LNG PROJECT MANAGEMENT



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Introduction

LNG Project Management examines how teams deliver liquefaction, regasification, and LNG marine facilities under extreme technical, contractual, and schedule pressure. This Training Course covers the LNG value chain, front-end engineering and design, long-lead equipment, modular fabrication, marine installation, and commissioning. Participants study the LNG value chain from gas treatment through liquefaction, storage, loading, shipping, regasification, and send-out, the FEL stage-gate model and AACE International cost estimate classes, the PMBOK Guide performance domains, liquefaction train configuration and capacity, cryogenic materials and equipment selection, the FERC and IGU practice references, the critical path method and DCMA 14-point schedule assessment, earned value management with SPI, CPI and TCPI, Monte Carlo schedule and cost risk analysis, HAZOP and HSE requirements, ISO 55000 asset management alignment, and commissioning and start-up assurance. Furthermore, the programme connects method to delivery through schedule labs, long-lead procurement workshops, and commissioning review simulations.

LNG Project Management Course Objectives

- Explain the LNG value chain and facility types.
- Apply the FEL stage-gate model to LNG project development.
- Apply AACE International cost estimate classes to LNG budgets.
- Apply the PMBOK Guide performance domains to LNG delivery.
- Manage long-lead equipment procurement and delivery risk.
- Plan modular fabrication and marine transport logistics.
- Assess schedule quality with the DCMA 14-point criteria.
- Apply earned value management with SPI, CPI, and TCPI.
- Quantify cost and schedule risk with Monte Carlo analysis.
- Govern commissioning, start-up assurance, and handover.

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Course Methodology

- Interactive workshops using real LNG project data.
- FEL stage-gate and estimate class application labs.
- Long-lead procurement and logistics planning exercises.
- Schedule health, earned value, and risk workshops.
- Commissioning and start-up review simulations.

Who Should Take This Course

- LNG project managers and engineering leads.
- Project control specialists in LNG projects.
- Procurement and long-lead equipment managers.
- Planning and scheduling engineers.
- Commissioning and start-up engineers.
- HSE and assurance professionals.
- Consultants supporting LNG development.

LNG Project Management Course Outlines

Day 1: LNG Value Chain and Facility Types

- Gas treatment, liquefaction, and the thermodynamic cycle basics.
- Liquefaction trains, storage tanks, and loading facilities.
- Shipping, regasification terminals, and send-out.
- Onshore versus floating LNG (FLNG) configurations.
- Project characteristics: scale, capital intensity, long duration.

- Common failures: underestimated utilities, late long-lead items.
- Building the LNG context pack.

Day 2: Front-End Loading and Estimate Classes

- The FEL stage-gate model and investment decision gates.
- AACE International cost estimate classes 5 through 1.
- Basis of estimate, contingency, and escalation for LNG.
- Scope definition and licensor package interfaces.
- FEED deliverables and design freeze criteria.
- Management of change and scope control in early phases.
- Building the FEL and estimate pack.

Day 3: Long-Lead Procurement and Fabrication

- Critical long-lead equipment: compressors, cold boxes, exchangers.
- Vendor pre-qualification and expediting practice.
- Modularisation strategy and yard selection criteria.
- Site logistics, laydown, and heavy lift planning.
- Schedule development with the critical path method.
- DCMA 14-point schedule assessment.
- Building the procurement and fabrication pack.

Day 4: Control, Risk, and Marine Delivery

- Earned value management with SPI, CPI, and TCPI.
- Monte Carlo cost and schedule risk analysis.
- Weather windows and marine installation constraints.

- HAZOP, HSE, and safety case requirements in LNG.
- Interface management between licensor, EPC, and operator.
- Quality assurance for cryogenic and pressure systems.
- Building the control, risk, and marine pack.

Day 5: Commissioning, Start-Up, and Handover

- Pre-commissioning, commissioning, and start-up sequencing.
- Systems completion, punch list, and turnover management.
- Performance test runs and ramp-up measurement.
- ISO 55000 alignment and operational readiness.
- Benefits realisation and production ramp-up.
- Preventing gaming: optimistic commissioning dates and progress distortion.
- Personal action plan and continuous improvement.

Conclusion

By successfully completing LNG Project Management, participants will have acquired a practical command of the LNG value chain, front-end loading, estimate classification, long-lead procurement, modular fabrication, project control, risk analysis, and commissioning assurance. They will know how to protect an LNG schedule from long-lead equipment risk, plan modularisation and marine logistics before the yard is chosen, and structure commissioning with defined systems completion rather than hope. In addition, the course prepares delegates to manage licensor and EPC interfaces without hidden gaps. As a result, they return to work ready to deliver LNG facilities with controls that match the asset. Gentex Training Center delivers this Training Course with a practical, standards-based approach.

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FAQs for the LNG Project Management course

Q1 What is the "LNG Project Management" course about?

It is a five-day programme on delivering liquefaction, regasification, and LNG marine facilities under extreme technical, contractual, and schedule pressure. It covers the LNG value chain, the FEL stage-gate model, AACE cost estimate classes, long-lead equipment procurement, modularisation and marine logistics, critical path and DCMA schedule assessment, earned value control, Monte Carlo risk analysis, and commissioning assurance.

Q2 What are the key benefits of the "LNG Project Management" course?

Participants gain the ability to protect an LNG schedule from long-lead equipment risk, plan modularisation and marine logistics before the yard is chosen, and structure commissioning with defined systems completion rather than hope. They also learn to manage licensor and EPC interfaces without hidden gaps.

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Q3 What skills will I gain from the "LNG Project Management" course?

LNG context work with value chain mapping, facility type assessment, and project characteristic analysis, FEL and estimate work with stage-gate model application, AACE estimate class application, basis of estimate construction, contingency and escalation design, FEED deliverable assessment, design freeze criteria definition, and management of change control, procurement and fabrication work with long-lead equipment identification, vendor pre-qualification, expediting practice, modularisation strategy design, yard selection criteria, logistics and laydown planning, heavy lift planning, critical path analysis, DCMA 14-point assessment, and schedule health review, and control, risk and commissioning work with earned value interpretation, SPI, CPI and TCPI calculation, Monte Carlo cost and schedule analysis, weather window assessment, marine installation constraint analysis, HAZOP and HSE requirement application, interface management, cryogenic quality assurance, pre-commissioning and commissioning sequencing, systems completion and punch list management, performance test design, ISO 55000 alignment, operational readiness assessment, benefits realisation, and anti-gaming practice.

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Q4 What tools, methods, or standards are covered in the "LNG Project Management" course?

The course covers gas treatment, liquefaction and the thermodynamic cycle basics, liquefaction trains, storage tanks and loading facilities, shipping, regasification terminals and send-out, onshore versus floating LNG configurations, project characteristics across scale, capital intensity and long duration, common failures across underestimated utilities and late long-lead items, the FEL stage-gate model and investment decision gates, AACE International cost estimate classes 5 through 1, basis of estimate, contingency and escalation for LNG, scope definition and licensor package interfaces, FEED deliverables and design freeze criteria, management of change and scope control in early phases, critical long-lead equipment across compressors, cold boxes and exchangers, vendor pre-qualification and expediting practice, modularisation strategy and yard selection criteria, site logistics, laydown and heavy lift planning, schedule development with the critical path method, DCMA 14-point schedule assessment, earned value management with SPI, CPI and TCPI, Monte Carlo cost and schedule risk analysis, weather windows and marine installation constraints, HAZOP, HSE and safety case requirements in LNG, interface management between licensor, EPC and operator, quality assurance for cryogenic and pressure systems, pre-commissioning, commissioning and start-up sequencing, systems completion, punch list and turnover management, performance test runs and ramp-up measurement, ISO 55000 alignment and operational readiness, benefits realisation and production ramp-up, and preventing gaming across optimistic commissioning dates and progress distortion.

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Q5 How is the "LNG Project Management" course applied in real-world practice?

Delegates apply it through LNG context packs, value chain maps, facility configuration assessments, project characteristic analyses, FEL stage-gate plans, investment decision papers, estimate class assessments, basis of estimate documents, cost estimates, contingency methodologies, escalation forecasts, scope statements, licensor interface registers, FEED deliverable registers, design freeze records, management of change logs, long-lead equipment registers, vendor pre-qualification records, expediting reports, modularisation strategies, yard selection matrices, logistics plans, laydown plans, heavy lift studies, network diagrams, critical path analyses, DCMA 14-point assessment reports, schedule health reports, earned value reports, SPI and CPI calculations, TCPI models, Monte Carlo cost simulations, Monte Carlo schedule simulations, contingency drawdown records, weather window analyses, marine installation plans, HAZOP records, HSE plans, safety case references, interface registers, cryogenic quality records, pressure system test records, commissioning plans, pre-commissioning checklists, systems completion registers, punch lists, turnover packs, performance test procedures, ramp-up reports, ISO 55000 alignment assessments, operational readiness assessments, benefits realisation registers, anti-gaming checklists, and LNG improvement plans. They also use them to chair stage-gate reviews and to present LNG project performance to partners, lenders, and boards.