



Procurement & Supply Chain Operations

The Gas Chain Concept- Economics

Course Introduction

This course provides an in-depth understanding of the **gas chain concept** from an economic perspective. It covers the entire value chain of natural gas, from exploration and production to transportation, processing, distribution, and end-user consumption. Participants will explore the key economic drivers influencing the gas industry, including pricing mechanisms, market structures, investment strategies, and regulatory frameworks. The course also examines the impact of global energy trends, supply-demand dynamics, and emerging technologies on the gas market.

Target Audience

1. Energy Economist
2. Oil and Gas Analyst
3. Supply Chain Manager (Gas Industry)
4. Petroleum Engineer
5. Gas Trading Specialist
6. Energy Policy Analyst
7. Operations Manager (Gas Sector)
8. Investment Analyst (Energy Sector)
9. Regulatory Affairs Specialist (Gas Industry)
10. Business Development Manager (Oil & Gas)

Learning Objectives

1. **Understand the Gas Value Chain** – Gain insights into the different stages of the natural gas supply chain and their economic significance.
2. **Analyze Market Dynamics and Pricing Mechanisms** – Learn how gas pricing is determined in various markets and the factors influencing price fluctuations.

3. **Evaluate Investment and Cost Structures** – Assess the economics of gas exploration, production, transportation, and infrastructure development.
4. **Explore Regulatory and Policy Frameworks** – Understand the impact of government policies, contracts, and international regulations on the gas sector.
5. **Assess Supply and Demand Factors** – Examine how geopolitical, environmental, and technological factors shape gas supply and consumption patterns.
6. **Understand LNG and Pipeline Economics** – Compare the economic considerations of liquefied natural gas (LNG) versus pipeline transportation and their global market implications.
7. **Examine the Role of Gas in the Energy Transition** – Analyze how natural gas fits into the global shift toward cleaner energy sources and decarbonization efforts.
8. **Develop Strategic Decision-Making Skills** – Learn how businesses and policymakers make informed economic decisions in the gas industry.

Course Outline

• Day 01

Welcoming and Introduction

- i. **Introduction to Natural Gas Technical Fundamentals**
- ii. **Definition of Hydrocarbon Gases and Its Chemical Composition**
- iii. **Types of Natural Gas Reservoirs**
- iv. **Basic Gas Geology and Origins of Hydrocarbon Deposits**
- v. **Trapping Mechanisms**

1st Coffee Break

- **Gas Value Chain Concept**
- **Gas Commercialization and Monetization Criteria**
- **Natural Gas Players: Government, NOC, IOC,**
- **Gas Project Life Cycle:**
- **Acquisition, Gas leasing process and terms**
- **Exploration and Appraisal**
- **Development**
- **Gas Production and Processing**

Prayer Break

- **LNG Value Chain**
- **Global Reserves, Supply, and Demand**

Q&A, Wrap-Up and End of Session day 1

• Day 02

Gas Field Economics and Evaluation

- **Familiarization with Economic Terms**
- **Cost classification and Cost Behavior**
- **Technical costs (CAPEX- OPEX- Abandonment)**
- **Fiscal costs**
- **Depreciation**
- **Profit Calculation**
- **Before and After-Tax Net Cashflow**
- **Loss Carryforward with and without revenue limit**

1st Coffee Break

- **Profitability Indicators**
- **Maximum capital outlay**
- **Payback period**
- **Economic Limit and Economic Life**
- **Economic Reserves**

Prayer Break

- **Net present value (NPV)**
- **Internal Rate of Return (IRR)**
- **Profit to investment ratio and capital productivity index**

Q&A, Wrap-Up and End of Session day 2

• Day 03

Recap of Day two

Legal Framework of Natural Gas Industry

- i. **Types of Gas Sales and Purchase Agreements Contracts**
- ii. **Depletion Type Contracts**
- iii. **Supply Contracts**

1st Coffee Break

- **Commercial and Financial Structure of LNG Plant**
- **Integrated structure**
- **Merchant Structure**

Prayer Break

- **Tolling Structure**

Q&A, Wrap-Up and End of Session day 3

• Day 04

Recap of Day three

- **Long Term Sales and Purchase Agreements**

i. Contractual quantities Negotiations

- **Total Contract Quantity**
- **Annual Contract Quantity**

1st Coffee Break

- **Excess Gas**
- **Carry Forward Gas**
- **Shortfall Gas**

Prayer Break

- **Take-or-Pay.**
- **Make Up Gas**

Q&A, Wrap-Up and End of Session day 4

• Day 05

Recap of Day four

LNG & Gas pricing Mechanisms

- LNG & Gas pricing Mechanisms**
- Indexed Gas Pricing Mechanisms**
- Gas on Gas Pricing**
- Regulated Pricing Mechanisms**

1st Coffee Break

- Cap Price**
- Floor Price**
- Collar Prices**

Prayer Break

Gas and LNG Markets

Q&A, Wrap-Up and End of Session day 5

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 23, 2025	June 27, 2025	5 days	4250.00 \$	UAE - Abu Dhabi
Aug. 23, 2025	Aug. 27, 2025	5 days	4950.00 \$	England - London
Oct. 6, 2025	Oct. 10, 2025	5 days	4250.00 \$	UAE - Dubai