



# SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore-641035



## Compressed Natural Gas (CNG)

CNG is natural gas compressed to a high pressure of about 1000 atmospheres. It is derived from natural gas and the main constituent of CNG is methane.

The average composition of CNG is as follows:

Constituents	Percentage %
Methane	88.5
Ethane	5.5
Propane	3.7
Butane	1.8
Pentane	0.5

## Properties

- (i) CNG is comparatively much less pollution causing fuel as it produces less CO, ozone and hydrocarbons during combustion.
- (ii) During its combustion, no sulphur and nitrogen gases are evolved.
- (iii) No carbon particles are ejected during combustion.
- (iv) It is less expensive than petrol and diesel.
- (v) The ignition temperature of CNG is 550
- (vi) CNG is a better fuel than petrol/diesel for automobiles.
- (vii) CNG requires more air for ignition.

## Uses

As CNG is the cheapest, cleanest and least environmentally impacting alternative fuel. In Delhi, it is mandatory for all buses, taxis and auto to use CNG as a fuel.





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## Liquefied Petroleum Gas (LPG)

LPG is obtained as a by-product during the fractional distillation of petroleum or from natural gas.

- ❖ LPG is obtained during the fractional distillation of crude oil
- ❖ It can be stored and transported easily in cylinders
- ❖ The average composition of LPG is as follows:

Constituents	Percentage %
n-Butane	38.5
Iso Butane	36.7
Propane	24.7
Others	0.1

- ❖ Its calorific value is 27800 kcal. / m<sup>3</sup>

### Properties

- ❖ LPG is easily controllable
- ❖ It is readily liquefied under moderate pressure
- ❖ As a liquid, it looks a lot like water.
- ❖ It is colourless and odourless in its natural state
- ❖ LPG at atmospheric temperature and pressure is a gas which is 1.5 to 2.0 times heavier than air

### Uses

- ❖ It is used as domestic and industrial fuel.
- ❖ It is also used as motor fuel.
- ❖ LPG is also used as a fuel in internal combustion engine

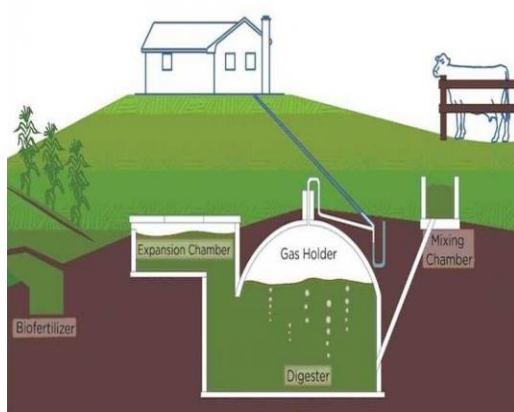


Liquefied Petroleum Gas



## Bio Gas

- ❖ Biogas is a type of biofuel that is naturally produced from the decomposition of organic waste in the absence of oxygen
- ❖ When organic matter, such as food scraps and animal waste, break down in an anaerobic environment (an environment absent of oxygen) they release a blend of gases called biogas.
- ❖ it is a renewable energy source



## Properties

- ❖ It is about 20% lighter than air (Density is about 1.2mgs/Liter)
- ❖ Ignition Temperature is about 650-750°C
- ❖ Calorific value is 5000 kcal./m<sup>3</sup>
- ❖ Clean fuel
- ❖ No residue and smoke produced
- ❖ Non polluting & Economical

## Uses

- ❖ Domestic fuel
- ❖ For street lighting
- ❖ For generation of electricity
- ❖ If compressed, it can replace compressed natural gas for use in vehicles



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