Advanced Oil & Gas Project Economics, Risk & Decision Analysis

16 - 20 Nov 2020, London
Introduction

The petroleum industry is one of the most important, highly capital intensive and risky business. Global exploration and production spending in 2015 was $644 billion, up 7% from $604 billion the year before. In 2014, the exploration budgets reached $654 billion but this fell to $521 billion in 2015 and in the following year, 2016, there was a further decline of 27%. This year’s global exploration and production spending is expected to increase 7%.

Petroleum industry projects are by their very nature risky. The challenge however is in assessing, managing, and mitigating this risk proactively. The three biggest planning challenges are predicting costs, assessing profitability, and risk management. All these tasks occur in the early stages of capital planning and failure to adequately evaluate these elements can lead to heavy losses.

This GLOMACS training seminar will highlight:

- Identification of the stages required in the risk analysis process, i.e., preparing, modeling, and running risk analysis
- Development of the risk model, assessing probabilities to various variables, risk analysis, and explore the impact of uncertain variables
- Enable the participants to create reports such as, tornadoes diagrams, scatter plots and cumulative probability functions, using excel
- Application of decision trees and Monte Carlo-based simulations to generate profitability indicators
- Enable the participants to develop probabilistic cashflow reports along with probabilistic profitability indicators for decision-making

Objectives

The primary objectives of this GLOMACS training seminar are to:

- Learn how to handle uncertainty in petroleum projects
- Understand different economic terms used in the oil & gas industry
- Understand the expected value concept and learn its impact on decision tree analysis
- Learn expected theory concepts and attitudes towards risk, risk aversion and risk premium
- Acquire spreadsheet skills including simulation software @RISK
- Carry out cashflow analysis, for petroleum related project and use common economic indicators to evaluate between competing alternatives
- Carry out a comprehensive economic study evaluating petroleum related projects using risk and sensitivity analysis by means of spreadsheets
- Enable the participants to develop probabilistic cashflow reports along with probabilistic profitability indicators for decision-making
- Assist the participants to apply the decision-making procedures to justify the petroleum projects in terms of profitability
- Participants learn the decision analysis process and foundation concepts so they can actively participate in multi-discipline evaluation teams
- Monte Carlo simulation is discussed and experienced in detail in hands-on exercises
- Adding value to the oil and gas company’s active projects, through the use of case studies
- Help participants to recognize and identify the influencing parameters for oil and gas field developments

Training Methodology

This GLOMACS Advanced Oil & Gas Project Economics, Risk & Decision Analysis training seminar will enable the training seminar delegates to reach an optimum decision in capital spending.

This GLOMACS Advanced Oil & Gas Project Economics, Risk & Decision Analysis training seminar approach will be facilitated using Microsoft Excel add on @Risk module and will further assist in promoting discussions among the participants.

Organisational Impact

By sending delegates on this five-day GLOMACS training seminar, your organization will benefit by:

- Learning how to apply economic valuation and risk assessment processes and techniques within the oil and gas industry
- Help the participants to identify and analyze the risk involved in a petroleum related project
- Assist the participants to apply the decision-making procedures to justify the petroleum projects in terms of profitability
- Participants learn the decision analysis process and foundation concepts so they can actively participate in multi-discipline evaluation teams
- Monte Carlo simulation is discussed and experienced in detail in hands-on exercises
- Adding value to the oil and gas company’s active projects, through the use of case studies
- Help participants to recognize and identify the influencing parameters for oil and gas field developments

Personal Impact

By attending this GLOMACS training seminar, you will:

- Learn how to describe the elements of the decision analysis process and grasp how construct a project cashflow model incorporating sensitivity analysis
- Evaluate investment and design alternatives with decision tree analysis
- Gain the operational decision making techniques using @Risk
- Gain valuable knowledge in identifying the important uncertainties in petroleum projects
- Enhance your awareness of the influential parameters in an oil and gas field development projects

Who Should Attend?

This GLOMACS Advanced Oil & Gas Project Economics, Risk & Decision Analysis Training seminar is designed to provide technical and practical approaches to executing a petroleum related project in the upstream sector.

This GLOMACS training seminar is suitable to a wide range of professionals but will greatly benefit:

- Planning Managers
- Oil & Gas Engineers
- Project Managers
- Analysts
- Commercial Managers
- Economists
- Government Officials
- Geologists
- Business Advisors
- Asset Managers
- E&P Managers
- Product Managers
- Project Management Professionals
Seminar Outline

DAY 1

Development Economics

• A Brief History of Energy Usage
• Principles of Development Economics
• Understanding of Economic Terms
• Inflation and its Impact on Nominal & Real CashFlows
• Project Financing

DAY 2

Uncertainty in Investments

• Handling Uncertainty in Capital Projects
• Understanding Probability Concepts
• The Expected Value Concept: Features and Pitfalls
  • Expected Monetary Value (EMV)
  • Expected Profitability Index (EPI)
  • Expected Opportunity Loss (EOL)

DAY 3

Risks and Uncertainties

• Risk & Uncertainty
• Risk Aversion and Risk Premium
• Exploration Project Threats and Opportunities
• Economic Decision Criteria
• Decision Tree Analysis
• Probability Distribution
• Case Study: Monte Carlo Simulation

DAY 4

Setting-up Spreadsheet Calculations Using Excel

• Spreadsheet Calculations
• CashFlow Analysis
• Sensitivity Analysis Calculations
• Tornado Diagrams
• Introduction to Monte Carlo Simulations using @Risk
• Class Exercises: Setting-up an Oil Field Project

DAY 5

Practical Use of the @Risk add-on: Oil Field Development Model

• Developing an Integrated Economic Model of an Oil Field Development
• Developing and using an @Risk Model Analysis
• Project Sensitivity Analysis utilizing data from @Risk Model
• Training Seminar Final Review and Close
Advanced Oil & Gas Project Economics, Risk & Decision Analysis

<table>
<thead>
<tr>
<th>Code</th>
<th>Date</th>
<th>Venue</th>
<th>Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>OG080</td>
<td>20 - 24 Jul 2020</td>
<td>London</td>
<td>$5,950</td>
</tr>
<tr>
<td>OG080</td>
<td>16 - 20 Nov 2020</td>
<td>London</td>
<td>$5,950</td>
</tr>
</tbody>
</table>

REGISTRATION DETAILS

LAST NAME:________________________________________
FIRST NAME:_______________________________________
DESIGNATION:_____________________________________
COMPANY: ________________________________________
ADDRESS: ________________________________________
CITY:______________________________________________
COUNTRY: ________________________________________
TELEPHONE:______________________________________
MOBILE: __________________________________________
FAX:_____________________________________________
EMAIL:_____________________________________________

AUTHORISATION DETAILS

AUTHORISED BY:___________________________________
DESIGNATION:_____________________________________
COMPANY: ________________________________________
ADDRESS: ________________________________________
CITY:______________________________________________
COUNTRY: ________________________________________
TELEPHONE:______________________________________
MOBILE: __________________________________________
FAX:_____________________________________________
EMAIL:_____________________________________________

PAYMENT DETAILS

☐ Please invoice my company
☐ Cheque payable to GLOMACS
☐ Please invoice me

CERTIFICATION

Successful participants will receive GLOMACS’ Certificate of Completion

4 WAYS TO REGISTER

Tel: +971 (04) 425 0700
Fax: +971 (04) 425 0701
Email: info@glomacs.com
Website: www.glomacs.com

TERMS AND CONDITIONS

• Fees – Each fee is inclusive of Documentation, Lunch and refreshments served during the entire seminar.
• Mode of Payment – The delegate has the option to pay the course fee directly or request to send an invoice to his/her company/sponsor. Credit card and cheque payments are both acceptable.
• Cancellation / Substitution – Request for seminar cancellation must be made in writing & received three (3) weeks prior to the seminar date. A US$ 250.00 processing fee will be charged per delegate for each cancellation. Thereafter, we regret that we are unable to refund any fees due, although in such cases we would be happy to welcome a colleague who would substitute for you.
• Hotel Accommodation – is not included in the course fee. A reduced corporate rate and a limited number of rooms may be available for attendees wishing to stay at the hotel venue. Requests for hotel reservations should be made at least three (3) weeks prior to the commencement of the seminar. All hotel accommodation is strictly subject to availability and terms and conditions imposed by the hotel will apply.
• Attendance Certificate – a certificate of attendance will only be awarded to those delegates who successfully completed/attended the entire seminar including the awarding of applicable Continuing Professional Education Units/Hours.
• Force Majeure – any circumstances beyond the control of the Company may necessitate postponement, change of seminar venue or substitution of assigned Instructor. The Company reserves the right to exercise this clause and implement such amendments.
• Fair Access / Equal Opportunities – In the provision of its services as a world-class Training Provider, the Company is committed to provide fair access / equal opportunities throughout the delivery of its courses and assessment leading to the completion of training seminars, or 3rd party qualifications/certifications.

GLOMACS
P.O. Box 74653 Dubai, U.A.E.
T: +971 (04) 425 0700     |    F: +971 (04) 425 0701
E: info@glomacs.com     |    W: www.glomacs.com

Connect with Us On LinkedIn

Scan the QR Code* to visit and connect to our LinkedIn profile.

*Requires QR code reader/scanner application to be installed on your smartphone.