

OVERVIEW

During this four-day program participants will learn, in a practical and realistic manner, how to analyze the financial performance of oil and gas investments from both the project and corporate reporting perspectives. They will be asked to build financial models for typical oil and gas projects and then identify and incorporate all major risks into the analysis. A major part of the learning is achieved through team participation in a challenging “business game” where they must present their team’s recommendations to the Board.

WHO SHOULD ATTEND

This program is designed specifically for energy managers, supervisors and key employees from broad functional areas, such as finance, technology and project development who wish to expand their knowledge of investment and risk analysis in managing, developing and reporting on energy projects. financial modeling and petroleum project economics.

INSTRUCTIONAL FORMAT

The instructional format consists of **lectures** by a respected specialist and team participation in a classic IHRDC “**business game**”. The business game typically takes almost one half of the instruction time and is highly rated for its effectiveness in internalizing learning and generating discussion among team participants. In addition to the lectures and business game this course will utilize additional exercises and case studies to further enrich the classroom experience. This method of blended learning has proven to be an ideal way for participants to learn the practical needs of today’s international energy markets.

LECTURE CONTENT:

Introduction to Petroleum Economics & Energy Business Environment

The fundamentals of economics: background of and its application to the oil and gas industries. An Introduction to the oil and gas value chains and the identification of business opportunities along these chains.

Introduction to Financial Statements and Measures of Performance

Background needed to understand and build models of the four key corporate financial statements; review and discussion of the key measures of financial performance, consideration of the measures used by major companies and those of your company. Steps required to build proforma financial projections to show how a new project will affect corporate performance.

Project Management Fundamentals

The oil and gas industry typically follows and IHRDC has developed its own five-phase process – from opportunity assessment to long-term operation – for analyzing and implementing a project.

Energy Project Economics and Measures of Performance

Project cash flow analysis, discounting cash flow to obtain present value and internal rate of return, the cost of capital and the effect of debt financing, other measures of project performance; sensitivity to changes in key variables.

Project Financing: Commercial Debt Finance

Corporate and project financing; sources of debt and equity financing; public and private sources of capital; multilateral and bilateral sources of financing; risk assessment and mitigation; structuring of financing; preparing the financing plan; negotiating the term sheet; preparing the financing documents; closing. Case Studies – Examples of Project Financing: Qatar Gas Project; Colombia Power Project; U.S. Gas Storage Project.

Energy Project Risk and Uncertainty

Identifying and quantifying energy projects risks and uncertainty into project analysis; using statistical measures to quantify risk; two key risk assessment methods: scenario analysis and sensitivity analysis.

Probability Theory and Quantitative Analysis

Introduction to probability theory, including probability density functions, overview of typical probability distributions and definition of key terms; applying probability theory in decision analysis with emphasis on concept of expected value.

Decision Tree Analysis

Applying a structured method for investment decision analysis; understanding the implications of different sets of decisions; identifying areas to reduce risk and understand economic opportunity cost of capital; identifying implications of various forms of contracts; analyzing implications of incremental project decisions.

Monte Carlo Simulation

Extending the decision tree analysis framework for situations that include continuous probability scenarios; identifying power and limitations of simulations, emphasis placed on relevance of expected value; Crystal Ball commercial software used to model risk in financial model.

Portfolio Theory and Real Options

Introduction to and discussion of Real Options and Portfolio Optimization, two other key methods used extensively today by many oil companies to evaluate project opportunities; understanding how a collection of investments can decrease overall risk in the portfolio.

Stakeholder Impact Assessment & Analysis

Introduce different analysis frameworks to identify stakeholders effected by energy projects, assess the impact on each group identified and develop strategies to address the social welfare.

Managing Price Risk Using Financial Derivatives

Background on the use of financial derivatives to manage energy product price risk; commodity exchanges; key price risk management instruments: futures, hedges, swaps and options. Setting a strategy to use derivatives to manage the risks of an energy project. Incorporating derivatives into the workshop financial model.

INSTRUCTORS



RICK SQUIRES, an IHRDC Senior Lecturer, is the founder of PiEnergy, which provides consulting and executive search services to the energy industry. He is also a Non-Executive Chairman of a U.K.-based offshore hybrid gas and wind power company. For four years, from 1998 to 2002, Mr. Squires was Senior Vice President, Planning, Strategy and Investor Relations for InterGen, an international power company with plants in ten countries. Prior to joining InterGen, he headed the Power Business within Shell Gas and Power, London. Mr. Squires' career at Shell spanned over 25 years and also included senior management positions in International Oil Trading and Coal Business Development and Marketing in London, South Africa and Japan. Mr. Squires holds an B.S. (Honours) degree in Electrical Engineering from Lanchester University and a Master's Degree in Business Studies from Durham University, U.K.; he is a member of the Institute of Electrical Engineers, the Institute of Directors and the Energy Institute.



MAHER HABBAL is Manager, Business Simulators Development/Applications for IHRDC. He is responsible for developing and implementing the business simulation models used in IHRDC management programs and workshops. To date he has built five such simulators: one for the oil industry, two for gas, and two for power. His other responsibilities include internal financial reporting, analysis and forecasting. Before joining IHRDC, Mr. Habbal worked three years with Arthur D. Little, Inc. as a Senior Financial Analyst in financial reporting and modeling. Also, as a member of the teaching staff at the Arthur D. Little School of Management Master of Science in Management Program, he taught Finance, Economics and Accounting. Mr. Habbal holds a M.S. degree in Management from Arthur D. Little School of Management and a B.S. in Business Economics from the Lebanese American University.

PROGRAM LOCATION & SCHEDULE

The program will begin on Monday morning with registration at 7:30am and end on Thursday. Participants may be asked to stay later on some of the first few evenings to complete workshop sessions. The program will be held in Bali, Indonesia. Hotel details will be provided upon registration.

Enrollment Fees: Bali, Indonesia: US\$3,350*
*IHRDC will provide a rate of \$3,150 per participant to companies that enroll five or more participants.

PLEASE ENROLL ME IN: PETROLEUM PROJECT ECONOMICS & RISK ANALYSIS

Name _____

Title/Position _____

Company _____

Address _____

City/State _____ Country _____

Telephone _____ Fax _____

E-mail _____

PAYMENT METHOD

Fee Enclosed Please Invoice Send to the attention of: _____

Mastercard Visa American Express Discover

Card Number _____ Exp. Date _____

Signature of Cardholder _____

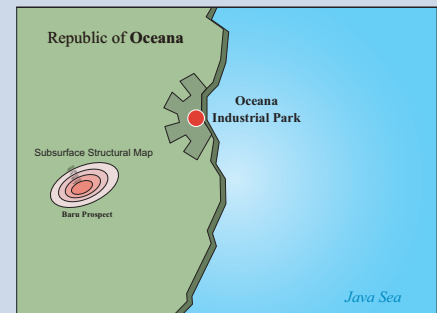
TO REGISTER PLEASE CONTACT IHRDC AT:

REGISTRAR@IHRDC.COM; Fax: 1.617.536.4396 or Phone: 1.617.536.0202

ASIA ONSHORE BUSINESS GAME

This "business game" is an integral part of the learning process. Participants, working in teams, will evaluate an oil and gas business opportunity in the Republic of Oceana, near Indonesia. They build a financial model that will integrate various risks associated with the investment. This model will utilize a proposed Production Sharing Agreement and incorporate revenue, capital and operating costs, financing costs, and tax projections for the life of the project.

Throughout the program teams will add layers of complexity to the model by incorporating different risk analysis tools presented in the lectures. The teams will present their project analysis to a decision review board by outlining the risk profile and expected performance measures of the project. They then learn the outcome of those decisions. Emphasis will be placed on the practical implementation of the tools presented and on developing practical financial modeling skills.



WORKSHOP SESSIONS INCLUDE:

- Modeling the production sharing agreement
- Building the base case proforma financial statements
- Calculating standard measures of performance
- Sensitivity and scenario analysis
- Decision trees and expected monetary value
- Monte Carlo simulation
- Project selections, stakeholder and financial analysis
- Simulation of team investments in the economic environment
- Evaluation of performance and presentation of results

Enrollment Code

The Enrollment Code in this box is required when registering for a course.

Enrollment Code: IWEB11