


All council areas in Northern Ireland

A few statistics in relation to firmus energy's activity within all council areas:

REDUCTION OF
220,921
TONNES OF
 **CO₂** FROM THE
ATMOSPHERE
EACH YEAR

(BASED ON 2019 FIGURES
WHEN COMPARED TO OIL)

INVESTED
£140.7m
SINCE 2005,
£5.6m
PLANNED FOR 2020



CONNECTED
49,596
CUSTOMERS TO DATE

(INCLUDING OWNER-OCCUPIER
PROPERTIES, NIHE, DOMESTIC
NEW BUILD AND INDUSTRIAL
AND COMMERCIAL)

GAS

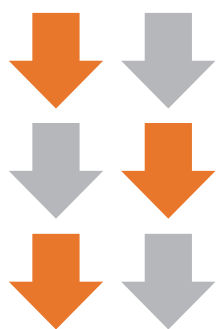
IS AVAILABLE FOR

104,884

FUTURE
CUSTOMERS
TO CONNECT



IF ALL THESE REMAINING PROPERTIES CONNECTED TO
GAS THE ADDITIONAL CO₂ SAVINGS WOULD EQUATE TO



307,901 TONNES

GIVING A TOTAL REDUCTION OF

528,825 TONNES

EVERY YEAR

About firmus energy

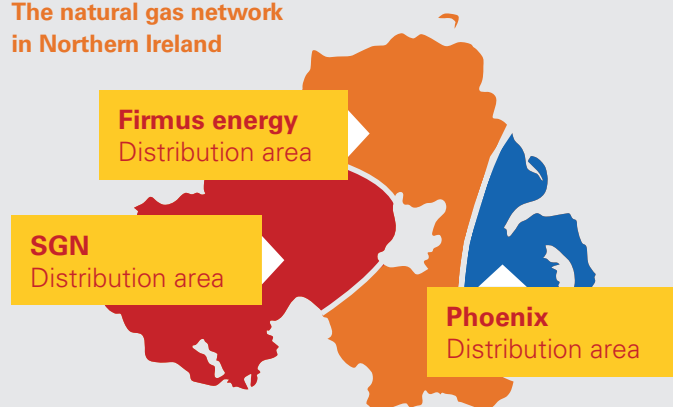
Since 2005 firmus energy has been responsible for installing and maintaining over 1,600km of pipeline across 35 cities, towns and villages in Northern Ireland. This natural gas network extends through the central strip of Northern Ireland from Newry, through Antrim (our HQ) and on to Derry / Londonderry. firmus energy also has a supply business which purchases and sells natural gas to over 100,000 domestic and Industrial customers throughout Northern Ireland.

The company employs over 100 direct staff, as well as 300 indirectly in the construction, installation and service support industries. firmus energy prides itself on achieving and maintaining Investors in People - gold status and takes part each year in Business in the Community's Environmental Benchmarking Survey which assesses the environmental performance of organisations. In 2019, in recognition of our ongoing work in this area, firmus energy was awarded gold status.

The Northern Ireland Gas Industry - £1bn network investment to date

Northern Ireland benefits from having one of the most modern and efficient natural gas networks in the world. By the end of 2022, there will be 550,000 properties with access to the natural gas network in Northern Ireland. There are three network operators based in the region. All essentially do the same job but operate in different licenced areas (please see map below). These gas networks are suitable to accept Biomethane and Hydrogen, hence the networks will play a significant part in assisting Northern Ireland to transition towards a net zero carbon target in future years.

The natural gas network in Northern Ireland



The natural gas network in Northern Ireland is constructed from new Polyethylene (PE) pipework in comparison to parts of GB and Rol which still have sections of gas network constructed of cast iron. Phoenix natural gas laid its first gas pipes in the Greater Belfast area in 1996, followed by firmus energy in 2005 which started building its gas network to over 35 cities, towns and villages in the central strip of Northern Ireland, and finally in 2015 SGN Natural Gas commenced laying gas pipes in the west of the province.

The natural gas industry provides an efficient and practical way for heating homes and businesses and is ideally placed without the need for significant investment in network upgrade, disruption to existing properties, or behavioural changes, to help facilitate the delivery of net zero carbon in Northern Ireland.

Environmental Benefits



Energy users switching from home heating oil to natural gas reduce their carbon emissions by 50%. This is achieved through the introduction of a carbon cleaner fuel and the associated efficiencies of a highly efficient natural gas boiler and controls. These impressive carbon savings complement lifestyle and convenience benefits and make moving to natural gas a desirable home and business improvement.

The natural gas industry recognises the importance of energy efficiency in delivering a low carbon economy as well as the importance of continually educating consumers on the role both technical innovation and behavioural change can have on reducing energy use.

By the end of 2022 there will be c.550,000 properties in Northern Ireland with access to natural gas and it is estimated that c.320,000 homes will have taken the opportunity to connect to the gas network. Maximising the conversion of heating from oil to natural gas has the potential to deliver 1.1m tonnes of CO2 savings per year by 2022. That's the equivalent of taking 750,000 cars off the road each year.

The role Natural Gas will play in decarbonising heat in Northern Ireland between now and 2050

The Department for the Economy in Northern Ireland is currently assessing responses to its Call for Evidence in relation to the new Energy Strategy for Northern Ireland. The natural gas industry in its submission proposed an appropriate timeline for the decarbonisation of heat between now and 2050.

Phase 1 – From 2020 to 2030

Maximise household heating and business conversions from oil to natural gas via Northern Ireland's existing and planned natural gas networks. Each household converting from oil to natural gas emits 50% less carbon dioxide into the atmosphere enabling an immediate reduction in carbon emissions. As highlighted by 2022, c. 550,000 homes and businesses will have access to natural gas networks, with c. 320,000 properties connected. This presents an opportunity to expedite conversion to natural gas of a further 230, 000 properties and realise a total carbon reduction saving of 1.7million tonnes of CO₂ each year.

Phase 2 – Ongoing Decarbonisation

● Facilitate Biomethane injection into the existing natural gas network

- The Anaerobic Digestion process breaks down matter such as animal or food waste to produce Biogas and Bio fertiliser. Biomethane is a purified form of raw Biogas and can be used as a natural gas substitute. Injecting Biomethane into existing natural gas networks is a practical way to further “green” the natural gas we use while also helping to address high levels of greenhouse gases attributable to the agri-sector in Northern Ireland. Energy policy must create the conditions for a regime that encourages investment into Biomethane production and injection given its efficiency and environmental credentials.

● Facilitate the blending of hydrogen into the existing natural gas network

- Trials, such as the HyDeploy project, are already well underway across the natural gas industry in GB to blend natural gas with hydrogen, which produces zero carbon at the point of use, into the existing network. This would offer even further carbon savings without the requirement for significant changes to household appliances. Further advancement in this area could eventually see natural gas networks carry full hydrogen solutions removing carbon from the network entirely.

● Facilitate Compressed Natural Gas (CNG) for HGVs and buses

- Around 25% of transport greenhouse gases are produced by diesel fuelled HGV's and buses, which make up only 1.5% of all road traffic in Northern Ireland. An effective alternative to diesel will be key for this sector to support decarbonisation goals. While it is recognised that electrification is a possible solution for cars and light vehicles, a solution for HGV's and buses has yet to be established in Northern Ireland.
- Compressed Natural Gas (CNG) is a lower cost, lower emission alternative to petrol and diesel that supports both lower carbon goals, as well as reduces harmful NOx and PM10's particulate matter. CNG can be used to fuel a wide variety of commercial applications, from vans to light, medium and heavy-duty trucks and buses. CNG refuelling stations can be connected to existing natural gas networks and provide an effective alternative to high polluting petrol and diesel commercial vehicles.

Phase 3 - Delivering Net Zero Carbon

- **Maximise household and business heating conversions from oil to natural gas** via Northern Ireland's existing and planned natural gas networks. Each household converting from oil to natural gas emits 50% less carbon dioxide into the atmosphere enabling an immediate reduction in carbon emissions.
- **Facilitate transport fuel change and the decarbonisation of Natural Gas in the networks**
 - Delivering Net Zero Carbon- following the period of commercial and technological development (2020-2030) the next phase in Northern Ireland's energy transition should be the implementation of new, long term and net zero carbon solutions, delivered by optimising the use of Northern Ireland's natural gas network as one of its core assets.

Natural gas heats and fuels some of Northern Ireland's best brands



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