



LNG/CNG

Liquefied Natural Gas (LNG)..... Cryogenic Methane

Compressed Natural Gas CNG..... Compressed Methane

GAS INNOVATIONS supplies hydrocarbon products including innovative consulting and technical services to a wide variety of industrial customers.

Gas Innovations continues to develop the natural gas market for its distributor network. In the past few months Gas Innovations has added resources to complete its offering of natural gas supply, filling odorized compressed natural gas (CNG) into cylinders and tube trailers. Until October 2013 Gas Innovations offered liquefied natural gas (LNG) and CNG in non-odorized form. With the addition of the odorized CNG, Gas Innovations now has the complete supply of natural gas products to support its distributors.

Gas Innovations fills several hundred odorized CNG cylinders per month into distributor-owned cylinders for redistribution to their respective customers. Additional odorized CNG sales include tube trailer product. LNG sales continue in less-than-truckload quantities as well as full truck loads. Other deliveries of LNG are made in cryogenic ISO containers, where they may also become the intermediate, temporary or short-term storage container for the end-user.

Recently Gas Innovations installed tube trailers of CNG for pipeline back-up supply to an industrial facility. This supply saved the distributor's customer thousands of dollars in penalties for delays had he not been able to provide all of the utilities to its lessee. Pipeline and back-up supply as well as temporary supply are also available with cryogenic supply of LNG. Typically LNG would be supplied with a larger volume requirement and might have additional vaporization installed to assure constant vapor supply. Gas Innovations provides these services, including staffing of experienced personnel.

The industrial gas industry may become the predominant supplier of natural gas to the non-pipeline users across the country. The industrial gas industry has more experience in cryogenics, compressed gases, related tanks, safeties, pumps, vaporizers, and compressors than any other industry. As such the industrial gas distributor is normally the first call by an end-user for this supply. Customer service and sales personnel within the industry should be aware of the resources and potential business in this line of products.

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One of the fastest growing products in the energy industry today. LNG is supplied in bulk, temporary bulk, portable bulk and short term supply of industrial and high purity grades.

LNG is available in containers with customized pressure settings to take full advantage of this new market.

Gas Innovations provides:

- Assurance of supply
- Transportation and delivery
- On-site storage for customized requirements
- Customized vaporization
- Customized delivery pressures
- Customized flow requirements
- Back-up supply of compressed natural gas (LNG)



CNG in... Tube trailers, Cylinders, or Vaporized LNG

Application opportunities:

- Flare fuel supply
- Burner incinerator fuel
- Steel mill supply fuel
- Chemical plant fuel
- Environmental incineration fuel
- CNG fueling stations



Cryogenic applications:

- Engine testing, R & D projects
- Space related fuel studies for NASA, Aerospace facilities
- Power plant back-up fuel and maintenance purging
- LNG fueling stations

PRODUCT DATA	
BTU/lb	22,980
BTU/gal	81,700
Auto ignition Temp F	1004 F
Flammability Range	5-15% in Air
1 pound liquid	23 cu ft
1 gallon of liquid	83 cu ft
1 gallon of liquid	3.6 lbs
Boiling point	-259 F
Density	0.60