Strategic LNG Operations and Supply Chain Management Training Course

21 - 25 Dec 2026

Cape town

4600 € (Per Person)

Ref: #OG4473_274968

Course Introduction / Overview:

The global energy landscape is increasingly reliant on Liquefied Natural Gas (LNG) as a pivotal, cleaner-burning fuel source, making the efficiency and resilience of its supply chain more critical than ever. This comprehensive training course is meticulously designed to provide an in-depth understanding of the entire LNG value chain, from the technical intricacies of plant operations to the strategic complexities of global supply chain management. As detailed by industry experts like Michael D. Tusiani in his seminal work "LNG: A Nontechnical Guide," mastering both the operational and commercial aspects is essential for success. This program delves into liquefaction technologies, cryogenic storage, shipping logistics, regasification processes, and the commercial frameworks that govern this dynamic market. Participants will explore best practices for operational excellence, risk mitigation, and strategic decision-making. At BIG BEN Training Center, we bridge the gap between theory and practice, equipping professionals with the integrated knowledge required to navigate the challenges and capitalize on the opportunities within the international LNG sector, ensuring seamless, safe, and profitable operations from wellhead to market. This course is your definitive guide to achieving mastery in this vital industry.

Target Audience / This training course is suitable for:

- Operations Managers and Supervisors.
- Supply Chain and Logistics Planners.
- LNG Plant Engineers and Technicians.
- Commercial Analysts and Traders.
- Project Managers in the energy sector.
- Health, Safety, and Environment (HSE) Professionals.
- Procurement and Contracts Specialists.
- Maritime and Shipping Professionals.
- Business Development Managers.
- Government Regulators and Energy Policy Advisors.

Target Sectors and Industries:

- Oil and Gas Exploration and Production Companies.
- Integrated Energy Corporations.
- LNG Liquefaction and Regasification Terminal Operators.
- Shipping and Maritime Logistics Companies.
- Power Generation and Utility Companies.
- Engineering, Procurement, and Construction (EPC) Firms.
- Commodity Trading Houses.
- Financial Institutions and Investment Banks.
- Governmental Energy Ministries and Regulatory Bodies.
- Management and Technical Consulting Firms.

Target Organizations Departments:

- Operations and Production.
- Supply Chain Management and Logistics.
- Engineering and Maintenance.
- Project Management.
- Health, Safety, and Environment (HSE).
- Commercial and Business Development.
- Procurement and Contract Management.
- Trading and Risk Management.
- Strategic Planning and Corporate Affairs.
- Marine and Terminal Operations.

Course Offerings:

By the end of this course, the participants will have able to:

- Analyze the complete LNG value chain from upstream gas production to downstream delivery.
- Evaluate different liquefaction and regasification technologies for optimal performance.
- Implement best practices for safe and efficient LNG plant operations and maintenance.
- Develop robust strategies for managing LNG shipping, storage, and terminal logistics.
- Master the commercial aspects of LNG, including pricing, contracts, and trading.
- Conduct comprehensive risk assessments and apply effective safety management systems.
- Optimize supply chain performance to enhance reliability and reduce operational costs.
- Understand the global LNG market dynamics, including supply, demand, and regulatory trends.
- Formulate strategies for integrating sustainability and digitalization into LNG operations.
- Lead LNG projects with a clear understanding of technical, commercial, and logistical interdependencies.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to foster a dynamic and immersive learning experience that goes beyond traditional instruction. We employ a blended approach that combines expert-led presentations with highly interactive learning modules. The curriculum is built around real-world case studies of successful and challenging LNG projects, allowing participants to analyze complex scenarios and develop practical problem-solving skills. Collaborative group workshops and breakout sessions encourage peer-to-peer learning and the exchange of diverse industry perspectives. Interactive simulations of LNG plant operations and supply chain disruptions will provide a hands-on understanding of decision-making under pressure. Throughout the course, there will be ample opportunity for Q&A sessions and open discussions, ensuring that individual learning needs are addressed. Our expert instructors provide continuous feedback and facilitate a supportive environment where participants can confidently apply new concepts. This experiential learning approach ensures that attendees leave not just with theoretical knowledge, but with the tangible skills and strategic insights needed to drive operational excellence and innovation in their organizations.

Course Agenda (Course Units):

Unit One: Fundamentals of the Global LNG Industry

- Introduction to Liquefied Natural Gas (LNG) and its properties.
- The complete LNG value chain from wellhead to burner tip.
- Global LNG markets, key players, and major trade routes.
- Historical development and future outlook of the LNG industry.
- Regulatory, environmental, and geopolitical factors impacting the market.
- Fundamentals of natural gas processing and pre-treatment.
- Understanding the key terminology and metrics used in the LNG sector.

Unit Two: LNG Plant Technology and Operations

- Detailed overview of major liquefaction process technologies (e.g., C3MR, AP-X).
- Design and operation of LNG storage tanks and containment systems.
- Managing boil-off gas (BOG) and reliquefaction systems.
- LNG loading and unloading operations for marine carriers.
- Key principles of cryogenic material handling and safety.
- Strategies for plant maintenance, reliability, and turnaround management.
- Process safety management (PSM) and operational risk assessment in LNG plants.

Unit Three: LNG Shipping and Terminal Logistics

- Types of LNG carriers and their key design features.
- LNG chartering strategies, voyage planning, and optimization.
- The critical ship-to-shore interface and compatibility studies.
- Operations at LNG import (regasification) and export (liquefaction) terminals.
- The role and technology of Floating Storage and Regasification Units (FSRUs).
- The technology and application of Floating LNG (FLNG) facilities.
- Managing logistical challenges and supply chain disruptions.

Unit Four: Commercial and Supply Chain Management

- Structure of LNG Sale and Purchase Agreements (SPAs).
- LNG pricing mechanisms: oil-indexation vs. hub-based pricing.
- Introduction to LNG trading, spot markets, and hedging strategies.
- Supply and demand forecasting and modeling techniques.
- Optimizing the LNG supply chain for cost and efficiency.
- Inventory management strategies for LNG storage.
- Risk management in the LNG supply chain.

Unit Five: Advanced Strategies and Future Trends

- Digital transformation and automation in LNG operations.
- Sustainability in the LNG industry: decarbonization and emissions reduction.
- Advanced safety methodologies like HAZOP for LNG facilities.
- Project management principles for large-scale LNG developments.
- The role of small-scale LNG in expanding market access.
- Innovations in LNG technology and future market trends.
- Developing a holistic strategy for operational excellence in the LNG sector.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How might the increasing integration of renewable energy sources and the push for decarbonization reshape the long-term strategic role and operational models of LNG supply chains globally?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by offering a uniquely integrated perspective that holistically connects the technical realities of LNG plant operations with the strategic complexities of global supply chain management. Unlike programs that focus narrowly on either engineering or commerce, this training provides a 360-degree view of the entire LNG value chain. The curriculum is built on a foundation of practical application, moving beyond theoretical concepts to immerse participants in real-world case studies, operational simulations, and strategic decision-making exercises. It places a strong emphasis on contemporary challenges and future-forward topics, including digitalization, supply chain resilience, and the critical role of LNG in the energy transition and decarbonization efforts. By bridging the gap between the control room and the boardroom, the course equips professionals not just with specialized knowledge, but with the cross-functional understanding required to lead, innovate, and drive sustainable value in the highly dynamic and interconnected global LNG market. The focus is on developing strategic thinkers who can navigate both technical and commercial landscapes with confidence and foresight.