**What is PNG and what are its uses?**

A domestic PNG connection includes conversion of one LPG appliance to PNG, laying of associated galvanized iron (GI) pipeline network, along with necessary fittings, pressure regulator and a meter.

Alternately procuring new PNG appliances and burners in kitchen without conversion is also possible.

Natural gas catches fire only when it forms a 5-15% mixture with air whereas LPG catches fire when it forms 2% or above mixture with air. Natural air is lighter than air. Hence, in case of a leak, it just rises and disperses into thin air given adequate ventilation. But, LPG being heavier will settle at the bottom near floor surface. Large quantity of LPG is stored in liquefied form in cylinder. With domestic PNG, it is safer since PNG installation inside premises contains only a limited quantity of natural gas at low pressure of 21 millibar.

As natural gas is odourless, ethyl mercaptan is added to detect any leakages. For CNG, odourant is added in mother station and for PNG, odourant is added at source of supply.

Piped Natural Gas (PNG) is used for domestic, commercial and industrial consumption. PNG has many distinctions to its credit – of being a pollution free fuel, economical and safer fuel being few of them.

Some benefits are as under:

Uninterrupted Supply: PNG is being supplied through pipe 24 x 7. PNG offers convenience of ensuring continuous and adequate supply of PNG at all times, without any problems of storing gas in cylinders.

Convenience: Since supply of PNG is continuous, domestic consumer is relieved from task of booking LPG cylinder and waiting for delivery-man to deliver. There is no storage space required. In case of commercial and industrial consumption, customer is relieved from storage pace for the fuel and fuel inventory management as they don’t need to monitor fuel stock and material handling.

Safety: Natural Gas is a safe fuel. In case of leakage, NG being lighter than air, disperses in air.

Economy: PNG is economical compared to CNG and any other liquid fuels. Further in the case of PNG, billing is after a cycle of fortnightly/ monthly/ quarterly after use by consumer whereas consumers pay upfront for any other fuel used by them. Thus, there is savings on account of release of working capital for commercial and industrial sector and deferment for domestic sector.

Eco-friendly fuel: PNG is one of the cleanest burning fuels and helps improve quality of air. When natural gas burns completely, it gives out carbon dioxide and water vapour. These are the very components which one gives out while breathing!

No spillage and pilferage:

CNG (Compresses Natural Gas)

As CNG is available in India, its usage is better for our National economy. CNG offers better ignition reduced emissions and thus becomes environment friendly.

 Advantages of Natural Gas:

1. Environmentally Clean Advantage

Compressed natural gas is cleanest burning fuel operating today. This means less vehicle maintenance and longer engine life.

CNG vehicles produce fewest emissions of any other fuel. Dedicated Natural Gas Vehicles (NGV) have little or no emissions during fuelling. In gasoline vehicles, fuelling emissions account for at least 50% of a vehicle’s total hydrocarbon emissions.

2) Maintenance Advantage:

 Some fleet operators have reduced maintenance costs by as much as 40% by converting their vehicles to CNG. Intervals between tune-ups for natural gas vehicles are extended form 30,000 to 50,000 miles.

Intervals between oil changes for natural gas vehicles are extended – anywhere from 10,000 to 25,000 additional miles depending on how vehicle is used.

 Natural gas does not react to metals the way gasoline does, so pipes and mufflers last longer.

 3) Performance Advantage

natural gas give same mileage as gasoline in a converted vehicle.

Dedicated CNG engines are superior in performance to gasoline engines.

CNG has octane number of 130 and has a slight efficiency advantage over gasoline.

Because CNG is already in gaseous state, NGVs have superior starting and drivability, even under severe hot and cold weather conditions.

NGVs experience less knocking and no vapour locking

4) CNG Cost Advantage:

 natural gas is cheaper per equivalent gallon than gasoline (an average of 15% ti 50% less than gasoline).

5) Safety Advantage:

Surveys indicate that NGVs are as safe as or safer than those powered by other fuels.

 PNG is transmitted via Pipeline laid by MNGL. Pipeline up to consumer’s kitchen is laid, owned and is responsibility of MNGL. In case of damage to equipment installed at customer’s premises by customer, applicable charges shall be recovered before replacement from the consumer only. Underground low pressure pipes (polyethylene) are laid till building and from bottom of building to individual residence, **GI pipes** are used for piping.

.