

# € TRAINING

LNG Management





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## Introduction:

This training program provides comprehensive instruction on the principles, practices, and operations of liquefied natural gas LNG industry management. It equips participants with the skills and expertise needed to effectively manage LNG operations and navigate the complexities of the global LNG market.

## Program Objectives:

At the end of this program, participants will be able to:

- Gain a deep understanding of the LNG and LPG value chains.
- Analyze LNG production, storage, transportation, and distribution processes.
- Evaluate LNG pricing structures and mechanisms for exports.
- Differentiate between various sales and marketing terms and conditions.
- Interpret terms in LPG sales and purchase agreements.
- Apply economic evaluation benchmarks to determine investment returns.

## Targeted Audience:

- Energy industry professionals involved in LNG production, transportation, and distribution.
- Managers and engineers responsible for LNG liquefaction, regasification, and terminal operations.
- Logistics and supply chain managers overseeing LNG shipping, storage, and distribution networks.
- Environmental and safety specialists focusing on LNG industry compliance and risk management.
- Government officials, policymakers, and regulatory authorities involved in LNG industry oversight and governance.

## Program Outlines:

### Unit 1:

#### Introduction to LNG Industry:

- Overview of the LNG industry: History, growth, and key players.

- LNG production process: From natural gas extraction to liquefaction.
- LNG transportation: Methods, vessels, and safety considerations.
- Market dynamics: Supply, demand, pricing, and trading.
- Regulatory framework: International regulations and standards governing LNG operations.

## Unit 2:

### LNG Liquefaction and Processing:

- Liquefaction process: Cryogenic cooling, compression, and liquefaction technologies.
- Gas treatment: Removal of impurities, dehydration, and purification processes.
- LNG storage: Types of storage tanks, safety measures, and storage capacity considerations.
- Quality control: Monitoring and maintaining LNG composition, purity, and specifications.
- Environmental considerations: Emissions reduction, waste management, and sustainability practices.

## Unit 3:

### LNG Transportation and Logistics:

- LNG carriers: Types of vessels, containment systems, and vessel design considerations.
- Shipping routes and terminals: Key transportation hubs, route optimization, and terminal infrastructure.
- LNG loading and unloading operations: Procedures, safety protocols, and operational challenges.
- LNG bunkering: Fueling vessels and infrastructure for LNG-powered ships.
- Risk management: Safety measures, emergency response plans, and insurance considerations.

## Unit 4:

### LNG Regasification and Distribution:

- LNG regasification process: Heat exchange, vaporization, and pressure regulation.
- Onshore and offshore regasification terminals: Infrastructure, facilities, and operational considerations.
- Natural gas distribution networks: Pipeline transportation, storage facilities, and grid integration.
- LNG-to-power projects: Role of LNG in electricity generation and power plant operations.
- Market development: Expanding LNG infrastructure, access to new markets, and regulatory challenges.

## Unit 5:

### LNG Safety, Security, and Risk Management:

- Safety regulations and standards: Compliance with international safety codes and guidelines.
- Emergency response planning: Preparedness, response strategies, and incident management protocols.
- Security considerations: Protecting LNG assets, preventing sabotage, and managing security risks.
- Risk assessment and mitigation: Identifying hazards, assessing risks, and implementing control measures.
- Training and personnel competency: Developing skills, conducting drills, and fostering a safety culture within the LNG industry.