

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

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/

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 To book online, visit: www.energyinst.org

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

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Job title or present position: Company/Organisation:

Name and address against which an invoice should be raised:

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

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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:

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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
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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