



Natural Gas Basics

The Natural Gas Basics track is geared toward utility professionals new to sales, marketing, or customer service departments, as well as professionals in *other* utility departments who would benefit from a broad explanation of the natural gas industry and the role of the local distribution company. Each of 14 units below will generally last from 45 minutes to 1 hour.



Unit 1: Comparing Gas to Other Fuels – Terminology and Factors

This unit is a primer on all primary and secondary energy forms, terminology and factors including conversion factors, pricing trends, and an overview of environmental benefits of natural gas compared to other fuels.



Unit 2: Natural Gas Wells, Fracking, Storage, Delivery, and Measurement

The production, delivery and metering of natural gas will be examined in this unit. Students will be introduced to how natural gas is formed, low carbon gasses such as Renewable natural Gas (RNG) & Hydrogen (H₂), locating natural gas, extracting gas from the ground, storage methods, transporting gas to customers and measurement along the way.



Unit 3: Natural Gas Supply, Consumption, Production, Operations & Pricing

This unit will introduce students to the natural gas supply environment including production, pipeline operations, gas supply, and liquefied natural gas.



Unit 4: The LDC Organizational Structure

This unit will provide an overview of the various operating departments within utilities including: Gas Acquisition, Gas Supply, Metering, Distribution, Call Center, Billing, Collections, Customer Service, Marketing and Sales, Regulatory Affairs, Communications, Legal and IT.



Unit 5: The Benefits of Natural Gas

Statistics on the natural gas marketplace and benefits of natural gas will be discussed in this unit. From worldwide to North American markets; the economics, source to site efficiency, and environmental issues will be discussed.



Unit 6: Gas Utility Revenue Streams & Customer Programs

This unit provides an overview of the various programs, such as billing and payment assistance programs available to end-use customers and how utilities incorporate these into revenue streams and effective programs for customers.



Unit 7: Understanding Carbon Footprint

This unit reviews the global environmental implications of carbon emissions on the earth. Additionally, a way to measure carbon footprint, and means to reduce our carbon footprint will be examined.



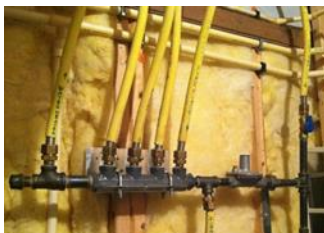
Unit 8: Natural Gas Safety

This module examines potential safety issues with gas leaks, carbon monoxide, pipeline safety, digging safety, and hot water temperature, as well as emergency preparedness.



Unit 9: Building Codes & Fuel Switching

We will examine pipe sizing, venting and appliance conversion considerations and what utility representatives need to understand when it comes to conversion to gas from another energy source.



Unit 10: Customer Piping Fundamentals

Introducing the student with the various piping systems available for natural gas is the basis of this unit. Topics include: black iron pipe, copper piping, CSST and the design and safety aspects of these systems.



Unit 11: Gas Meter Operation & Selection

This unit will look at the various metering options available for customers including diaphragm, rotary, turbine and ultrasonic meters. Additionally we will examine meter sizing, application, meter reading and timing.



Unit 12: Natural Gas Rate Structures

This unit will review the various rates available for customer classes and how unique options can affect the customer's energy decision. Cost of Service, WACOG, and various riders will be reviewed in this unit.



Unit 13: Understanding Electric Rates & Billing

The electric utility incorporates numerous riders and contract options for end-use customers. This unit will help you understand electric rate terminology, the deregulated marketplace and how electric costs are calculated from a competitive standpoint.



Unit 14: Carbon Reduction Strategies

The natural gas industry has played a vital role in reducing overall greenhouse gas emissions through a variety of strategies. This unit will introduce lower carbon gasses, discuss strategies to reduce the carbon footprint of natural gas, and review energy savings measures and programs that have worked to reduce carbon emissions.