COURSE OVERVIEW TM1112
Measuring, Assessing & Managing Risk in Energy Projects

Course Title
Measuring, Assessing & Managing Risk in Energy Projects

Course Date/Venu
October 12-16, 2025/Meeting Plus 9, City Centre Rotana, Doha, Qatar

Course Reference
TM1112

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date knowledge of Measuring, Assessing & Managing Risk in Energy Projects. It covers the risk management in energy projects, energy project lifecycle and risk exposure and risk management frameworks and standards; the stakeholders and risk ownership, risk taxonomy in energy projects and tools for risk identification; the qualitative risk assessment, quantitative risk assessment, scenario planning and stress testing and cost and schedule risk assessment; the technical and operational risk modeling, environmental and social impact risks, risk response planning, risk allocation and contractual clauses and insurance and risk transfer mechanisms.

During the course, participants will be able to monitor risk controls and performance, governance, compliance and risk auditing, crisis management and business continuity; integrating risk into strategic project decisions and portfolio risk management for energy companies, financial and market risk in energy projects and risk-based decision-making and optimization; the lender and investor risk requirements, regulatory and policy risk management and tools and software for risk management; building a project risk register and risk management culture; and the energy transition and emerging risks.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on measuring, assessing and managing risk in energy projects
- Discuss risk management in energy projects, energy project lifecycle and risk exposure and risk management frameworks and standards
- Identify stakeholders and risk ownership as well as recognize risk taxonomy in energy projects and tools for risk identification
- Explain qualitative risk assessment, quantitative risk assessment, scenario planning and stress testing and cost and schedule risk assessment
- Analyze technical and operational risk modeling, environmental and social impact risks, risk response planning, risk allocation and contractual clauses and insurance and risk transfer mechanisms
- Monitor risk controls and performance and explain governance, compliance and risk auditing, crisis management and business continuity
- Integrate risk into strategic project decisions and discuss portfolio risk management for energy companies, financial and market risk in energy projects and risk-based decision-making and optimization
- Identify lender and investor risk requirements, regulatory and policy risk management and tools and software for risk management
- Build a project risk register and risk management culture as well as discuss energy transition and emerging risks

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of measuring, assessing and managing risk in energy projects for project managers and engineers, risk management professionals, finance and investment analysts, energy sector executives and decision-makers, regulatory and compliance officers, consultants and advisors and those who involved in planning, financing, executing, or overseeing energy-related projects.

Course Fee

US$ 6,000 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Dimitry Rovas, CEng, MSc, PMI-PMP, SMRP-CMRP is a **Senior Management Consultant & Maintenance Engineer** with extensive industrial experience in **Oil**, **Gas**, **Power** and **Utilities** industries. His expertise includes **Leadership** & **Change** Management, **Leadership & Mentoring**, **Supply Chain** Management, **Strategic Supply Chain** Management, **Supply Chain** Advanced, **Time** Management, **Performance** Management, **Strategic Planning & Analysis and Communication & Reporting** Skills, **Talent** Management, **Presentation** Skills, **Negotiation** Skills, **Interpersonal** Skills, **Communication** Skills, **Collaboration** Skills, Developing **Effective Partnership**, **Developing & Managing Budget**, **Technical Design & Development**, **Analytical & Troubleshooting** Techniques, **Interpersonal** Skills, **Project** Management, **Construction** Management, **Project Management Planning & Control Techniques**, **Project Risk** Management, **Quality** Management, **Project Acceleration** Techniques, **Scope Control** Management, **Contract** Management, **Asset** Management, **Procurement & Purchasing** Management, **Warehousing**, **Quality Management System** (**QMS**) and **Business** Management. Further, he is also well-versed in **Maintenance** Optimization & Best Practices, **Maintenance** Auditing & Benchmarking, **Reliability** Management, **Reliability Centered Maintenance** Principles & Application, **Machinery Lubrication**, **Maintenance Planning & Scheduling**, **Coupling & Shaft Alignment** Techniques, **Maintenance** Management & Cost Control, **Preventive & Predictive Maintenance**, **Effective Reliability** Maintenance & Superior Maintenance Strategies, **Integrity & Asset** Management, Reliability, Availability & Maintainability (**RAM**), Total Plant Reliability Centered Maintenance, **Turnaround & Outages**, **Process Plant** Shutdown, Turnaround & Troubleshooting, **Shutdown & Turnaround** Management, **Integrity & Asset** Management, **Maintenance Management** Best Practices, **Material Cataloguing**, **Maintenance** Planning & Scheduling, Effective **Reliability Maintenance**, **Maintenance Contracting & Outsourcing**, **Maint enance Inventory**, **Materials** Management, **Mechanical & Rotating Equipment** Troubleshooting & Maintenance, **Rotating Equipment Reliability** Optimization, Computerized Maintenance Management System (**CMMS**), **Material Cataloguing & Specifications**, **Rotating Equipment** Maintenance & Troubleshooting, **Pump** Technology, **Pump** Selection & Installation, **Reciprocating & Centrifugal Compressors**, **Energy Conservation**, **Electricity Distribution Systems**, **Energy Saving**, **Combined Cycle Power Plant**, **Gas & Steam Turbines**, **Heat Transfer**, **Machine Design**, **Fluid Mechanics**, **Heating & Cooling** Systems, **Heat Insulation** Systems and **Heat Exchanger & Cooling Towers**. He was the **Project Manager** wherein he was managing, directing and controlling all activities and functions associated with the domestic heating/cooling facilities projects.

During his life career, Mr. Rovas has gained his practical and field experience through his various significant positions and dedication as the **EPC Project Manager**, **Field Engineer**, **Preventive Maintenance Engineer**, **Researcher**, **Instructor/Trainer**, **Telecom Consultant** and **Consultant** from various companies such as the Podaras Engineering Studies, Metka and Diadikasia, S.A., **Hellenic Petroleum Oil Refinery** and COSMOTE.

Mr. Rovas is a **Chartered Engineer** of the **Technical Chamber** of **Greece**. Further, he has **Master's** degree in **Mechanical Engineering** and **Energy Production & Management** from the **National Technical University of Athens**. Moreover, he is a **Certified Instructor/Trainer**, a **Certified Maintenance and Reliability Professional** (**CMRP**) from the Society of Maintenance & Reliability Professionals (**SMRP**), a **Certified Project Management Professional** (**PMP**), a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and a **Certified Six Sigma Black Belt**. He is an active member of Project Management Institute (**PMI**), Technical Chamber of Greece and Body of Certified Energy Auditors and has further delivered numerous trainings, seminars, courses, workshops and conferences internationally.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Sunday, 12th of October 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Risk Management in Energy Projects*** *Definition and Types of Risk (Strategic, Technical, Financial, HSE) • Importance of Risk Management Across the Project Lifecycle • Risk versus Uncertainty in Energy Investments • Energy Sector-Specific Risk Examples (Oil Price Volatility, Regulatory Shifts)*
0930 – 0945	*Break*
0945 – 1030	***Energy Project Lifecycle & Risk Exposure*** *Phases: Conceptual, Feasibility, Design, Execution, Operation, Decommissioning • Risk Drivers in Each Phase • Risk Exposure During Transitions Between Project Stages • Stage-Gate Risk Considerations*
1030 – 1130	***Risk Management Frameworks & Standards*** *ISO 31000 and its Application • COSO ERM Framework • Project Management Institute (PMI) Risk Process • Integration with Corporate Governance and Compliance*
1130 – 1215	***Identifying Stakeholders & Risk Ownership*** *Internal versus External Stakeholders • Role of Sponsors, Regulators, Community and Lenders • Assigning Ownership and Accountability • Communication and Reporting Strategies*
1215 – 1230	*Break*
1230 – 1330	***Risk Taxonomy in Energy Projects*** *Technical, Operational, Financial, Commercial, Environmental and Geopolitical Risks • Legal and Contractual Risks • Health, Safety and Security (HSE) Risks • Climate and Sustainability-Related Risks*
1330 – 1420	***Tools for Risk Identification*** *Brainstorming and Expert Judgment • Checklists and Lessons Learned Databases • SWOT and PESTLE Analysis • HAZID, HAZOP and What-If Analysis*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2: Monday, 13th of October 2025

0730 – 0830	***Qualitative Risk Assessment*** *Likelihood and Consequence Matrices • Risk Ranking and Prioritization • Color-Coded Risk Heat Maps • Confidence Levels and Assumptions*
0830 – 0930	***Quantitative Risk Assessment*** *Probability Distributions and Expected Values • Sensitivity Analysis • Monte Carlo Simulation Basics • Risk-Adjusted NPV and IRR*
0930 – 0945	*Break*
0945 – 1100	***Scenario Planning & Stress Testing*** *Defining High-Impact, Low-Probability Scenarios • Scenario Analysis versus Forecasting • Energy Price and Regulatory Stress Testing • Application to Power Purchase Agreements and Upstream Economics*
1100 – 1215	***Cost & Schedule Risk Assessment*** *Contingency Estimation • Risk Registers for Cost Overruns and Delays • Critical Path and Float Risk Identification • Use of PERT and Three-Point Estimation*
1215 – 1230	*Break*
1230 – 1330	***Technical & Operational Risk Modeling*** *Equipment Failure and Reliability Risk • Technology Maturity and Integration Risk • Interface Risks Across Contractors and Packages • Control System and Cybersecurity Vulnerabilities*
1330 – 1420	***Environmental & Social Impact Risks*** *ESG-Related Risk Evaluation • Impact Assessment Methodologies • Reputation and Community Relations Risk • Permitting and Compliance Challenges*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3: Tuesday, 14th of October 2025

0730 – 0830	***Risk Response Planning*** *Risk Avoidance, Reduction, Transfer and Acceptance • Designing Layered Mitigation Strategies • Residual Risk Evaluation • Response Plan Documentation and Change Control*
0830 – 0930	***Risk Allocation & Contractual Clauses*** *EPC, BOOT and PPP Risk Allocation Models • Force Majeure, Liquidated Damages and Indemnities • Risk-Sharing Models with Joint Ventures or Partners • Clauses for Performance and Availability Guarantees*
0930 – 0945	*Break*
0945 – 1100	***Insurance & Risk Transfer Mechanisms*** *Role of Insurance in Energy Risk Management • Types of Coverage: CAR, EAR, Business Interruption, Liability • Captive Insurance and Reinsurance • Claims Management and Exclusions*
1100 – 1215	***Risk Controls & Performance Monitoring*** *Leading versus Lagging Risk Indicators • Control Plans and Checklists • Performance Monitoring Systems (SCADA, EMS, ERP) • KPIs for Risk Management Effectiveness*
1215 – 1230	*Break*
1230 – 1330	***Governance, Compliance & Risk Auditing*** *Integrating Risk into Project Governance • Compliance with Local and International Standards • Internal Audit of Risk Controls • Risk Assurance Reviews and Third-Party Audits*
1330 – 1420	***Crisis Management & Business Continuity***

	Emergency Response Planning • Continuity Planning for Energy Assets • Simulation and Drill Exercises • Integration with Cybersecurity and IT Resilience
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4: Wednesday, 15th of October 2025

0730 – 0830	***Integrating Risk into Strategic Project Decisions*** *Strategic Risk Appetite and Tolerance • Balancing Risk and Opportunity • Capital Allocation Under Uncertainty • Energy Transition and Low-Carbon Risks*
0830 – 0930	***Portfolio Risk Management for Energy Companies*** *Diversification of Assets and Geographies • Correlation and Risk Aggregation • Enterprise-Level Risk Reporting • Use of Dashboards and Risk Heat Maps*
0930 – 0945	*Break*
0945 – 1100	***Financial & Market Risk in Energy Projects*** *Interest Rate, Inflation and Exchange Rate Risks • Commodity Price Risk (Oil, Gas, Electricity) • Hedging Strategies and Instruments • Energy Trading and Price Exposure Management*
1100 – 1215	***Risk-Based Decision-Making & Optimization*** *Decision Trees and Expected Monetary Value (EMV) • Real Options Analysis in Project Evaluation • Trade-Off Analysis (Cost versus Risk versus Performance) • Multi-Criteria Decision Analysis (MCDA)*
1215 – 1230	*Break*
1230 – 1330	***Lender & Investor Risk Requirements*** *Risk Perception by Financiers and Insurers • Risk Covenants in Loan Agreements • Project Finance and Bankability Assessments • Transparency and Reporting for ESG Risks*
1330 – 1420	***Regulatory & Policy Risk Management*** *Adapting to Evolving Energy Regulations • Permitting and Environmental Approval Risks • Carbon Pricing and Emissions Regulation • International Frameworks: Paris Agreement, SDGs*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

Day 5: Thursday, 16th of October 2025

0730 – 0830	***Case Studies in Oil, Gas & Renewable Energy*** *Offshore Platform Risk Assessment • Solar and Wind Energy Project Risk Mitigation • LNG Terminal Schedule and Cost Risk Control • Lessons Learned from Nuclear and Hydropower Projects*
0830 – 0930	***Tools & Software for Risk Management*** *Primavera Risk Analysis • Palisade @Risk and Crystal Ball • Bowtie XP for HSE Risk Visualization • ERP Integration with SAP Risk Modules*
0930 – 0945	*Break*
0945 – 1030	***Building a Project Risk Register***

	Developing a Risk Register Template • Linking Risks to WBS and Project Milestones • Review and Update Mechanisms • Lessons Learned for Future Projects
1030 – 1230	***Building a Risk Management Culture*** *Leadership and Tone from the Top • Training and Capacity Building • Aligning with Safety and Quality Programs • Embedding Risk into Daily Operations*
1230 – 1245	*Break*
1245 – 1345	***Energy Transition & Emerging Risks*** *Climate-Related Financial Risk Disclosures (TCFD) • Decarbonization and Stranded Asset Risk • Technology Disruption in Renewables and Hydrogen • ESG and Stakeholder Activism in Project Approvals*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-

Course Coordinator

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