

Technical

Connections

- Gas Distribution Networks (GDN) there are four Gas Distribution Network companies, each of which covers a separate geographical region of Great Britain. These networks are owned and managed by the following companies:
 - Cadent Gas
 - Northern Gas Networks
 - SGN
 - Wales and West Utilities



Independent Gas Transporters (IGT) - these develop, operate and maintain local gas transportation networks. IGT networks are directly connected to the Gas Distribution Network (GDN) via a Connected System Entry Point (CSEP) or indirectly to the GDN via another IGT. It is estimated that the number of consumers connected to IGT networks is around one million. Utility Infrastructure Provider (UIP) - are accredited companies that can build or modify connections to the gas network, but they do not own the network or connections they build. For a UIP to carry out connection works they must be registered with the Gas Industry Registration Scheme (GIRS) that is administered by Lloyd's Register.

- Connected System Entry Point (CSEP) a connection point for a new gas pipe to the existing network.
- Network Code this is the strict contract that governs a *shipper's* relationship to National Grid, designed to ensure a level playing field.
- Gas Supplier these are companies that sell gas to consumers. Suppliers must have a contract with a *shipper* to arrange to have their gas conveyed to the consumer. Suppliers must obtain a license from *Ofgem* before they supply gas. The big six energy suppliers are British Gas, E.ON, EDF Energy, Npower, Scottish Power and SSE.
- Shipper the shipper is the company that arranges to move the gas from where it comes onshore to the consumer. Shippers must have a license from Ofgem before they can ship gas.
- Producers these are the companies who explore for gas, drill wells and take the gas to coastal delivery facilities.
- Transporter This is the company that transports gas from coastal delivery facilities (where gas comes onshore) on behalf of the shippers. All gas in the UK is transported by one of the regional Gas Distribution Networks.

Copyright of Premier Energy Services Ltd.



Gas Acronyms and Jargon

- Gas Transmission Network Britain's gas transmission network, the National Transmission System (NTS), is the *high pressure* gas network which transports gas from the entry terminals to Gas Distribution Networks, or directly to power stations and other large industrial users. It is owned and operated by National Grid Gas Plc (NGG).
- Pressure Reducing Station (PRS) is a large gas governor that reduces gas pressure in a network.
- Gas Governor also called gas or pressure regulators, these reduce the pressure of gas flowing through a pipeline, meter or appliance.
- Low Pressure (LP) operating pressures up to 75mbar. Typical pressure from a meter installation is 21mbar.
- Medium Pressure (MP) operating pressure between 75mbar and 2bar.
- Intermediate Pressure (IP) operating pressure between 2bar and 7bar.
- High Pressure (HP) operating pressure between 7bar and 16bar. These mains are owned and operated by the local GDN.
- National High Pressure (NHP) operating pressure between 16bar and 100bar. These mains are owned and operated by National Grid Gas.
- mbar is a metric unit of pressure (millibar). 1000 mbar is equal to 1bar
- *is a metric unit of pressure.*
- Compressed Natural Gas (CNG) is a natural gas that is cheaper, greener and more efficient to the traditional alternatives (petrol & diesel).

- Liquefied Natural Gas (LNG) is a non-toxic liquid that is formed from natural gas when cooled to -162°C.
- Liquefied Petroleum Gas (LPG) is a hydrocarbon gas in liquid form. Its two main forms are propane and butane.
- Renewable Natural Gas (RNG) is a biogas which is primarily methane-based. It is created from organic waste breaking down.

Metering

- Meter Point Reference Number (MPRN) is the number given to uniquely identify every point on the network where a meter could be or is connected.
- Meter Asset Manager (MAM) the key responsibility for gas meter provision is with the MAM. This is the company that a gas supplier or gas transporter contracts to provide metering services to customers and is responsible for the meter at all stages of its life from cradle to grave.
- After Diversity Maximum Demand (ADMD) the combined maximum demand for one or multiple customers when a diversity factor has been applied.
- Annual Quantity (AQ or AAQ) the annual quantity of gas consumed measured in kilowatt hours (kWh).
- Kilowatt Hour (kWh) is a unit of energy. 1kWh is equal to 3.6 megajoules.
- Megawatt Hour (mWh) is a unit of energy. 1 megawatt is equal to one million watts.
- Therms This is a unit measure for gas. One therm is equal to 29.3071kWh.

Copyright of Premier Energy Services Ltd.

Technical





Gas Acronyms and Jargon

- Calorific Value (CV) the calorific value is a measurement of the amount of energy contained in the gas. CV is usually quoted in megajoules per cubic meter (MJ/m3). Gas delivered to your premises will have a CV of between 37.5 MJ/m3 and 43.0 MJ/m3. This is continually measured by National Grid for each Local Distribution Zone and passed to your gas supplier daily.
- Correction Factor the correction factor is used to take account of the temperature and atmospheric conditions at a site. It is generally of the order of 1.02264.
- Load Profile Most consumers use more gas in the cold winter months than the warmer summer months. If you are on a variable rate contract, in the absence of meter reads, your *supplier* will bill you on the standard profile, as a percentage of your *Annual Quantity*. See example below:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
% Used	13.8	13.6	12.2	9.8	7.1	4.2	2.4	2.4	4.2	7.3	10.3	12.7

Other

- BEIS this is the Department of Business, Energy and Industry Strategy. This government department brings together responsibilities for business, industrial strategy, science, innovation, energy and climate change. (www.gov.uk/department-for-business-energyand-industrial-strategy)
 - Office of Gas and Electricity Markets (Ofgem) – regulates the gas and electricity industries in Great Britain. Ofgem is governed by a market authority and its powers are provided for by Acts of Parliament. Everything that Ofgem does is designed to promote and protect the interests of gas and electricity customers. (https://www.ofgem.gov.uk/)

- Lloyd's Register Operates the Gas Industry Registration Scheme (GIRS) which allows companies to become Utility Infrastructure Providers (UIP) (<u>http://www.lr.org/en/</u>)
- Gas Industry Registration Scheme (GIRS) is the *Lloyd's* accreditation scheme for the installation and design of gas networks. (<u>https://www.lr.org/en-gb/utilities/girs/</u>)
- Energy Networks Association (ENA) The industry body of UK gas and electricity transmission and distribution licence holders (<u>http://www.energynetworks.org/</u>)
- Institution of Gas Engineers and Managers (IGEM) – An engineering institution licensed to assess gas engineers and technicians (<u>http://www.igem.org.uk/</u>)

V1 – JUNE 2019

Technical

Copyright of Premier Energy Services Ltd.