settlement Options

### FINAL SESSION

- Course Summary and Checklists
- Financial Skills: Further Development
- Course Review: Feedback and Actions

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[www.argusmediagroup.com](http://www.argusmediagroup.com)

# Project and operations management along oil and gas supply chains

13–15 September 2010, London, UK

EI member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute



Project management plays a major role in many industries, not just in field operations and facility developments, but also in the corporate realm of mergers, acquisitions and re-organisations.

Key project and operations management and problem solving skills and techniques relevant to the oil and gas industry include: planning, estimating, modelling, organising and controlling resources and schedules with a view to optimising project performance and quality. In addition teamwork, motivation, contracts, negotiations, risk management and handling data and documentation are essential requirements for successful projects and operations.

This course focuses on the practical skills and methods needed to improve project and operating performance across the oil and gas industry. The skills taught are both generic and industry specific and can be widely applied at upstream, downstream and corporate levels.

Combining detailed knowledge of projects and operational circumstances that commonly exist at various points along oil and gas supply chains with the best generic skills and techniques provides valuable industry insight. The difference between this course and most other project and operations management courses is that it is focused specifically on the oil and gas industry and is delivered by practitioners that have diverse experience from across this industry.

Over three days the course covers key project and operations' management techniques and issues in a sequence of PowerPoint lectures and practical exercises involving group interactions and analysis. Delegates will learn about the practical skills required to manage projects and operations successfully and at the same time gain some insight into how such skills can be applied within the industry.

## Topics covered include:

### Day one – Project management in an oil and gas industry context

- Overview of project management process and skills
- Project structures: activity stages and decision gates
- Project planning: an essential requirement
- Offshore field development with video
- Exercise: estimating under conditions of uncertainty
- Cost estimating and approval / authority for expenditure
- Project management frameworks: PMBOK and PRINCE
- Resource scheduling exercise: developing Gantt charts
- FEED and EPC contracting in the oil and gas industry
- Quantifying risks and opportunities
- Strategies to reduce risk and enhance opportunities

### Day two – Detailed planning, analysis and modelling

- Project networks and critical path analysis
- Exercise: precedence diagram and critical path
- Review of project scheduling software
- Probabilistic approach to cost-time forecasting
- Chemical plant construction: critical path analysis
- Case study: actual versus planned project schedule
- Exercise: tendering and bid evaluation
- Resource procurement and the supply chain
- Cost-time control: milestone monitoring and achievement analysis

- Contract structures to spread risk: alliance and incentive contracts
- Case studies: alliances in practice

### Day three – Performance and problem solving

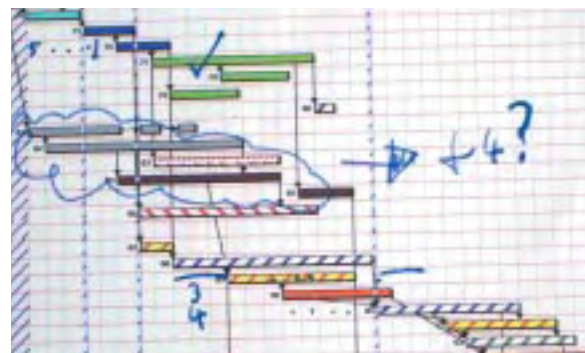
- Project team organisation, teamwork and motivation
- Leadership, direction and management skills
- Data management, relational databases and documentation
- Optimising communications and meetings
- Exercise: operating performance monitoring offshore field
- Delegating and assigning responsibilities effectively
- Quality, health, safety and environmental systems
- Case study: construction of gas liquefaction project with video
- Key performance indicators for measuring operating performance
- Problem solving versus decision-making
- Structured and systematic approaches to problem solving
- Confronting a crisis and contingency planning
- Delivering project and operational deliverables

## Who should attend?

*This course is designed for a multi-disciplined audience from project and operations sectors of the oil and gas industry, including both professional and support staff. The skills and industry insight provided are also of value to corporate staff involved in project management and planning.*

## Attendees would include:

- Managers, supervisors and project team members involved in planning, implementing, supervising and directing projects.
- Upstream professionals, such as: engineers, geoscientists and planners.
- Downstream professionals, such as: facility engineers and planners.
- Corporate and asset managers involved in acquisitions, disposals and business re-engineering projects.



# Oil and gas industry fundamentals

## 21-23 September 2010, London, UK



El member £1,880.00 inc VAT Non-member £2115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

This course comprehensively covers the oil and gas supply chains from exploration through field development, valuation and risk, production, transportation, processing and refining, marketing, contracts, trading, retailing, logistics, emerging markets and competition with alternative energies. As such, it provides understanding and insight to the processes, drivers, threats and opportunities associated with the core industry activities.

The course will benefit personnel from a range of technical, non-technical and commercial backgrounds with varying levels of experience. For example, new industry entrants and those with expertise in one area wishing to gain a broader perspective of all industry sectors will be provided with a concise knowledge base.

It also provides a valuable industry overview for those employed by financial, commercial, legal, insurance, governmental, service, supply and advisory organisations who require an informed introduction to the economic and commercial background and general trends within the oil and gas industry.

Participants will gain an appreciation of the principal activities in the international upstream and downstream petroleum industry and an understanding of how these inter-relate, as well as an awareness of the impact of external influences and the ways in which the industry is adapting to increase its competitiveness and to meet new challenges.

### The 3-day intensive course will cover:

#### Day one

- Descriptions of the distinct oil and gas supply chains
- Origin and distribution of oil and gas
- Upstream production, reserves and price trends
- Petroleum product consumption trends
- Supply, demand licensing and bidding
- Seismic and drilling technologies
- Applying exploration and production technologies
- Sub-surface and above-ground risks and opportunities
- Economic evaluation of field developments
- Project planning and managing field developments
- Upstream fiscal terms, contractual and project finance
- Costs, timing, efficiency and benchmarking the industry

#### Day two

- Natural gas: pipelines, storage, LNG and GTL
- Global gas trading, gas-to-power, co-generation and CHP
- Gas supply contracts, distribution networks and liberalised markets
- Range of crude oil compositions and evolving product barrel

- Basic processes of refining and product outputs
- Refinery management and optimisation operations
- Refinery economics, gross product worth, net profit margins
- Pipelines, marine transportation and costs (worldscale)
- Petrochemical industries – trends and forecasts
- Syncrudes and heavy oil technologies and economics

#### Day three

- Physical oil markets and crude pricing
- The major oil and gas markets and trade movements
- Oil trading and supply operations
- Price exposure: the need to hedge
- Trading instruments: forwards, futures and swaps
- Product marketing and distribution logistics
- Wholesale, aviation, marine and LPG markets
- Retailing fuel: competitive techniques and market trends
- Evolution of C-stores and unmanned forecourts
- Renewables and alternative energies: threats or opportunities?

### Who should attend?

- Those seeking a broader knowledge of the oil, gas and energy industry and markets
- New recruits to oil, gas and energy companies
- Analysts, planners, traders, sales, marketing, engineering, refining, communications and commercial personnel
- Those requiring an understanding of the oil, gas and energy value chain
- Bankers and lawyers supporting the industry, together with management consultants providing services to oil, gas and energy companies
- Ministerial, governmental, industry bodies and development agency staff

### Delegates will:

- Identify where petroleum comes from and how and where it accumulates.
- Understand exploration and production techniques and their associated risks.
- Gain insight to petroleum economic, fiscal and project planning issues.
- Become aware of development, transport and market options for oil and gas.
- Recognise the ability of refining processes to balance product market demand.
- Perceive the importance of the trading, hedging and retailing functions to modern, integrated oil and gas companies.
- Be able to evaluate the threats and opportunities offered by non-conventional petroleum sources and alternative fuels.



# Supply and distribution: organisation, operations and economics



27-30 September 2010, London, UK

EI member £2,585.00 inc VAT Non-member £2,820.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

In the chain between oil rig and customer lie a number of functions all of which have an effect on the final margin available to the marketers. When it comes to marketing the finished product, Supply and Distribution are the core functions delivering the goods to the right place, at the right time, in the right quantity and at the right price.

This course is designed for those who are or will be operating in the supply and distribution functions and will provide the background knowledge to allow them to take the right decisions on how to supply the network at the right cost. The course will also benefit those involved in functions which interface with supply and distribution and who wish to improve their understanding of their impact on their business.

A brief introduction to refining will be provided for those who are new to the business or who may have forgotten the basics of turning crude into finished product. This will highlight the strengths and weaknesses of the different refineries and the effect these can have on their output, leading to the need to source product from different locations at different times.

Fuel specifications will be reviewed and the impact of differing requirements for different markets discussed.

Sourcing product will be examined, whether available from a parent company refinery, purchased on the open-market and stored in third party facilities, purchased ex-rack, handled on a throughput basis or exchanged both nationally and internationally.

Primary supply mechanisms, pipelines, ship, rail or road, are a core function and the options will be reviewed along with the impact they have on the economics of the market and their influence on the layout of the network. Terminal location and network planning will be examined along with the effect of competitor locations, exchange opportunities, and environmental considerations and legislation.

Terminal design has a substantial influence on the efficiency of the operation and the course will consider tank numbers and capacity, loading rack configuration, staffing levels, safety issues and training.

The final link in the chain is the transport operation where in-house operations compete with contract haulage. The overall effect of the network and its impact on routing, load optimisation and backhauling operations will be discussed, as well as the benefits of multi-shift delivery patterns.

The course will also review benchmarking techniques allowing you to assess how you are performing against your competitors and where opportunities exist for improvement.

The subject will be considered from a national and international perspective.



## Who should attend?

- Logistics and distribution personnel, contractors, managers with network planning, supply and transportation responsibilities
- Marketing managers and planners
- Supply, logistics and distribution analysts
- Major oil companies' personnel with strategic or operational roles
- Finance and performance measurement managers

This **3-day** course is designed to provide a technical overview and to introduce delegates to the many facets of the Aviation Jet Fuel business – a business which operates at a truly global level. It will not only examine the workings of the modern jet engine, but will build the picture as to why, unlike some fuels, jet fuel specification, production and handling is critical to the continuing success of the aviation industry. It explores components of the business from several key perspectives, including oil company fuel suppliers and civilian and military users.

## Day one

### • The jet engine

Starting with the basics of how a jet engine works and examining why fuel parameters are critical.

### • Production of fuel

Looking at all aspects of production of fuel, the refining processes used, and examining the current and possible future sources of jet fuel.

### • Contaminants

Description of contaminant types in jet fuel and their prevention and control

### • Storage and distribution and quality assurance

The systems currently in use and problems encountered with respect to railcars, ships, and pipelines. What is tested and why. An examination of the importance of quality assurance from production to use.

## Day two

### • A visit to an airport storage facility

Demonstration of storage procedures with hands-on testing.

### • Laboratory visit

Demonstration of laboratory testing requirements and difficulties.

### • Microbiological contamination

Investigation of the problems that can occur and how to detect and avoid them.

## Day three

### • Specifications and Standards

Why specifications are required and how they are developed. Jet fuel procurement specifications and fuel handling standards will be explained.

### • Additives

A look at what additives are permitted in jet fuel, their purpose and prevailing restrictions.

### • Jet fuel and the environment

An explanation of the environmental affects of jet fuel and how this may shape jet fuel and air travel in the future.

### • Filtration

Description of Energy Institute standards. Explanation of the fundamentals of filtration and filtration types.

### • Electrostatics and Safety

Handling and operational procedures to minimise electrostatic discharges. General safety, including PPE explained.

### Delegates will learn:

- The jet engine, its underlying principles and fuel requirements
- The critical characteristics of jet fuel, including additives
- Industry best practice adopted in the supply, handling and use of aviation fuel
- Real-life problems associated with the contamination of fuel and solutions to remedy them
- The practical side of operations at an airport storage depot and a laboratory
- The environmental impact and future of jet fuel



# Strategic management of oil and gas assets and companies

26-28 October 2010, London, UK

El member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute



Selecting, planning and implementing strategy are critical functions for petroleum companies confronted with volatile markets and increasing international competition from national oil companies (NOCs) and new entrants in upstream and downstream sectors. Effective strategic management is the key to aligning shareholder expectations with corporate capabilities, performance and market conditions. Successful oil and gas companies constantly review, evaluate and benchmark performance of their prevailing strategies with a view to optimising performance of their asset portfolios over short, medium and long-term planning horizons.

Indeed strategy and risk management can be effectively integrated as the primary driver to steer business planning, budgeting and asset portfolio management.

Teamwork, organisational design and presentation skills are all crucial elements of strategic management. Moreover, significant changes in strategy often result in corporate upheavals and re-organisations that require change management approaches to implement them successfully

Values and risks of a portfolio of assets can be substantially more than just the sum of the constituent assets. The most effective portfolios demonstrate synergies able to deliver enhanced value. However, synergies, balance and diversification in portfolios do not just materialise – they require proactive approaches to planning and strategic management. It is impossible to manage petroleum assets or portfolios successfully without being able to quantify the uncertainties and use that information to develop strategies, to mitigate the risks and capitalise on the opportunities.

This course addresses strategy in the practical context focusing upon the broader petroleum industry issues of portfolio opportunities, risks, change, performance and organisation. Several videos of high profile international projects and short exercises are used in the course to elicit key strategic approaches relevant to real situations along oil and gas supply chains.

## Who should attend?

*This course is designed for a multi-disciplined audience from strategic planning, portfolio and corporate sectors of the oil and gas industry, including both professional and support staff. The skills and industry insight provided are also of value to divisional asset and business unit managers and decision-makers.*

## Attendees would include:

- Analysts and managers involved in planning, implementing, supervising and directing strategy.
- Upstream and downstream professionals and decision-makers.
- Corporate and asset team members involved in acquisitions, disposals and business re-engineering initiatives.



## Topics covered include:

### Day one – Strategic analysis, design and direction

- What is strategic management and why is it important?
- Generic upstream and downstream petroleum strategies
- Analysing strategic environments - external and internal
- Resources' capabilities - financial, human and facilities
- Commonly used strategic analysis techniques
- Recognising and exploiting synergies and alliances
- Issues for centralised and de-centralised organisations
- Line, matrix and business unit structures
- Identifying and focusing upon core competencies
- Teams and teamwork
- Strategic options and organisational design
- Extracting value along oil and gas supply chains
- Competitive strategies in refining and fuel retailing

### Day two – Strategic modelling, implementation and performance

- Building and monitoring business plans and budgets
- Resource allocation - setting goals and targets
- Critical path and probabilistic models
- Hedging strategies using derivatives
- Measured management, benchmarking and key performance indicators
- Optimising performance of oil and gas asset portfolios
- Distinguish portfolio risks from asset risks
- Diversification, balance and asset combinations to reduce risk
- Measurements of uncertainty that do not penalise the upside opportunity
- Efficient frontiers and feasible envelopes
- Portfolio optimisation linked to quantified corporate strategy
- Simulation and statistics to quantify strategic portfolio performance
- Mergers, acquisitions and divestments to improve strategic performance

### Day three – Managing strategic change and human obstacles to change

- Corporate dynamics and inherent resistance to change
- Promoting a global mindset to recognise opportunities
- Balanced scorecard approach aids strategic change
- Aligning operations and accountability to strategy
- Strategic approach to risk management
- Linking strategy and enterprise risk management
- Top-down and bottom-up communications
- Cultural issues - corporate and national
- Integrating qualitative and quantitative analysis
- Improving quality and timing of decision-making and reactions
- Applying strategy to direct business planning and budget cycles
- Linking staff remuneration to corporate and individual performance
- Overcoming human obstacles to strategic change
- Securing buy-in to change from management and individuals

# Acquiring and divesting oil and gas assets and companies

1-3 November 2010, London, UK



El member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

Access to quality international producing assets and reserves combined with infrastructure synergies, economies of scale and rapid growth potential are the key factors driving companies towards acquisitions and mergers. On the other hand portfolio rationalisation, lack of materiality and harvesting value in times of volatile commodity prices drives companies to divest assets and, in some cases, seek mergers. Whether a buyer or seller the mergers, acquisition and divestment (MA&D) process in the oil and gas industry requires careful management and a structured approach if values are to be maximised and deals completed in an efficient manner and timeframe. When conducted competently MA&D can help to promote investor confidence, growth, returns and operating efficiency in difficult and uncertain markets.

Competition for funding, cost of capital and stock market multiples in the past decade have prompted a trend towards major companies merging to remain competitive on a global scale. There have been winners and losers in this trend, and the stakes remain high for conducting MA&D effectively. Historical trends in oil and gas industry specific key performance indicators (KPIs) reveal those companies likely to prosper and those likely to become targets for acquisition. Successful companies have KPI trends that demonstrate their ability to divest of non-core assets and to concentrate on areas of core expertise based on technical, commercial and geographic focus.

This course develops the theme of optimising corporate and portfolio value focusing on the role of business development in ensuring long-term growth and improved returns through mergers and acquisitions. It concentrates on process and the recognition of the factors driving companies to merge, acquire and divest assets and the use of core competencies and asset base to provide competitive advantages. The principles, skills and techniques required for successful MA&D activity apply to both large and small companies.

## Topics covered include:

### Day one – MA&D drivers and industry performance

- Factors driving oil and gas companies to merge, acquire and divest
- Key performance indicators and benchmarking relevant to MA&D
- Exercise: evaluation of key performance indicators
- Historical performance of oil and gas sectors
- Generic strategies complemented by acquisition and divestment
- Identifying and exploiting synergies
- Case studies: mergers of major oil and gas companies
- Case studies: acquisitions and divestments that have failed
- Transition phase of ownership and control following an acquisition
- Human resource issues require careful planning
- Review criteria for success in MA&D activity

### Day two – Structured approach to acquisition and divestment process

- Asset evaluation process – fair market value concept
- Recognising and accounting for risk and opportunity
- Exercise: competitive bidding
- Data rooms and due diligence
- Reserves audits and valuations associated with upstream deals
- Formulating proposals: offers and counter-offers

- Letters of intent confirming agreement subject to conditions
- Sale and purchase agreements – key issues
- Conditions precedent, representations and warranties
- Effective dates and their significance
- Identifying and addressing trailing liabilities
- Exercise: SWOT analysis of MA&D candidates
- Independent engineering, environmental, safety (etc) audits
- Completion of agreement – what this usually entails
- Portfolio approach to MA&D evaluation and selection
- Structuring divestment programmes

### Day three – Strategic, financial and payment issues

- Competitive bidding theory and practice
- Case study: Libya bidding rounds of 2005
- Leveraging acquisition values using debt
- Project financing acquisitions
- Integrating tax pools and exploiting tax positions
- Financial management and structure of mergers and acquisitions
- Exercise: structuring takeover terms
- Valuation of long-life assets
- Limitations of discounted cash flow techniques
- Effective use of options and deferred payments
- Exercise: evaluation of acquisition alternatives
- Pitfalls in MA&D process

## Who should attend?

This course is designed for a multi-disciplined audience from commercial, technical, corporate, human resources, planning, portfolio, financial, legal and risk management backgrounds.

Course content addresses issues and skills relevant to professionals and support staff involved in mergers, acquisitions and divestment activities from across the industry. This would include, but not be limited to: acquisition advisers, asset managers, bankers, buyers, economists, engineers, geologists, financiers, insurers, investors, lawyers, negotiators, planners, portfolio managers, and risk analysts.

# Overview of the international upstream oil and gas industry

4 November 2010, London, UK



EI Member £705.00 inc VAT Non-member £822.50 inc VAT\*

\* includes complimentary Affiliate membership to the Energy Institute

The upstream oil and gas sector involves the interaction of wide-ranging engineering and geological techniques and technologies with complex fiscal, financial and risk management issues. In one day, this course provides an overview of the upstream sector in non-technical terms from technical, commercial and financial perspectives. It is designed for a multi-disciplined audience with varying levels of previous experience in the upstream sector wishing to gain an integrated overview of the key issues and drivers.

## Topics covered include:

- Characteristics of oil and gas fields
- Global opportunities for finding new reserves
- Licensing, unitisation and fiscal terms
- Seismic techniques to define reservoir geometries
- Drilling techniques, equipment and well design options
- Oil and gas reservoir characteristics and risks
- Defining reserves and field production profiles
- Field development options and cost-time considerations
- Optimising reservoir and upstream performance
- Oil and gas production processing requirements
- Project managing field developments and costs
- Pipelines and transportation alternatives
- Environmental, safety and decommissioning issues
- Issues specific to gas fields: pipelines, LNG and GTL
- Non-conventional reserves: bitumen and coal-bed methane

## Who should attend?

*This course is designed for a multi-disciplined audience with diverse commercial, technical, corporate, operations, planning and trading backgrounds from various sectors of the oil and gas industry. Course content addresses the basic issues and skills relevant to professionals working within companies involved in upstream activities, including: analysts, asset and portfolio planners, bankers, economists, financial administrators, traders, trainee geologists and engineers, insurers, lawyers, and risk managers.*



# Valuation and risk analysis of oil and gas assets

16–18 November 2010



El member £1,880.00 inc VAT Non-member £2,115.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

This intensive 3-day course concentrates on economic evaluation techniques applied in upstream and downstream oil and gas projects. It will discuss the fundamental variables and issues associated with petroleum project valuations and provide an appreciation of how to assess the key uncertainties involved.

The course is pitched to appeal to professionals with a large range of technical and commercial backgrounds and varying levels of experience seeking insight to the broad range of economic valuation techniques required across the industry. In addition the course will also provide a valuable overview of the micro-economic issues facing oil and gas project operators for those employed by financial, commercial, legal, insurance, governmental, service, supply and advisory organisations.

The course will incorporate a number of short exercises and case studies to reinforce the key techniques discussed.

## Topics covered include:

### Day one – Basic analysis and valuation techniques

- Need for petroleum project economic analyses
- Project cash flow components
- Discounting and time-value considerations
- Distinguishing cash flow and other measures of profitability
- Funding criteria: the cost of capital and inflation issues
- Capital budgeting techniques and yardsticks
- Petroleum reserves categories and valuation
- Production and decline profiles
- Costs: estimating, budgeting and controlling
- Techniques to optimise upstream and downstream performance

### Day two – Constructing economic evaluation models

- Volatility of crude oil, gas and products markets
- Upstream fiscal terms and project economics
- Production sharing and cost recovery
- Corporate and project finance in the petroleum industry
- Equity and debt cash flow analysis
- Sensitivity, scenario and simulation techniques
- Components of Monte Carlo simulation models
- Gross product worth and net refining margins

### Day three – Dealing with risk, hedges, options and portfolios

- Regional reviews and case studies
- Valuations incorporating risk and uncertainty analysis
- Subsurface risk in oil and gas fields
- Above ground uncertainties impacting upstream and downstream
- Probabilistic approaches to economics and risk analysis
- Hedging: Valuation of options and swaps
- Decision trees and real options
- Risked valuation of petroleum asset portfolios
- Upstream and downstream optimisation techniques



## Who should attend?

*This course is designed for a multi-disciplined audience with diverse corporate, financial, economic, technical, strategic planning, risk management and operational backgrounds. Course content addresses issues and skills relevant to professionals working within oil and gas companies, government agencies (National Oil Companies and Ministries) and the support and service sectors to the industry, including: accountants, analysts, asset and project managers, bankers, economists, engineers, geologists, insurers, lawyers, portfolio analysts and managers.*

# Oil and gas industry fundamentals

22–25 November 2010, London, UK



El member £2,585.00 inc VAT Non-member £2,820.00 inc VAT\*

\*includes complimentary Affiliate membership to the Energy Institute

This 4-day course comprehensively covers the oil and gas supply chains from exploration through field development, valuation and risk, production, transportation, processing and refining, marketing, contracts, trading, retailing, logistics, emerging markets and competition with alternative energies. As such, it provides understanding and insight to the processes, drivers, threats and opportunities associated with the core industry activities.

The course will benefit personnel from a range of technical, non-technical and commercial backgrounds with varying levels of experience. For example, new industry entrants and those with expertise in one area wishing to gain a broader perspective of all industry sectors will be provided with a concise knowledge base.

It also provides a valuable industry overview for those employed by financial, commercial, legal, insurance, governmental, service, supply and advisory organisations who require an informed introduction to the economic and commercial background and general trends within the oil and gas industry.

Participants will gain an appreciation of the principal activities in the international upstream and downstream petroleum industry and an understanding of how these inter-relate, as well as an awareness of the impact of external influences and the ways in which the industry is adapting to increase its competitiveness and to meet new challenges.

## Topics covered include:

- Descriptions of the distinct oil and gas supply chains
- Origin and distribution of oil and gas
- Upstream production, reserves and price trends
- Petroleum product consumption trends
- Supply, demand, licensing and bidding
- Seismic and drilling technologies
- Applying exploration and production technologies
- Sub-surface and above-ground risks and opportunities
- Economic evaluation of field developments
- Project planning and managing field developments
- Upstream fiscal terms, contractual and project finance
- Costs, timing, efficiency and benchmarking the industry
- Natural gas: pipelines, storage, LNG and GTL
- Global gas trading, gas-to-power, co-generation and CHP
- Gas supply contracts, distribution networks and liberalised markets
- Range of crude oil compositions and evolving product barrel
- Basic processes of refining and product outputs
- Refinery management and optimisation operations
- Refinery economics, gross product worth, net profit margins
- Pipelines, marine transportation and costs (Worldscale)
- Petrochemical industries – trends and forecasts
- Syncrudes and heavy oil technologies and economics
- Physical oil markets and crude pricing
- The major oil and gas markets and trade movements
- Oil trading and supply operations
- Price exposure: the need to hedge
- Trading instruments: forwards, futures and swaps
- Product marketing and distribution logistics
- Wholesale, aviation, marine and LPG markets
- Retailing fuel: competitive techniques and market trends
- Evolution of C-stores and unmanned forecourts
- Renewables and alternative energies: threats or opportunities?

## Who should attend?

- Those seeking a broader knowledge of the oil, gas and energy industry and markets
- New recruits to oil, gas and energy companies
- Analysts, planners, traders, sales, marketing, engineering, refining, communications and commercial personnel
- Those requiring an understanding of the oil, gas and energy value chain
- Bankers and lawyers supporting the industry, together with management consultants providing services to oil, gas and energy companies
- Ministerial, governmental, industry bodies and development agency staff

## Delegates will:

- Identify where petroleum comes from and how and where it accumulates.
- Understand exploration and production techniques and their associated risks.
- Gain insight to petroleum economic, fiscal and project planning issues.
- Become aware of development, transport and market options for oil and gas.
- Recognise the ability of refining processes to balance product market demand.
- Perceive the importance of the trading, hedging and retailing functions to modern, integrated oil and gas companies.
- Be able to evaluate the threats and opportunities offered by non-conventional petroleum sources and alternative fuels.



# Registration form

**UK Entry Visas** – Please note that there have been recent changes to the UK Entry Visa application system. Given this, it now takes a minimum of 15 working days/3 weeks, to process any applications. If you wish to attend a course and need a visa, you are urged to apply at least 1 calendar month prior to the start date of the course. Full information at: [www.ukvisas.gov.uk/en/howtoapply/wheretooapply/](http://www.ukvisas.gov.uk/en/howtoapply/wheretooapply/)

To register, by post or fax, please complete this registration form in **BLOCK CAPITALS** and return it to the address below, together with payment of all fees. Nick Wilkinson, EI Oil and Gas Training, Energy Institute, 61 New Cavendish Street, London W1G 7AR, UK f: +44 (0)20 7255 1472 To register by email, please provide the same contact details (shown below), together with the relevant course details and send to: [nwilkinson@energyinst.org](mailto:nwilkinson@energyinst.org) To book online, visit: [www.energyinst.org](http://www.energyinst.org)

I am/my employer is a member of the EI and entitled to the EI member's rate. EI Membership Number: .....

Mr/Mrs/Miss/Ms/Dr/Other: ..... Name: .....

Job title or present position: ..... Company/Organisation: .....

Name and address against which an invoice should be raised: .....

.....

t: ..... f: .....

e: .....

Mailing address for joining instructions (if different to invoice address above): .....

.....

Please indicate if you have any particular dietary requirements: .....

I confirm that I have read and agree to the conditions of registration as specified in the General Information section.

Signature: ..... Date: .....

**Under UK Excise Regulations, delegates from all countries are required to pay VAT on any course taking place in the UK.**

Course Title: .....

Course date: ..... Cost of course: £ .....

Less 10% discount for each subsequent delegate from the same company attending the same course on the same date  
£ .....

I enclose my remittance, made payable to the Energy Institute, for: **TOTAL PAYMENT** £ .....inc VAT

The total amount may be paid by Sterling Cheque or Draft drawn on a bank in the UK.

To pay by Credit or Charge Card, circle appropriate card name and give card details below:

Visa                     
  MasterCard                     
  Euro Card                     
  Diners Club                     
  Amex

Card No: \_\_\_\_\_ Start Date \_\_ \_\_ / \_\_ \_\_ Expiry Date \_\_ \_\_ / \_\_ \_\_

Please enter your 3-digit\* security code above. This will be deleted upon authorisation. \*4-digits for Amex users.

Credit/Charge card holder's name and address: .....

.....

Signature: ..... Date: .....

**Payment:** Full payment must be received before a place can be guaranteed. Under UK Excise Regulations, delegates from all countries are required to pay VAT on any event taking place in the UK. Please note that VAT may be liable to amendment. All prices are correct at the time of going to press, but may be subject to change without prior notice.

**Acknowledgement of registration:** Confirmation of registration and a VAT receipt will be sent to all delegates. Joining instructions will be sent out prior to the start date of the course. If you have not received your acknowledgement seven days prior to the start date of the course, please contact EI Oil and Gas Training at the Energy Institute to confirm your booking.

**Language and course materials:** All presentations, course materials and supporting documentation will be presented in English. **Audio-visual recording of presentations is strictly forbidden. Course materials cannot be purchased by non-attendees.**

**Cancellation:** In the event of a delegate cancelling, a refund of the registration fee less a 20% administration charge will be made provided that notice is received in writing at least 28 days before the date of the course. No refunds will be paid after that date. However, course papers, as supplied to attendees, will be provided after the event.

**Substitution**  
If you are unable to attend, a substitute delegate may attend in your place, provided that EI Oil and Gas Training is notified in advance.

**Enquiries**  
EI Oil and Gas Training, Energy Institute, 61 New Cavendish Street, London W1G 7AR, UK  
t: +44 (0)20 7467 7100 f: +44 (0)20 7255 1472  
e: [nwilkinson@energyinst.org](mailto:nwilkinson@energyinst.org) [www.energyinst.org](http://www.energyinst.org)

**DATA PROTECTION ACT**

The EI will hold your personal data on its computer database. This information may be accessed, retrieved and used by the EI and its associates for normal administrative purposes. If you are based outside the European Economic Area (the 'EEA'), information about you may be transferred outside the EEA. The EI may also periodically send you information on membership, training courses, events, conferences and publications in which you may be interested. If you do not wish to receive such information, please tick this box

The EI would also like to share your personal information with carefully selected third parties in order to provide you with information on other events and benefits that may be of interest to you. Your data may be managed by a third party in the capacity of a list processor only and the data owner will at all times be the EI. If you are happy for your details to be used in this way, please tick this box