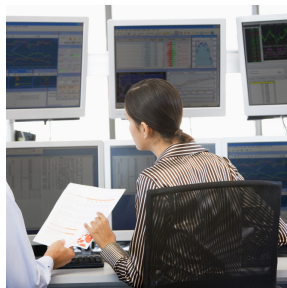




Course length: Two days
Prerequisites: None
CPE credits: 16

An in-depth introduction to the natural gas industry

The natural gas industry is unique, fast-paced, and driving an energy revolution. And it has become an increasingly important part of our overall energy supply picture. Gas Industry Basics gives those new and not so new to the industry a solid understanding of natural gas customers, the current supply and demand situation, the physical system, markets, regulation and business practices. Participants are also introduced to basic industry concepts, acronyms, and technical information that will help them to communicate more effectively in their daily jobs.



WHO WILL BENEFIT FROM THIS SEMINAR?

- New hires at a utility, gas marketing company, pipeline, storage operator, production company, electric generator, electric system operator, technology vendor, or any company providing services to the gas industry
- Employees with industry experience in one or two specific departments who are now moving into management or technical gas employees moving into business or regulatory support
- Sales professionals and technical employees such as system operators, engineers, and information technology professionals who need to understand how the business of natural gas works
- Regulatory employees who need to understand the real-world challenges of gas market participants
- Professionals in the legal, finance, accounting, PR, and communications fields who provide services to the energy industry
- Virtually any industry employee with limited experience on the business side of the natural gas industry

WHAT PARTICIPANTS WILL LEARN

- A big-picture perspective of how the gas business operates
- The various types of gas customers, how they use gas, their specific needs, and how services are designed to meet those needs
- North American supply and demand and the future of Liquefied Natural Gas (LNG) exports
- How natural gas is discovered, produced, gathered, and processed
- How gas is stored and moved through the transmission and distribution systems to a customer
- Which segments of the industry are regulated and how regulation functions in setting rates, determining services, driving infrastructure decisions, and affecting gas company profits
- Who the key industry participants are and how they use physical and financial strategies to make money and

manage risk

- The key forces driving the future of the gas business

COURSE AGENDA

Overview of Natural Gas in Our Society

- What natural gas is and how it is used to provide energy
- Why natural gas is critical to our society
- Gas units and additional important concepts

Customers

- The number of customers and their usage broken down by four primary gas customer classes
- What the Residential, Commercial, and Industrial classes use gas for
- How customer demand is forecast in the short term and the long term
- Annual load shapes and why this is important to infrastructure planning and system operations
- Bundled and unbundled procurement options
- Typical rate structures in the regulated market
- Services to serve customer needs

The Physical System and Delivery Chain

- Sources of North American gas supply (domestic production, imports by pipeline, LNG)
- North American basins and production/reserves ratios
- A big picture look at the natural gas physical system
- Exploration fundamentals
- Production fundamentals
- Conventional vs. unconventional supply including fracking and why it is controversial
- How gas is processed
- LNG (what it is, how it works, why it's valuable, existing and proposed U.S. facilities)
- The transmission pipeline network
- Storage (types of storage, regional capacities, and





- locations of storage fields)
- Market hubs
- Transmission system fundamentals (packing, drafting, using storage)
- Gas distribution fundamentals
- Issues associated with gas safety and leaks

Regulation

- Evolution of regulation and markets over time (regulation, deregulation, commoditization, value-added services)
- What natural gas regulation does and why parts of the industry are regulated
- Who regulates what
- The federal and state regulatory compacts
- 4 key types of regulatory proceedings
- The 8 steps in the regulatory process and what happens during each step
- How cost-of-service based rates are set: setting authorized rates of return, determining the rate base, determining the revenue requirement, forecasting usage, determining cost allocations, determining rate structures, calculating rates
- The use of balancing accounts and weather normalization
- When and why incentive ratemaking is used in the industry
- When market-based rates and prices are allowed

Gas Markets

- Participants in the delivery chain (upstream, midstream, downstream)
- Natural gas supply market structure
- Top producers, pipelines, marketers, and LDCs
- Electronic exchanges and trading hubs
- U.S. gas demand and demand drivers

- U.S. gas supply and supply drivers
- Gas imports and exports (pipelines and LNG)
- U.S. supply vs. demand
- The growth in shale gas and coalbed methane supply
- Gas prices in the marketplace
- Regional price differentials and price volatility
- The forward price curve
- The contractual path from production to consumer
- Gas trading
- Structuring physical transactions
- Gas transportation services (firm and interruptible)
- How gas is nominated and scheduled
- Balancing services
- Gas storage services
- Hubs and market center services
- Retail and distribution services including gas supply choice
- Behind-the-meter and value-added services

Making Money and Managing Risk

- How companies make profits (competitive, under cost-of-service regulation, under incentive regulation)
- Risk exposures in the gas business and what a company can do to manage them
- Physical and financial tools used for risk management and who provides them
- Using Value at risk (VAR) to measure levels of risks and the need for additional stress testing

The Future

- Likely future developments in regulation, technology, and markets
- How the gas industry is likely to evolve
- Greenhouse gas regulations and the role of natural gas
- The evolving workforce

