



ESC's Contractor Training Program for Architects, Engineers, Consultants, Contractors, and Installers

The Contractor Training Program is designed to educate an array of contractors that work hand in hand with gas utilities to deploy gas appliances and equipment for commercial and industrial use. Track I of this program focuses on the advantages of natural gas relative to other fuels, operating and performance characteristics of gas equipment and, environmental and efficiency issues associated with their use.

Unit Summaries:

Unit 1: The Benefits of Natural Gas Appliances and Equipment

Statistics on the natural gas marketplace and benefits of natural gas compared to other forms of energy will be compared and contrasted in this unit. This unit will discuss economics and efficiencies of gas.

Unit 2: Overview of Gas Equipment for Commercial Applications

This unit provides an overview of equipment for space heating, cooling, water heating, cogeneration, and foodservice, highlighting equipment features, benefits, and applications are addressed.

Unit 3: Environmental Considerations and Carbon Footprint

This unit will review the positive environmental attributes of natural gas including emissions, source to site efficiencies, carbon footprint, and the means to reduce our carbon footprint.

Unit 4: Hot Water Heating Solutions

This unit will review traditional tank and tankless water heaters, direct contact water heaters, boilers, booster water heaters and gas heat pump water heaters used to create hot water for numerous applications.

Unit 5: Combined Heat and Power (CHP)

Cogeneration or Combined Heat and Power saves commercial and industrial customers money while adding security and resiliency. There are numerous products that generate electric and heat from a single natural gas input at much higher efficiencies than buying electric from the grid. This unit addresses the opportunity, best applications for CHP, economics, and emissions reductions. Multiple prime movers and waste heat recovery technologies will be reviewed.

Unit 6: Gas Air Conditioning & Gas Heat Pumps (GHP)

Natural gas air conditioning not only saves money but, reduces demand on the electric grid thereby allowing for smaller back-up generators to meet building needs during a power outage. Gas heat pumps have the added benefit of heating efficiencies of approx. 140%, with the ability to operate in very cold temperatures. Several kinds of equipment applications will be reviewed, and life cycle costing will be addressed.