

Training - Liquefied Natural Gas (LNG)



LNG-EN-P



Face-to-face only



5 days

This course provides a comprehensive technical and economic review of the Liquefied Natural Gas industry

Level

Knowledge

Public

Professionals involved or interested in the LNG industry: technical and managerial staff in the LNG industry, equipment providers, personnel from engineering companies, etc

Objectives

Attendees will be able to implement the following skills:

- define the main LNG physical properties and associated hazards
- describe the main liquefaction processes' operating principles
- understand the main LNG equipment details
- acquire an understanding of the new trends and evolving technologies
- develop quantitative LNG Project valuation skills

Pedagogical & technical resources

- Highly interactive training by industry-specialist lecturers
- Numerous applications, illustrations and videos

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsible

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

THE LNG VALUE CHAIN

0.25 day

Introduction to the LNG industry

The LNG supply chain: Order of magnitude and trends, Location of main plants worldwide.

Types of LNG plants: Base load LNG plants. Peak shaving LNG plants. Small LNG plants for LNG fueled vehicles.

Receiving terminals. Regasification techniques.

LNG SPECIFIC PROPERTIES & ASSOCIATED HAZARDS

0.25 day

Physical properties: liquid-vapor equilibrium, density, heat of vaporization, heat of combustion
 Safety aspects: flash point, fire point, auto-ignition point, minimum spark energy, flammability limits, deflagration.
 LNG vaporization, Rapid Phase Transition (RPT), radiation levels, stratification/roll-over, sloshing, LNG clouds ignition.
 Hazards: Asphyxiation risks, cryogenic liquids jets, piping behavior.
 Cryogenic personnel protection items.

LNG HAZARD PREVENTION & MITIGATION MEASURES

0.25 day

LNG spillage control at design stage and in operation.
 LNG clouds control in operation.
 Fire control measures at design and operational stages.
 Emergency response and risk management.

LIQUEFACTION & REGASIFICATION PROCESSES

1 day

Natural Gas conditioning and Feed pretreatment: sweetening, dehydration, NGL extraction, Hg and aromatics removal.
 Liquefaction processes: pure component refrigerants, mixed refrigerants.
 Peak shaving simplified scheme.
 Regasification process and Floating Storage Regasification Units (FSRU).
 Small Scale LNG, processes, characteristics and layouts.

LNG STORAGE, LOADING/OFFLOADING & TRANSPORT

0.75 day

LNG tanks: single, double, or full containment.
 Jetty head, jetty trestle, and harbor operations.
 LNG carriers: technology, cargo operations, safety systems.

TECHNOLOGY OF LNG SPECIFIC EQUIPMENT

1 day

Various Cryogenic compressors, drivers and possible configurations
 LNG cryogenic heat exchangers: spiral wound, aluminum brazed.
 LNG Vaporizers: Open Rack Vaporizers (ORV), Submerged Combustion Vaporizers (SCV), Ambient air vaporizers (AAV).
 Safety and environmental aspects.
 Submerged LNG pumps: in-tank, retractable, cargo pumps, HP canned send out pumps.
 Liquid cryogenic turbo-expanders, cryogenic valves.

KEY PLANT RELIABILITY & OPERATION PARAMETERS

0.5 day

Reliability and Maintenance in LNG plants design.
 Operational aspects of LNG plants.

LNG TRENDS - RESEARCH & NEW DEVELOPMENTS

0.25 day

Latest trends, innovations, concept advancements and future developments in LNG, FLNG and FRSU.

LNG ECONOMIC ASPECTS

0.75 day

Global gas markets: reserves, production, demand, and trade.
 LNG Projects Economics case study / Workshop (Hands-on discounted cash flow based on Equipment estimation, Freight Calculations...)
 LNG contracts, learn the specifics, pricing, shipping contracts.
 Market trends and outlook.

Sessions

Rueil-Malmaison - From 11/16/2026 to 11/20/2026

5550 €/HT

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com