



Gas Network, Natural Gas, and
LNG Workshop





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Introduction:

This gas network, natural gas, and LNG workshop charts a rich history of progress and innovation revolutionizing the gas industry. From humble beginnings, the LNG industry and global trade have grown substantially in recent years. It aims to cover the transition of LNG becoming a leading contributor to the energy mix and the security of supply to existing and emerging energy markets.

With a keen eye on the future of this innovative industry, this gas network, natural gas, and LNG training workshop will introduce delegates to the key aspects of Natural Gas and LNG, from operational and commercial aspects to technological advances and new applications.

This comprehensive gas network, natural gas, and LNG workshop will enhance your understanding of the infrastructure and energy trade of the gas industry. It will delve into the complexities of gas network design and operation and the burgeoning world of liquefied natural gas LNG.

The Role of Gas Network Operators:

Gas network operators play a crucial role in maintaining the integrity, safety, and efficiency of the entire gas network, ensuring a continuous flow of natural gas and LNG to meet market demands.

By employing sophisticated gas network design strategies and adapting to the virtual gas network paradigm, these professionals ensure the robustness of energy infrastructures, catering to both conventional and evolving industry needs.

This gas network, natural gas, and LNG training workshop component will highlight their pivotal roles and the innovative technologies leveraged to optimize network performance.

Targeted Groups:

This gas network, natural gas, and LNG workshop is for professionals wishing to gain an overview or basic understanding of natural gas, the industry, and its operations. It includes but is not limited to anyone new to the oil and gas industry, contractors working with clients, or anyone in a non-technical industry seeking a greater understanding of operations.

Workshop Objectives:

At the end of this gas network, natural gas, and LNG workshop, the participants will be able to recognize:

- Understand components of natural gas, complications of gas units and oil-equivalents.
- Understand the difference between Natural Gas Liquids NGL and Liquefied Natural Gas LNG, Gas to Liquids GTL and Liquefied Petroleum Gas LPG, Compressed Natural Gas CNG and LNG.
- The distinction between unconventional gas and conventional gas.
- Understand how unconventional gas will impact global markets.
- The change in the LNG chain over the past few years.
- How will the business be changed by emerging technologies such as Floating LNG FLNG, mini-LNG, and Floating Storage Regas Units FSRU?
- What do sales agreements cover?
- What terms in a Gas Sales Agreement GSA are most negotiated?
- The success factors for LNG projects.

Targeted Competencies:

Upon the end of this gas network, natural gas, and LNG training, the participant's competencies will:

- Principles of Natural Gas.
- NGL and LNG Operations.
- Operational Safety.

Workshop Content:

Unit 1: Gas and LNG Basics:

- Overview of Natural Gas.
- Chemical and physical properties of natural gas components methane, Natural Gas Liquids.
- Gas units.
- Gas chain.
- Pipeline versus LNG transport options.

Unit 2: Conventional and Unconventional Gas:

- Difference between Conventional and Unconventional gas resources.
- Shale gas and coal bed methane.

Unit 3: LNG Value Chain:

- LNG chain.
- Liquefaction temperatures of natural gas components.
- The capital expense of each aspect of the LNG chain liquefaction, shipping, regasification.
- Advantages and disadvantages of emerging technologies floating liquefaction and floating regasification.
- LNG project risks and success factors.

Unit 4: Pricing and Contracts:

- Global gas pricing models.
- LNG S curve pricing formula and its main negotiated items slope and constant.
- Comparison of the S curve with the US hub price + costs model.
- LNG sales agreements, introducing concepts such as Term, Take-or-Pay, and Price Review.
- LNG project economic models, comparing the traditional integrated model with the US tolling model.

Unit 5: Global Gas Dynamics:

- Environmental benefits of natural gas.
- The growing resemblance of natural gas markets.
- Key factors sought by LNG customers.
- Future LNG supply sources.
- Growing LNG demand from emerging markets.
- The role of floating regasification units in opening up new markets.