

The mixing technology can be used as **Back-up equipment** or **Gas costs Peak shaving**. Technology is also economic alternative.

ADVANTAGES:

- Economic reasons (back-up system): uninterruptible gas service rates, better position to negotiate fuel cost with Natural Gas supplier.
- Alternative solution: pipelines maintenance and servicing, global cut-off of gas (emergency back-up), standby solution for accidents at pipelines.
- Supply a remote community with Natural Gas – permanent or temporary until extension of Natural Gas main.

LPG/AIR IS 100% INTERCHANGEABLE WITH NATURAL GAS:

- Combustion characteristics of LPG/air are identical to Natural Gas.
- **NO modifications of Natural Gas equipment: no burner modifications, no orifice changes, no regulator or line adjustments.**
- You can switch to LPG/air immediately - NO pre-purging or post purging of the line.
- LPG/air mixture can directly replace the natural gas in combustion applications.

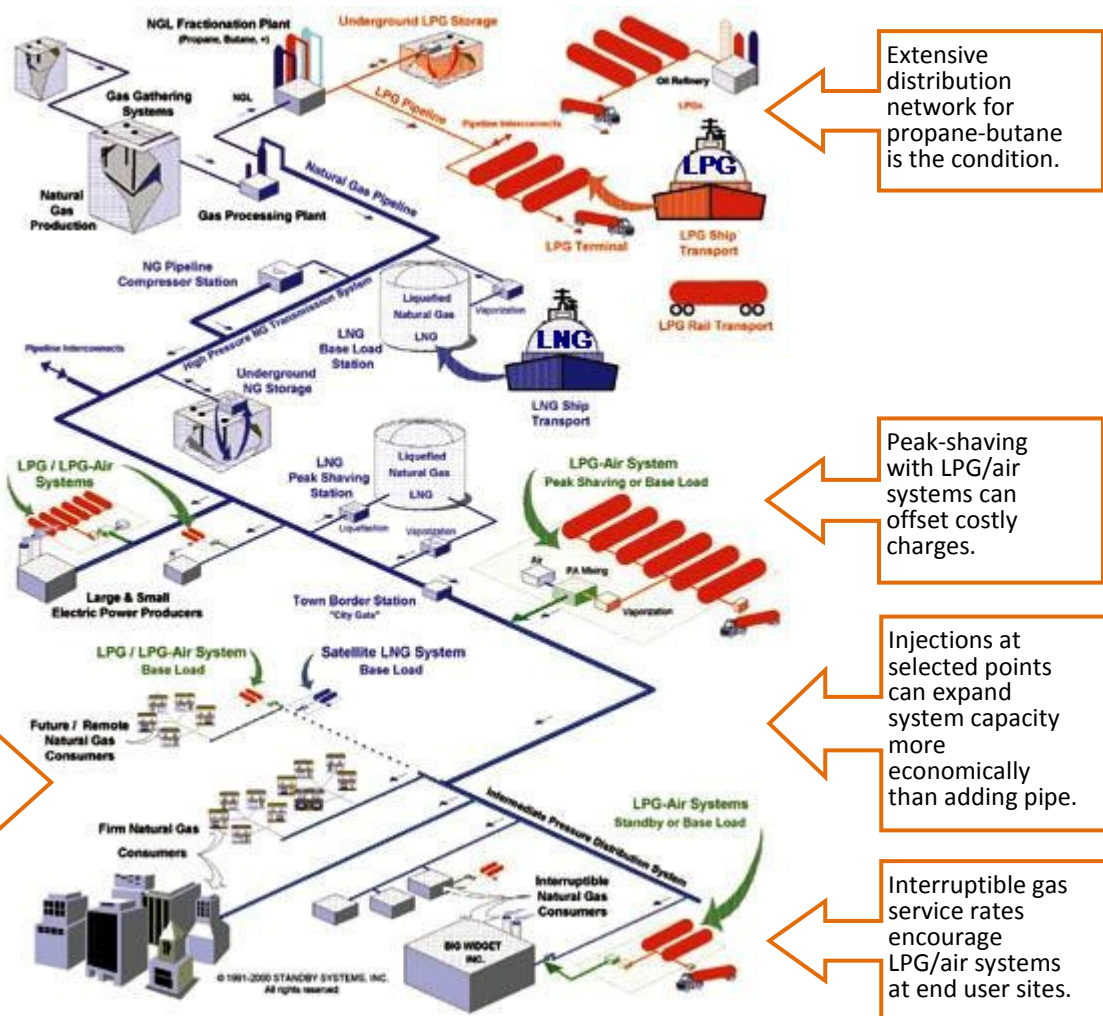
When LPG is mixed with Air to the correct ratio, the resulting mixture will burn with the same characteristics as Natural Gas.

LPG/AIR MIXED RATIO:

55% propane / 45% air		47% butane / 53% air
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DIFFERENT USES OF LPG/AIR SYSTEM:

Natural Gas-Problems
 -Variation in Demand
 -Pipeline Maintenance
 -Recent experience of gas cut-off



LPG/Air bridges the gap between off-system development and extension of natural gas mains.

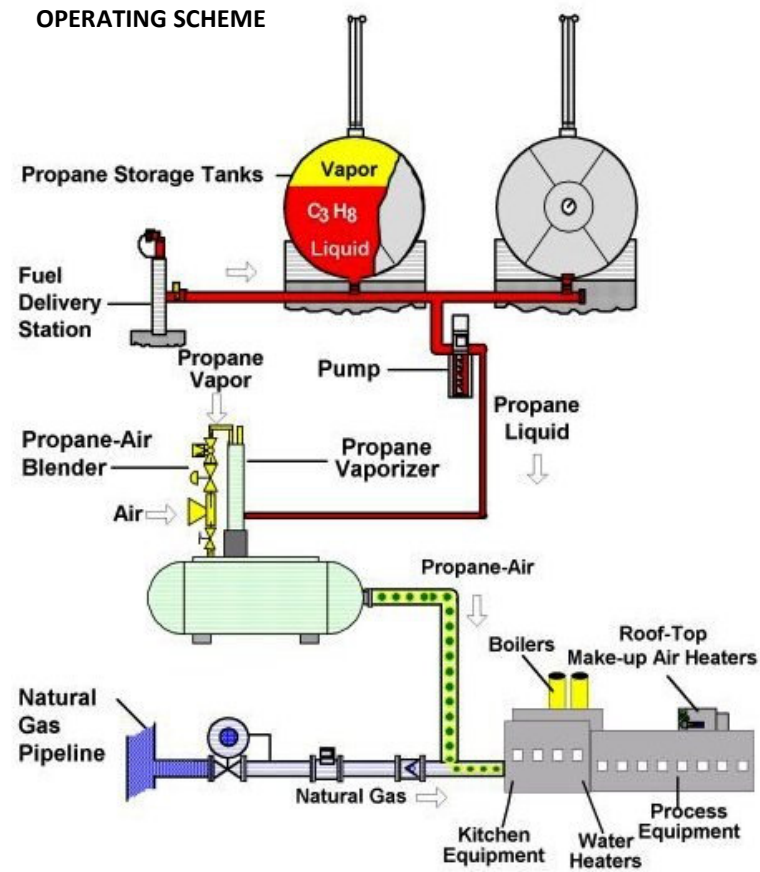
OPERATION

In the basis of the system there are mixer and LPG vaporizer.

Depending on its type the vaporizer uses electric or gas energy for transformation of LPG liquid to vapor. LPG vapor enters then the venturi mixer. As pressurized vapor passes through the mixer, the kinetic energy of the gas draws in air from the atmosphere through a check valve. The mixture is then re-pressurized through the diffuser before it enters the surge tank.

For bigger capacities and higher discharge pressures the air is supplied through compressor and mixing process is digitally controlled.

Unlike diesel, fuel oil or propane, synthetic natural gas does not require additional gas trains, piping, regulators, or special fuel delivery systems inside the factory. The propane air mixture is **simply connected to the natural gas piping** just after the metering station (and pressure reducing station) but before entering the building.



TYPES OF NG REPLACEMENT SYSTEMS

There are 3 types of system depending on mode of LPG vaporizing:

DFM (with Direct Fired vaporizer)	XPM (with XP electric vaporizer)	QM (with waterbath vaporizer)
Combination of Algas Direct Fired vaporizer, venturi mixer and LPG pump.	Combination of Algas XP electric vaporizer, venturi mixer and LPG pump.	Combination of gas fired waterbath vaporizer, venturi mixer and LPG pump.



Capacity range: 2.5 to 28 MM Btu/h at delivery pressures from 5 to 12 psig for propane and 5 to 8 psig for butane atmospherically (with no compressor).

- 100% turndown means these units are perfect for variable or steady loads.
- **The most economical solution** to lower gas bills.
- Available in 110V/50-60Hz or 220V/50-60Hz. Electrical consumption less than 1 amp.
- Air inlet silencer (80dB at 10 feet).

Capacity range: 2.5 to 21 MM Btu/h at delivery pressures from 5 to 12 psig for propane and 5 to 8 psig for butane atmospherically (with no compressor).

- 100% turndown capability
- Able to make natural gas in less than one minute!
- Venturi silencer
- Explosion proof (Class I, Division 1, Group D)

Capacity range: 2.5 to 21 MM Btu/h at delivery pressures from 5 to 12 psig for propane and 5 to 8 psig for butane atmospherically (with no compressor).

- Integrated PLC controlled operating system with user interface and on/off/standby modes.
- Component cycle and runtime display
- Air intake header with silencer

The 300mbar systems may require and underground tank. Higher pressure systems require a small liquid pump.