

Training - Gas Valorization



SYNGASE-EN-P



Face-to-face only



3 days

This course provides a technical and economic information regarding the various options for valorizing gas

Level

Awareness

Public

Professionals interested in technical information about the different ways to valorize gas

Objectives

Attendees will be able to implement the following skills:

- Grasp the essence of gas markets, including natural gas and syngas (CO + H₂)
- Understand the importance of syngas: production modes and valorization channels
- List the main technologies , their conditions of implementation, some the latest projects

Pedagogical & technical resources

Industry experts share their views of current developments

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

NATURAL GAS

1 day

Natural gas reserves, conventional or non-conventional.
Production, consumption and trade, utilization of natural gas worldwide.
Field treatment, production and by-products (ethane, LPG's, condensates).
Different ways for gas transportation: pipelines, LNG shipping...
Quality specifications for commercial natural gas.
Valorization of natural gas: as fuel (domestic or industrial uses), generation of other energy types (electrical, cogeneration), car-fuel (CNG, GTL), chemical valorization.

SYNGAS PRODUCTION

1 day

Composition and feedstocks (natural gas, hydrocarbons, coal).

Different modes of syngas production: steam reforming, partial oxidation (POx), autothermal reforming.
Gas production from biomass: advantages, yields, constraints. Example of a biorefinery.

SYNGAS VALORIZATION

0.5 day

Maximization of hydrogen production in the refineries through the shift reaction.

Chemical synthesis: production of alcohol like Methanol, Ammonia and other chemical compounds.

GTL Complex (Gas-To-Liquid): production of liquid hydrocarbons from gas through Fischer Tropsch reaction.

Coal gasification.

Electrical energy production, steam and hydrogen for refining industry: IGCC (Integrated Gasification Combined Cycle).

ECONOMIC ASPECTS OF GAS VALORIZATION

0.5 day

Investment (Capex), operating costs (Opex), costs for raw materials.

Marketing advantages, environment issues.

Example: comparison of GTL with LNG.

Strategies of different actors: production countries of natural gas, licensors, oil or gas trusts, engineering companies.

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