

Training - Gas chain economics and energy transition



GCEG-EN-P



Face-to-face only



55 days

The natural gas market, including LNG (liquefied natural gas) in particular, has experienced strong development. This sector is impacted by the energy transition and the development of competing energies. The IFP Training Certificate program in gas chain economics in this context of the energy transition provides knowledge and know-how to professionals in key disciplines solicited in upstream to downstream gas marketing development projects. It offers professionals the opportunity to acquire high-level skills in the fields of gas project economics as well as an in-depth understanding of the industrial dynamics observed in this natural gas sector.

IFP Training Certificate

Graduate Certificate

Level

Knowledge

Public

All key players, engineers, market analysts, project managers, managers, professionally evolving towards a position requiring in-depth knowledge of the economic and contractual issues of the Gas & LNG chain in this context of energy transition.

Objectives

Attendees will be able to implement the following skills:

- Be aware of the components of the global gas scene
- Specify the characteristics of natural gas and detail the natural gas chain
- Be aware of the technical, operational and commercial conditions concerning shipping
- Make investment profitability analysis in the gas sector
- Identify the main clauses of gas and LNG agreements
- Understand the operational responsibilities of the actors from the chain Front-to-Back

Pedagogical & technical resources

- Highly interactive training with industry expert speakers
- Computer-simulated case studies based on gas projects
- Quizzes, videos and application exercises
- Scenario, negotiation role plays

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

MODULE 1: ENERGY ISSUES AND IMPACT ON THE GAS MARKET IN THE 21ST CENTURY

3 days

Climate commitments.
Energy needs and climate change.
Energy transition and geopolitics.
Oil and gas vs electricity.
Oil and gas company strategies.

MODULE 2: SAVING THE GAS CHAIN AND LNG

4 days

Natural gas in the global energy balance and the strategies of the main players in the industry.
Natural gas opportunities and emerging trends in the gas and LNG industry.
Main technical, economic and contractual characteristics of the natural gas value chain, from the production well to the final consumer.
Gas and LNG markets and their evolution (price, hedging, etc.).

MODULE 3: NATURAL GAS: TYPES, SPECIFICATIONS & PROCESSING TECHNOLOGIES

5 days

Fundamentals of natural gas composition, characteristics, production and field processing.
Technical issues and specific constraints of natural gas transport and storage.
Review of the different end-user markets available for natural gas upgrading.
Main economic issues of the natural gas chain.

MODULE 4: LNG: RISKS, TECHNOLOGIES, AND OPERATIONS

5 days

The LNG chain: liquefaction, transport, storage, regasification.
Specific properties of LNG - cryogenics.
Liquefaction and revaporization processes.
Vessel specifications, operation and operations.
Regasification terminals: storage, loading/unloading, regasification.
Operation of LNG facilities.

MODULE 5: ECONOMICS AND MANAGEMENT OF UPSTREAM GAS

4 days

Key issues and constraints in contract negotiations (government, national and international companies).
Overview and analysis of the different tax systems and contractual frameworks that exist.
Main contractual and tax clauses of E&P contracts.

MODULE 6: CONTRACTUAL FRAMEWORK FOR THE MARKETING OF GAS AND LNG

4 days

Main articles of long-term agreements on natural gas and LNG.
Key points of the commercial clauses.
Natural gas pricing and transportation principles.
Techniques for negotiating master sales and purchase contracts.

MODULE 7: PROFITABILITY STUDIES OF INVESTMENTS IN THE GAS INDUSTRY

5 days

Development of advanced computer models for the economic evaluation of gas projects.

Incorporation of a specific financing plan through the analysis of the return on equity.
 Analysis of economic results and conducting sensitivity analyses.
 Taking into account risk and uncertainty in the economic evaluation of gas projects.
 Government Policies and Support Programs / Investment Incentives and Barriers.

MODULE 8: UNDERGROUND CARBON CAPTURE AND STORAGE (CCUS) AND ITS ECONOMIC IMPACT ON THE GAS CHAIN

5 days

CCUS technologies: Where do we stand? Synergies with natural gas?
 Integration of a CCUS project upstream of a gas project and development cost.
 CCUS price vs carbon credit.
 Profitability and financing of carbon capture and storage.
 Economic impact of CCUS and carbon credits on the profitability of gas projects.

MODULE 9: INVESTMENT AND PROJECT MANAGEMENT THROUGHOUT OF THE GAS CHAIN

5 days

Preliminary studies, conceptual studies, EPC phase and project implementation plan.
 Local content and sustainable development.
 Phases of a gas project. Detailed engineering of an LNG project and associated activities.
 Technical contracts. Project organization, governance, interface and communication management.
 HSE management, quality and risks. Project management: costs and planning.
 Case studies.

MODULE 10: DOWNSTREAM GAS MARKET IN EMERGING COUNTRIES AND CONVERGENCE GAS & ELECTRICITY

5 days

Modern natural gas markets: segmentation and regulation in emerging countries.
 Operation of the downstream natural gas market.
 Natural gas trading: physical market and financial market.
 The role of LNG in the globalization of transactions.
 Gas / Electricity: competition and convergence.

MODULE 11: FOCUS ON NATURAL GAS AND ENERGY TRANSITION

5 days

Future of fossil fuels: Another important role for natural gas.
 Natural gas value chain and carbon neutrality.
 Sustainable development for gas and LNG.
 Gas and LNG saving vs carbon storage.
 Natural gas resource for electricity generation.

FINAL PROJECT

5 days

End-of-study project on a theme specific to the economics of energy transition.

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