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OIL AND GAS | OG-012

Strategic Project Risk & Decision Analysis for Energy Sector Professionals

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Course content

Why Attend

Energy projects are characterized by high capital exposure, long execution timelines, and complex technical and market uncertainties. Strategic decisions made early in the project lifecycle have a direct impact on profitability, safety, and operational success.

This course equips professionals with advanced risk and decision analysis techniques to support strategic planning, investment evaluation, and project execution in uncertain environments. It enables participants to move beyond qualitative risk identification toward structured, evidence-based decision-making.

Course Methodology

The course is delivered through a practical and interactive approach:

- Real-life energy and oil & gas case studies
- Facilitated group discussions and decision workshops
- Scenario-based simulations and strategic exercises
- Application of structured analytical frameworks
- Practical tools for immediate use in projects

Course Objectives

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

- Apply strategic risk analysis techniques in energy projects
- Evaluate complex project decisions under uncertainty
- Integrate risk thinking into strategic planning and investment decisions
- Use structured frameworks for multi-criteria decision analysis
- Assess project alternatives based on risk-adjusted outcomes
- Improve decision quality in high-stakes environments



Course content

Target Audience

This program is designed for:

- Project Managers and Senior Engineers
- Risk Management Professionals
- Strategy and Planning Managers
- Investment and Portfolio Analysts
- Technical and Operational Leaders in energy sector
- Professionals involved in capital project decision-making

Target Competencies

Participants will develop competencies in:

- Strategic risk assessment and prioritization
- Decision analysis and structured thinking
- Risk-based investment evaluation
- Scenario planning and forecasting
- Multi-criteria decision-making techniques
- Communication of strategic risk insights

Course outline

Day 1: Strategic Risk Fundamentals in Energy Projects

- Understanding strategic risk in energy sector projects
- Sources of uncertainty in large-scale energy investments
- Risk management frameworks and governance structures
- Identifying and structuring strategic risks



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Course outline

• Developing a strategic risk register

• Qualitative risk analysis and prioritization techniques

Day 2: Quantitative Risk Analysis for Strategic Decisions

• Introduction to quantitative risk thinking

• Probability concepts applied to project risk

• Sensitivity analysis and key risk drivers

• Introduction to simulation-based thinking (Monte Carlo concepts)

• Evaluating uncertainty in cost, schedule, and performance

• Interpreting risk outputs for decision support

Day 3: Decision Analysis Frameworks

• Decision-making under uncertainty principles

• Decision trees and expected value analysis

• Multi-criteria decision analysis (MCDA)

• Risk appetite and strategic trade-offs

• Evaluating investment alternatives

• Case study: Energy project investment decision

Day 4: Scenario Planning & Strategic Risk Modeling

• Scenario development for energy projects

• Stress testing and extreme scenario analysis

• Modeling dependencies and interrelated risks

• Strategic portfolio risk considerations

• Risk mitigation and optimization strategies



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• Practical workshop: scenario-based decision modeling

Day 5: Embedding Risk into Strategic Decision-Making

• Integrating risk analysis into strategic planning

• Governance and executive risk reporting

• Communicating uncertainty to senior stakeholders

• Enhancing decision quality in capital projects

• Industry best practices from energy sector

• Final case study and group presentations



Seminar dates

Available seminar dates

Live dates and pricing for Strategic Project Risk & Decision Analysis for Energy Sector Professionals generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	Barcelona - Spain	Classroom	**€3,400.-**
16 - 20 November 2026	Kuala lumpur - Malaysia	Classroom	**€2,280.-**
7 - 11 December 2026	London - U.K	Classroom	**€3,400.-**
14 - 18 December 2026	Barcelona - Spain	Classroom	**€3,400.-**
21 - 25 December 2026	Vienna - Austria	Classroom	**€3,360.-**
4 - 8 January 2027	Kuala lumpur - Malaysia	Classroom	**€1,800.-**
1 - 5 February 2027	Cape Town - South Africa	Classroom	**€2,272.-**
1 - 5 March 2027	Barcelona - Spain	Classroom	**€3,080.-**
5 - 9 April 2027	Munich - Germany	Classroom	**€3,400.-**
3 - 7 May 2027	Kuala lumpur - Malaysia	Classroom	**€1,800.-**
7 - 11 June 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
5 - 9 July 2027	London - U.K	Classroom	**€3,360.-**
2 - 6 August 2027	Paris - France	Classroom	**€3,600.-**
6 - 10 September 2027	London - U.K	Classroom	**€3,360.-**
4 - 8 October 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
1 - 5 November 2027	London - U.K	Classroom	**€3,360.-**
6 - 10 December 2027	Barcelona - Spain	Classroom	**€3,080.-**