



**Course length:** 3.5 hours    **Cost:** \$295-\$350\*

**Subscription:** 2-12 months

**CPE credits:** 5 (see website for more details)

**Prerequisites:** Gas Industry Overview (online course) or a general knowledge of the natural gas industry including the basics of production, transmission, distribution, customers, and regulation.

## An in-depth look at how gas markets work

Recent technology developments in natural gas production have profoundly changed North American gas market dynamics. Gas Market Dynamics provides an overview of today's monopoly and competitive markets found in North America. It examines the forces that drive supply and demand in gas markets and how they impact prices; the types of gas markets found in North America as well as the specific services that are traded in these markets; and the strategies used by four common market participants to manage risk and maximize earnings. This learning path is intended for those with a basic understanding of the natural gas business who need more detailed information on how natural gas markets function.



## WHO WILL BENEFIT FROM THIS COURSE?

- Senior managers needing a broader understanding of gas markets
- Experienced energy industry employees needing a deeper understanding of gas markets
- Sales professionals providing services to market participants in the gas industry
- Finance, accounting, legal, public relations, or regulatory professionals
- Gas company employees new to gas systems operations
- Gas engineers needing to understand relationship of physical system to gas markets
- Marketing or sales professionals new to the gas industry
- Energy procurement professionals new to the gas industry
- Professionals from the exploration and production industry needing to better understand midstream and downstream markets
- Any energy industry professionals wanting to understand how competitive gas markets function and set prices

## WHAT PARTICIPANTS WILL LEARN

- The various market structures that exist and the roles of various participants in each structure
- Concepts of supply and demand and how gas prices behave in various market structures
- The supply, transport and storage services offered in gas markets
- Types of markets including bilateral, electronic exchanges, and tariff, and details on how each market works
- How contractual arrangements between market participants are structured
- Strategies participants use in gas markets

## COURSE AGENDA

### Introduction

- Course objectives
- Gas units
- Heating value

### Gas Market Structures and the Roles of Market Participants

- What is a gas market?
- The differences between regulated monopoly and unregulated competitive markets
- Why competitive markets are important
- The key physical characteristics of natural gas that affect how markets function
- The four sectors of market participants (upstream, midstream, downstream, consumer)
- The market participants in each sector and their roles
- Market participants for Liquefied Natural Gas (LNG) delivery
- Bundled vs. unbundled service
- Supply choice for various customer classes in North America
- Gas market structure for commodity and transport/storage
- Market hubs

### Principles of Gas Supply, Demand, and Pricing

- Short-term and long-term factors that drive gas demand
- Consumers who create gas demand
- Concepts used in evaluating demand (baseload demand, average demand, peak-day demand, load factor, annual load profile)
- Residential, commercial, industrial and electric generation gas use (specific uses for gas and characteristics of gas demand)
- How weather affects demand

\* Please contact us for bulk discounts and site license pricing.





- How storage activity affects demand
- Sources of U.S. supply
- Major North American supply regions
- Reserve to production ratios
- The North American transmission pipeline system
- North American storage facilities
- North American LNG facilities
- The shift to unconventional production
- Gas pricing
- The LNG value chain
- Key factors influencing prices

### **Gas Services and Markets**

- Types of gas markets (bilateral, electronic exchanges, tariff)
- Services offered in gas markets
- Gas supply (forward, spot)
- Financial services
- Transportation services (firm, interruptible and the secondary market)
- Storage services (injection, inventory, withdrawal) and levels of service available (firm, interruptible)
- Balancing services and rules
- How flow orders are used to maintain system integrity
- Market hubs and the services they provide (wheeling, parking/lending, peaking gas, balancing, title transfer, hub-to-hub transfer)
- Which services trade in which markets?
- Scheduling and priority for transportation, storage, and distribution services
- Structuring of supply, transport and storage agreements
- How and why prices change as gas travels through the value chain
- Price differentials across the U.S.
- Transportation pricing

- How storage and hub services are priced
- Retail commodity pricing and structure
- Contracts
- The North American Energy Standards Board (NAESB) and its role

### **Gas Market Strategies**

- The two paradigms for business in gas markets (regulated vs. competitive)
- The relationship between earnings and the level of risk required to achieve them
- Risks inherent in the gas business (price, basis, volume, counterparty, execution, operational, regulatory, legal)
- Tools used to manage risk (pricing, take obligations, firm/IT transport, storage, balancing provisions, hub services, internal procedures, portfolio hedging)
- Goals of various market participants
- Gas supply and transport market structure
- Pricing (regulated and competitive)
- How producers, wholesale marketers, and retail marketers determine sales prices
- How earnings are achieved for regulated and competitive companies
- How market participants manage risks through contract structures

