

OIL & GAS PROJECT RISK MANAGEMENT: PRINCIPLES AND PRACTICES

“Identifying, Assessing, and Controlling Risk Across the Energy Project Lifecycle”

Schedule

Date	Venue	Fees (Face-to-Face)
02 - 06 Nov 2026	London, UK	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Oil and gas projects are capital-intensive, high-stakes ventures exposed to a wide range of technical, commercial, regulatory, and geopolitical risks. Effective risk management is not just a compliance function—it is central to project success and long-term asset value.

This course provides a practical and structured approach to identifying, assessing, and managing risks throughout the oil & gas project lifecycle. Participants will gain hands-on tools and techniques for integrating risk thinking into planning, execution, and decision-making across exploration, development, construction, and operations.

Objectives

By the end of this course, participants will be able to:

- Identify and classify project risks across the oil & gas value chain
- Apply qualitative and quantitative risk assessment techniques
- Develop risk registers, matrices, and control plans tailored to project phases
- Implement mitigation and response strategies for technical, schedule, and financial risks
- Integrate risk management into project governance, reporting, and decision-making

Why Attend

- Enhance your ability to anticipate and manage uncertainty in complex projects
- Master risk tools such as Monte Carlo simulation, risk matrices, and bowtie diagrams
- Understand contractual and regulatory risk implications in oil & gas projects
- Learn from real-world project case studies and failure analyses
- Build confidence in supporting risk-based project leadership

Target Audience

This program is designed for:

- Project managers and risk coordinators in upstream, midstream, or downstream projects
- Project engineers, schedulers, and cost controllers
- Contract, commercial, and procurement professionals
- Asset managers, planners, and technical team leaders
- Anyone involved in capital project development or oversight in the energy sector

Individual Benefits

Key competencies that will be developed include:

- Proficiency in risk identification and assessment techniques
- Ability to develop risk registers and mitigation action plans
- Knowledge of risk allocation in contracts and partnerships
- Skills to facilitate risk workshops and communicate findings to stakeholders
- Confidence to integrate risk thinking into technical and strategic decisions

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved project delivery outcomes through structured risk practices
- Reduced exposure to schedule, budget, and regulatory failure
- Consistent risk governance and reporting aligned with international standards
- Enhanced cross-functional collaboration on risk responses
- Increased resilience and agility in the face of market and operational volatility

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Risk frameworks, standards (ISO 31000, PMI), and energy-specific risks
- Case Studies - Oil & gas project delays, overruns, and risk mismanagement lessons
- Workshops - Hands-on sessions using risk registers, bowtie models, and probability tools
- Peer Exchange - Sector-specific risk challenges and mitigation approaches
- Tools - Templates for qualitative/quantitative risk analysis, Monte Carlo, and risk reports

Course Outline

Detailed 5-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Project Risk in Oil & Gas

- Module 1: Risk Fundamentals in Energy Projects (07:30 – 09:30) • Types of risk: strategic, operational, financial, technical, HSE • The cost of unmanaged risk in oil & gas • Risk across the lifecycle: exploration to decommissioning
- Module 2: Risk Management Standards and Frameworks (09:45 – 11:15) • ISO 31000, API RP 75, and project management guidelines • Risk maturity and governance models
- Module 3: Workshop – Identifying Lifecycle Risks (11:30 – 01:00) • Build a risk map for a sample offshore or onshore project
- Module 4: Group Discussion – Industry Risk Scenarios (02:00 – 03:30) • Case reviews and peer discussion

Day 2: Risk Identification and Qualitative Assessment

- Module 5: Building a Risk Register (07:30 – 09:30) • Templates, categories, and stakeholder inputs • Setting risk thresholds and tolerance levels
- Module 6: Risk Matrix and Bowtie Analysis (09:45 – 11:15) • Visualizing risk causes, consequences, and controls • Qualitative risk rating systems
- Module 7: Workshop – Creating a Project Risk Register (11:30 – 01:00) • Using case data to build and prioritize risks
- Module 8: Peer Exchange – Control Effectiveness Review (02:00 – 03:30) • Group review of control options

Day 3: Quantitative Risk Analysis Tools

- Module 9: Monte Carlo Simulation Basics (07:30 – 09:30) • Probability distributions, PERT and triangular methods • Schedule and cost risk modeling
- Module 10: Quantifying Risk Impact (09:45 – 11:15) • Expected monetary value (EMV), risk exposure, and reserve planning • Integrating uncertainty into project baselines
- Module 11: Workshop – Quantifying Schedule Risk (11:30 – 01:00) • Modeling project timelines using Monte Carlo tools
- Module 12: Case Study – Cost Overrun Analysis (02:00 – 03:30) • Root cause and mitigation strategies

Day 4: Risk Response and Control Planning

- Module 13: Risk Treatment Strategies (07:30 – 09:30) • Avoidance, mitigation, transfer, and acceptance • Contractual risk transfer mechanisms
- Module 14: Risk Control Planning and Monitoring (09:45 – 11:15) • Control plans, triggers, and escalation thresholds • Embedding risk into project controls and reporting
- Module 15: Workshop – Designing a Risk Action Plan (11:30 – 01:00) • Assigning roles and monitoring actions in a simulated project
- Module 16: Group Activity – Risk Owner Roles (02:00 – 03:30) • Roleplay and stakeholder engagement

Day 5: Risk Integration and Final Case Review

- Module 17: Integrating Risk into Project Execution (07:30 – 09:30) • PMO and governance team integration • Risk-informed decision-making frameworks
- Module 18: Reporting Risk to Stakeholders (09:45 – 11:15) • Heat maps, dashboards, and communication strategies • Tailoring reports for boards, clients, and partners
- Module 19: Final Project – Comprehensive Risk Register (11:30 – 01:00) • Present and defend a project-wide risk strategy
- Module 20: Course Closure, Feedback, and Certification (02:00 – 03:30) • Review key takeaways and issue certificates

Certification

Participants will receive a Certificate of Completion in Oil & Gas Project Risk Management, confirming their competence in identifying, assessing, and managing risks across capital energy projects using globally accepted tools and practices.

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