



OIL AND GAS | OG-050

Gas Distribution Networks and Gas-to-Power

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Course content

Why Attend

Natural gas reaches homes, businesses and power plants through transmission and distribution networks, and gas-fired power plants provide flexible electricity that supports renewable integration. Planning, operating and regulating these systems requires both technical and commercial understanding.

This Aractech course covers gas transmission and distribution network design, pressure regulation and metering, network operations and safety, gas-to-power plant configurations, gas supply contracts for power, and regulation of gas utilities. Participants examine the role of gas networks in the energy transition, including biomethane and hydrogen blending.

Course Methodology

- Technical lectures
- Network design exercises
- Case studies
- Contract discussions
- Group workshops

Course Objectives

- Describe gas transmission and distribution systems
- Understand network design, pressure regulation and metering
- Operate networks safely and efficiently
- Explain gas-to-power plant configurations
- Understand gas supply contracts and regulation
- Assess the future role of gas networks

Course content

Target Audience

- Gas utility engineers and operators
- Power plant engineers
- Network planners
- Commercial and regulatory staff

Course outline

Detailed course outline

Day-by-day outline for Gas Distribution Networks and Gas-to-Power.

Day 1 - Gas Networks Overview

- 09:00-09:39 | Gas value chain to end users
- 09:39-10:18 | Transmission and distribution
- 10:18-10:57 | Network components
- 10:57-11:00 | Gas quality
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Gas quality (continued)
- 12:05-12:43 | Regulatory structures
- 12:43-14:00 | Exercise: Network mapping

Day 2 - Network Design and Operation

- 09:00-09:39 | Pressure tiers
- 09:39-10:18 | Regulation and metering stations
- 10:18-10:57 | Network modelling
- 10:57-11:00 | Operations and control
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Operations and control (continued)
- 12:05-12:43 | Maintenance
- 12:43-14:00 | Workshop: Network capacity exercise

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Day 3 - Safety and Asset Management

- 09:00-09:39 | Gas safety risks
- 09:39-10:18 | Leak management
- 10:18-10:57 | Emergency response
- 10:57-11:00 | Asset integrity
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Asset integrity (continued)
- 12:05-12:43 | Performance indicators
- 12:43-14:00 | Case study: Distribution incident

Day 4 - Gas-to-Power

- 09:00-09:39 | Gas turbine and combined cycle plants
- 09:39-10:18 | Flexibility and grid support
- 10:18-10:57 | Gas supply for power
- 10:57-11:00 | Contracts and pricing
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Contracts and pricing (continued)
- 12:05-12:43 | Efficiency and emissions
- 12:43-14:00 | Exercise: Gas-to-power economics

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Day 5 - Future of Gas Networks

- 09:00-09:45 | Biomethane injection
- 09:45-10:30 | Hydrogen blending
- 10:30-11:00 | Decarbonisation pathways
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Decarbonisation pathways (continued)
- 11:45-12:30 | Regulatory change
- 12:30-13:15 | Investment planning
- 13:15-14:00 | Capstone: Network strategy outline

Seminar dates

Available seminar dates

Live dates and pricing for Gas Distribution Networks and Gas-to-Power generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	Barcelona	Classroom	€2,815
14 - 18 December 2026	Paris	Classroom	€3,825
18 - 22 January 2027	Munich	Classroom	€3,225
15 - 19 February 2027	Kuala Lumpur	Classroom	€1,925
15 - 19 March 2027	Amsterdam	Classroom	€2,830
19 - 23 April 2027	London	Classroom	€2,315
17 - 21 May 2027	Munich	Classroom	€3,225
21 - 25 June 2027	Barcelona	Classroom	€2,815
19 - 23 July 2027	Cape Town	Classroom	€1,625
16 - 20 August 2027	Munich	Classroom	€3,225

Seminar dates

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Date	Location	Format	Fee
20 - 24 September 2027	Kuala Lumpur	Classroom	€1,925
18 - 22 October 2027	Amsterdam	Classroom	€2,830
15 - 19 November 2027	London	Classroom	€2,315
20 - 24 December 2027	Munich	Classroom	€3,225
9 - 13 November 2026	Online / Live	Online / Live	€1,815
14 - 18 December 2026	Online / Live	Online / Live	€1,815
18 - 22 January 2027	Online / Live	Online / Live	€1,815
15 - 19 February 2027	Online / Live	Online / Live	€1,815
15 - 19 March 2027	Online / Live	Online / Live	€1,815
19 - 23 April 2027	Online / Live	Online / Live	€1,815

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Date	Location	Format	Fee
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21 - 25 June 2027	Online / Live	Online / Live	€1,815
19 - 23 July 2027	Online / Live	Online / Live	€1,815
16 - 20 August 2027	Online / Live	Online / Live	€1,815
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18 - 22 October 2027	Online / Live	Online / Live	€1,815
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