

Industrial Track

ESC's Account Rep Training Program

Unit Summaries:

Unit 1: Food & Beverage Processing

This unit is a primer on all-natural gas equipment used in the food and beverage processes. Processing food is America's top business. Processing raw fruits, vegetables, grains, meats, and dairy products into finished goods ready for the grocer or wholesaler to sell to households, restaurants, or institutional food services. Food and beverage manufacturing plants, located throughout North America.



Unit 2: Power Generation

An overview of the Power Generation market Segment. Power generation is another growth opportunity within the commercial and industrial markets. In 2016 ~4.08 trillion kWh of electricity was generated in the United States. Opportunities exist for both utility-scale plants and commercial/industrial end users. As coal is phased out, natural gas and renewables are becoming the dominant alternatives.



Unit 3: Semiconductors

An overview of the high-tech semiconductor industry and what specific natural gas products are used. . Industry makes semiconductor diodes and stacks, including rectifiers, integrated microcircuits, transistors, solar cells, and light-sending and -emitting devices. This unit will cover the four main product categories: 1) memory 2) microprocessors 3) commodity integrated circuit 4) complex SOS (system on a chip).



Unit 4: Industrial 101

This unit is an overview of the day-to-day responsibilities of the industrial utility Representative.



Unit 5: Agriculture

An overview of the Agricultural market segment. This unit cover market overview, natural gas use in agriculture, and gas-fired products.



Unit 6: Pulp & Paper – Part 1

This unit covers market overview and industry trend, pulp making process, pulp drying, natural gas use in an integrated pulp and paper mill, boilers used in pulp mills, CHP (Cogeneration) for pulp and paper mills, and common terminologies used in the pulp and paper industry.



Unit 7: Pulp & Paper – Part 2

This unit covers an overview of the paper, tissues, paperboard making processes. Will cover all the natural gas technologies used and many resources available for paper making process.



Unit 8: Primary Metals

This unit covers primary metals industry facilities that melt and refine metals from ores and / or scrap metal. Primary metals industries include ferrous and non-ferrous metals and provide products both in the form of direct end products or as stock for use by other industries (i.e. billets for reheating and forging).



Unit 9: Greenhouses and Grow Houses

This unit addresses the indoor controlled environment to grow of plants. How Engine-driven CHP provide the necessary CO₂ needed to grow the plants. Two case studies will be covered in detail.



Unit 10: Steam System Thermal Cycle

This unit covers the energy input to the boiler, minus all the energy losses in the system, energy recovered back to the boiler plant, and condensate recovery.



Unit 11: Visit Metal Processing Plant

This unit addresses what to look for and what to recommend improving energy efficiency when you visit a metal processing plant.



Unit 12: Industrial Boilers

Understanding and Improving Boiler Efficiency to Reduce Energy Costs. It will cover Various definitions of boiler efficiency, how various efficiencies are measured and calculated, how and when to use these efficiencies for energy saving projects and show examples.

