



Course length: Two days

Prerequisites: None

CPE credits: 16

A comprehensive overview of the natural gas and electricity businesses

Given the increasing integration between electricity and natural gas, a comprehensive understanding of the business side of the natural gas and electricity industries is instrumental to success. This two-day seminar examines gas and electricity's physical systems, customers, markets, regulation, and operations. Gas and Electric Industry Basics is ideal for those new to the energy industry or veterans seeking a broad understanding of how today's natural gas and electricity businesses operate.



WHO WILL BENEFIT FROM THIS SEMINAR?

- New hires at a utility, generation company, transmission owner, gas or electric marketing company, pipeline, gas producer, renewables firm, technology vendor, or any company providing services to the industries
- Employees with industry experience in one or two departments who are now moving into management
- Sales professionals and technical employees such as gas or electric system operators, engineers, and information technology professionals
- Employees involved in the regulatory process
- Professionals in the legal, finance, accounting, PR, and communications fields who are working for an industry participant or providing services to the energy industry
- Virtually any industry employee with limited experience on the business side of the gas and/or electric industries

WHAT PARTICIPANTS WILL LEARN

- A big-picture perspective of how the gas and electricity businesses operate
- The various types of customers, how they use gas and electricity, their specific needs, and how services are designed to meet them
- How natural gas is discovered, produced, gathered, processed, stored, and transmitted and distributed to customers
- How electricity is generated, transmitted, and distributed to customers
- How gas and electric systems are operated and scheduled
- Which segments of the industry are regulated, and how regulation functions in setting rates, determining services, driving infrastructure decisions, and impacting energy 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 and electricity businesses

COURSE AGENDA

Introduction

- What natural gas and electricity are and how they work
- How the U.S. consumes natural gas and electricity
- Why natural gas and electricity are essential to our society
- How the two industries are related as competitors and partners
- Gas and electric units

Gas Customers

- Types of gas customers
- Customer usage patterns
- How different customers use natural gas
- Customer needs and wants
- Services available to gas customers under bundled and unbundled market structures

The Physical Gas System and Delivery Chain

- Sources of North American gas supply
- North American basins and production/reserves
- The physical delivery systems including gathering, processing, pipelines, hubs, storage, and distribution systems
- Upstream, midstream, and downstream market participants
- How the system is operated
- Pipeline scheduling
- Balancing and flow orders used to maintain system integrity

Gas Regulation

- Why the gas industry is regulated
- Who regulates each function
- Types of regulatory proceedings
- The regulatory process and how cost-of-service rates are set





- Incentive regulation
- When are market-based rates allowed
- How regulated gas companies make money

Gas Markets

- The North American gas market structure
- Participants in the delivery chain (upstream, midstream, downstream)
- How gas flows through the value chain
- How parties transact and trade gas
- How gas prices are determined
- Risk exposures and ways to manage them

Electric Customers

- Types of electric customers
- Customer usage patterns
- How different customers use electricity
- Daily and monthly load shapes
- Services available to electric customers

The Physical Electrical System and Delivery Chain

- The integrated planning process for electric systems
- U.S. generation capacity and output by fuel type
- Types of generation, their characteristics, and how each is used
- How generation is dispatched to meet the load curve
- Demand side management, distributed generation, and storage
- The transmission system (components and characteristics)
- The North American power grids
- The distribution system (components and characteristics)
- Characteristics of power systems
- How the system is scheduled and operated
- Types of ancillary services and what they are used for
- How reliability is maintained

Electric Regulation

- How electric regulation differs from gas regulation
- Who regulates each function
- Differences in ratemaking and other regulatory aspects

Electric Markets

- Five market structures currently used in North America
- What electric supply choice is and where it is available
- How parties transact in electric markets
- The services bought and sold in electric markets
- Basic pricing concepts
- ISO scheduling and locational marginal pricing (LMP)
- How an energy portfolio is managed
- Risk exposures and how they can be managed

The Future

- Evolution of the gas and electric markets, technology, and regulation
- A future energy marketplace (robust gas supply, an evolved electric grid, distributed resources, greenhouse gas regulation, engaged customers, new business models)
- A new workforce

