Economics of the Oil Supply Chain

Program Objectives

During this five-day program, delegates explore the various activities of an oil company and the economic forces driving the oil supply chain. They will also learn the main areas of risk and opportunity from the crude oil supply terminal, through transportation, refining, and international trading to the refined product distribution terminal.

Through exercises in a fictional refinery, delegates learn the quality aspects of product supply, refinery process economics, and the effects of upgrading. They will examine blending as a means to meet quality requirements at optimal cost and construct a processing deal. Additionally, the program provides an overview of international markets, trading, and different methods of price risk management.

This program is an essential foundation for people entering the oil industry or for those with single-function experience looking to broaden their knowledge. It also forms the basic building block for the other downstream courses. Numerous exercises are carried out in teams, with comprehensive debriefs studying the consequences of the decisions made.

Key Benefits

- Reviews the interaction of the various aspects of the downstream oil supply chain, from provision of crude oil feedstock, through shipping refining processes, refined product blending, and distribution to market place
- Looks at the economics of each of the interactive processes and how they can be optimized
- Introduces the concept of oil price exposure and the various instruments that can be used to manage price risk
- Participants will work in teams as a means of further enhancing the learning process and to appreciate the practical application of the knowledge gained

Instructional Format

The learning format consists of a carefully designed, practical “workshop” form of learning that incorporates a finely crafted balance of role plays, exercises, lectures, and discussions using oil prices and markets to illustrate and enhance the learning of concepts and practices

Program Schedule

This program will begin with registration on Monday morning and will end on Friday at Lunch time. Daily sessions are expected to be completed by 6:00 PM.

Who Should Attend

This course will benefit those new to the oil industry or moving into the commercial area from the upstream or downstream sectors. The program is also of interest to those who interface with the commercial aspects of the oil industry such as banks, accountancy practices, and other organizations.
PROGRAM CONTENT

Oil Fundamentals
Oil Price History
World Supply and Demand
Structure of World Markets
Price Formation and Reporting

Crude Oil
Types of Crude Oil
Evaluation of Crude Oils
Crude Oil Markets
Crude Oil Pricing

Oil Refining
Distillation and Reforming
Treating and Conversion
Cracking
Refinery Economics and Optimization
Blending
Refinery Margins

Logistics
Scheduling Oil Supplies
Stocks and Storage
Losses
Inland Distribution

Oil Products
Refined Product Quality and Specifications
Value of Quality
Downstream Marketing

Transportation
Oil Tankers
Freight and Worldscale
Chartering a Ship
Pipelines

Markets and Trading
International Oil Trading
Mechanics of Trading
Contracts for Sale and Purchase
Costs of Trading

Processing
Processing Deals

Price Risk Management
Identifying Exposure
Futures
Swaps
Basic Hedging Techniques

IHRDC Programs
For this program there will be two senior lecturers from the IHRDC faculty. Their backgrounds are as follows:

**Michael Jarvis** is a knowledgeable practitioner and consultant in the downstream oil sector with more than 40 years of experience. He has a comprehensive understanding of crude oil and products trading, hydrocarbon price risk management practices, international marketing of speciality fuels, supply planning and logistics, and refinery operations. He has worked for Shell in both Venezuela and the U.S., and has travelled widely in developing areas gaining global business experience. Mr. Jarvis is the founder of Extac Limited, a consultancy company for oil sector activities with dealings across the downstream spectrum. Since 2000 he has been a core team presenter with Invincible Energy and has presented and developed a wide range of training courses across the world. He has also provided advice on functional and strategic aspects of business to major oil companies, state organizations, and producer companies. In addition, Mr. Jarvis works with local government and private bodies, consulting on service competencies for welfare provision and reform. He studied Chemical Engineering at the University of Surrey and has postgraduate business training. He is a Chartered Engineer with the Institution of Chemical Engineers and a member of the Energy Institute.

**Howard Skipp** is a core presenter for IHRDC-Invincible Energy Ltd. He has more than 40 years of comprehensive experience in the international downstream oil industry. It includes hands-on experience working at Shell for 28 years, followed by his formation of Bablake Services in 1997, which provides downstream oil training and consultancy services. He began his career at Shell as a refinery engineer, and held a variety of oil supply, trading, and marketing positions in the U.K., Denmark, the Netherlands, Malaysia, and Korea. In those roles, he lead teams for supply and refining, international oil trading, and the marketing of aviation fuel, marine fuels, and lubricants. His work also included recruitment for Shell International and running the in-house training programs for Shell’s international oil trading. In 1999 he became a founding member and core presenter for Invincible Energy. He has extensive experience designing and teaching training courses for both public and in-house programs worldwide. His consultancy assignments have covered the supply and trading of crude oil and refined products, price risk management, trading controls, shipping, refining, and marketing. Mr. Skipp has both a B.S. and an M.S. in Chemical Engineering from the University of Cambridge and is a member of the Energy Institute.

**Phil Snaith** is a partner in PSI Energy, which provides consulting and training services to the energy industry. Prior to starting his own business, he worked for Royal Dutch Shell for more than 35 years. During his career with Shell he worked in eight different countries spanning Asia Pacific, the Americas, and Europe. He has broad experience in downstream oil commercial businesses via both wholly-owned companies and joint ventures. His roles have included President of Shell International Eastern Trading Company, President of HydrogenSource LLC (a joint venture with United Technologies to develop fuel processors for hydrogen fuel cell power systems), and Shell Executive Vice President for the Caribbean and Central America. During the mid-nineties, Mr. Snaith was Chief Representative and Director of Shell China Ltd., where he developed new retail, lubricants, LPG, bitumen, and aviation ventures, a role he considers his most challenging and rewarding experience to date. He has functional expertise in marketing, supply and logistics, and oil trading. He gained leadership experience in mature company turnarounds involving major restructuring and strategic repositioning for profitable growth, new venture start-ups (including joint ventures in China and the U.S.) and new technology research and development. Mr. Snaith holds a B.S. in Physics from Imperial College and an MBA from Cranfield School of Management, both in the U.K.