

In this Chapter :

- ⇒ **Design and Installation requirements of LP Gas systems**
- ⇒ **LPG usage in flame shows and food trucks.**
- ⇒ **Safety requirements for LPG usage and re-filling.**

Intent of the Chapter

- To lay down the technical requirements for design and installation of LPG Cylinder and Central Gas systems as per best practices.
- To lay down the requirements for safe handling of LP-Gas .
- To ensure material and equipment involved in LPG installation are tested and comply to international standards.

1. Definitions

1.1. Shall

It is a mandatory requirement by Civil Defence.

1.2. Should

It is a suggested requirement recommended by Civil Defence but not mandatory.

1.3. Listed

Approved and registered by individual Emirates' Civil Defence material department.

1.4. Gallon. U.S. Standard and Kilogram

1 U.S. gal = 3.785 L., 1 Kg = 1.8 Liter, Approx. (Units used in this chapter are either Kilograms or US Gallons. Conversion of Liter to Kg without knowing specific density, Liter conversion to Kg is approximate.)

1.5.a. LPG (Liquefied Petroleum Gas)

Liquefied petroleum gas is classified as flammable, liquefied, and fuel. Any material having a vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves or as mixtures: propane, propylene, butane (normal butane or isobutane), and butylenes. LPG is stored in liquid form at high pressures. Because the LPG is twice heavier than air, if leaked from container, flows back to lower levels and accumulates around container. Most commonly used cooking fuel in UAE is LPG.

1.5.b. LNG (Liquefied Natural Gas)

Liquefied natural gas is classified as flammable, cryogenic, and fuel. Any material having a vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves or as mixtures: propane, propylene, butane (normal butane or isobutane), and butylenes. LNG is stored in liquid form at high pressures.

1.5.c. CNG (Compressed Natural Gas)

Compressed natural gas (CNG) is natural gas, Methane stored at high pressure. CNG is stored in gas form at high pressures. CNG is lighter than air and when leaked from containers, disperses up into air above.

1.5.d. SNG (Substitute Natural Gas /Synthetic Natural Gas)

Synthetic Natural Gas (SNG) is a blend of Liquefied Petroleum Gas (LPG) and diluent. The possible diluents are Bio gas, Digester Gas, Landfill Gas, Nitrogen and Compressed Air. However the commonly used diluent is compressed Air. SNG provides direct replacement for Natural Gas. SNG is lighter than LPG and can only be supplied through piping network from