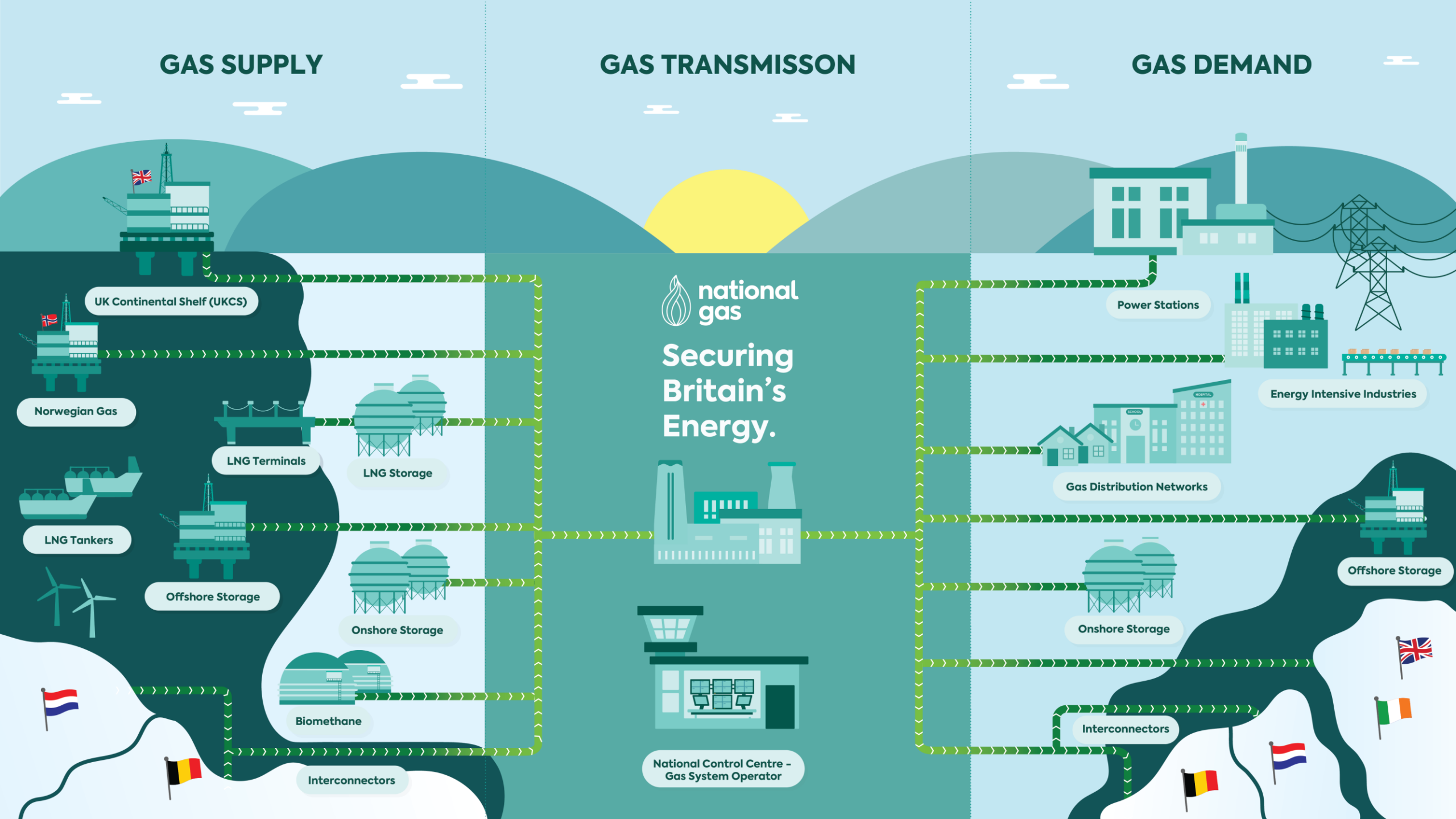
Securing Britain's Energy.

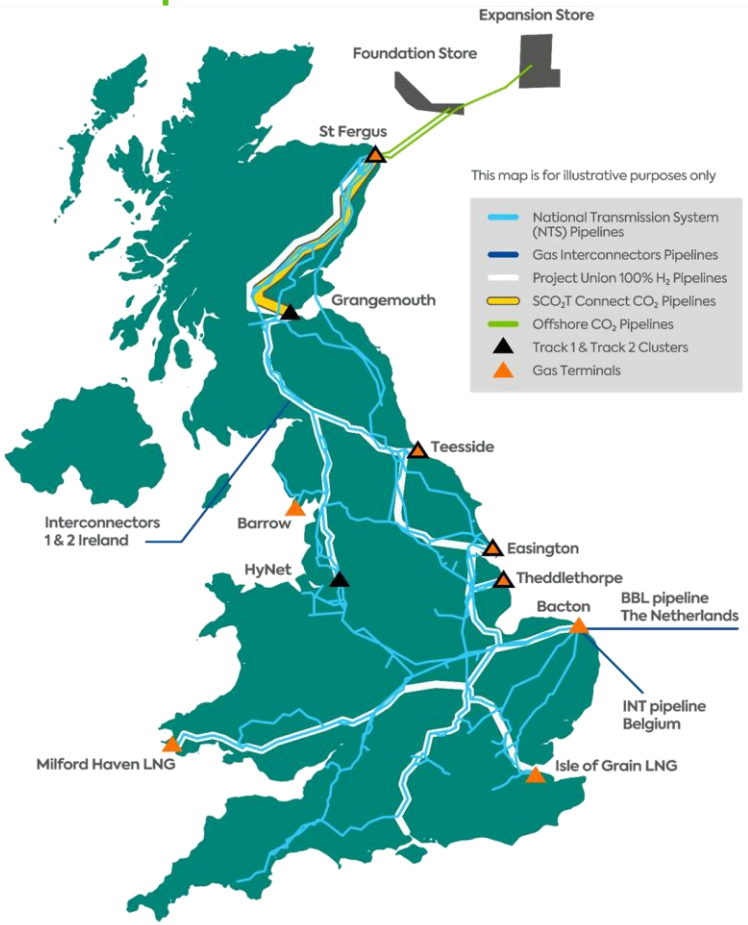
Jake Tudge
National Gas

All-Party Parliamentary Group for Energy Studies (PGES)
2nd December 2025


GAS SUPPLY
GAS TRANSMISSON
GAS DEMAND
UK Continental Shelf (UKCS)
Norwegian Gas
LNG Terminals
LNG Storage
LNG Tankers
Offshore Storage
Onshore Storage
Biomethane
Interconnectors
national gas
Securing Britain's Energy.
National Control Centre - Gas System Operator
Power Stations
Energy Intensive Industries
Gas Distribution Networks
Offshore Storage
Onshore Storage
Interconnectors

We operate Great Britain's primary energy system, the NTS. Our role is to secure Britain's energy whilst supercharging the delivery of clean power and net zero.

We operate the National Transmission System (NTS)



100% All GB gas imports and exports go through the NTS.

500k Businesses and industries supplied by gas in Britain.

50% Dispatchable power capacity provided by gas (c.35GW).

100% Reliability and availability of the NTS in recent years.

- **35** power stations
- **15** major industries
- **9** storage sites
- **4** Local networks
- **3** Interconnectors
- **3** LNG terminals

5,000 miles of high-pressure steel transmission pipeline

60 jet engine compressors across our 21 sites

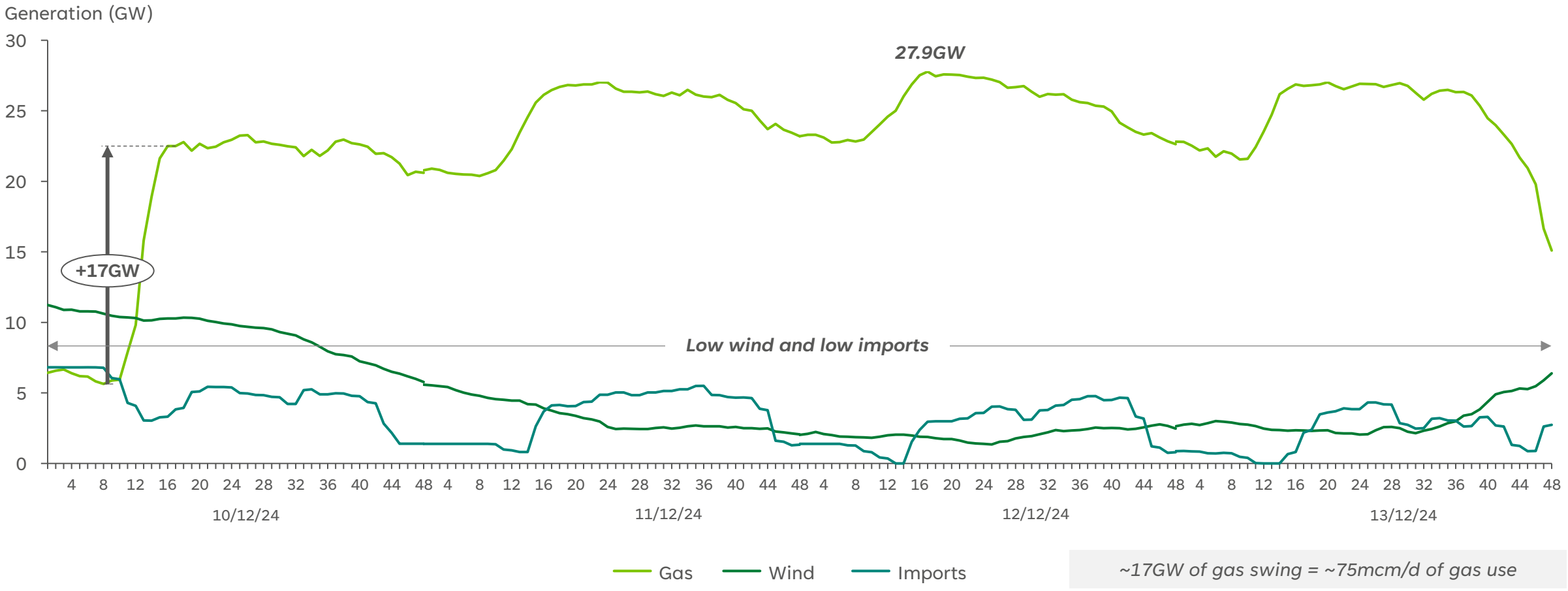
3x the energy transported than by the electricity grid

¼ of UK annual electricity generated from gas

£7.99 Average cost of the NTS on typical consumers' annual gas bill

The NTS supplies over 40% of the UK's primary energy – also securing energy for the island of Ireland and continental Europe.

Last December, across several days, we saw significant swings when gas was required at short notice and in large volumes – averaging 60 to 70% of electricity some days.

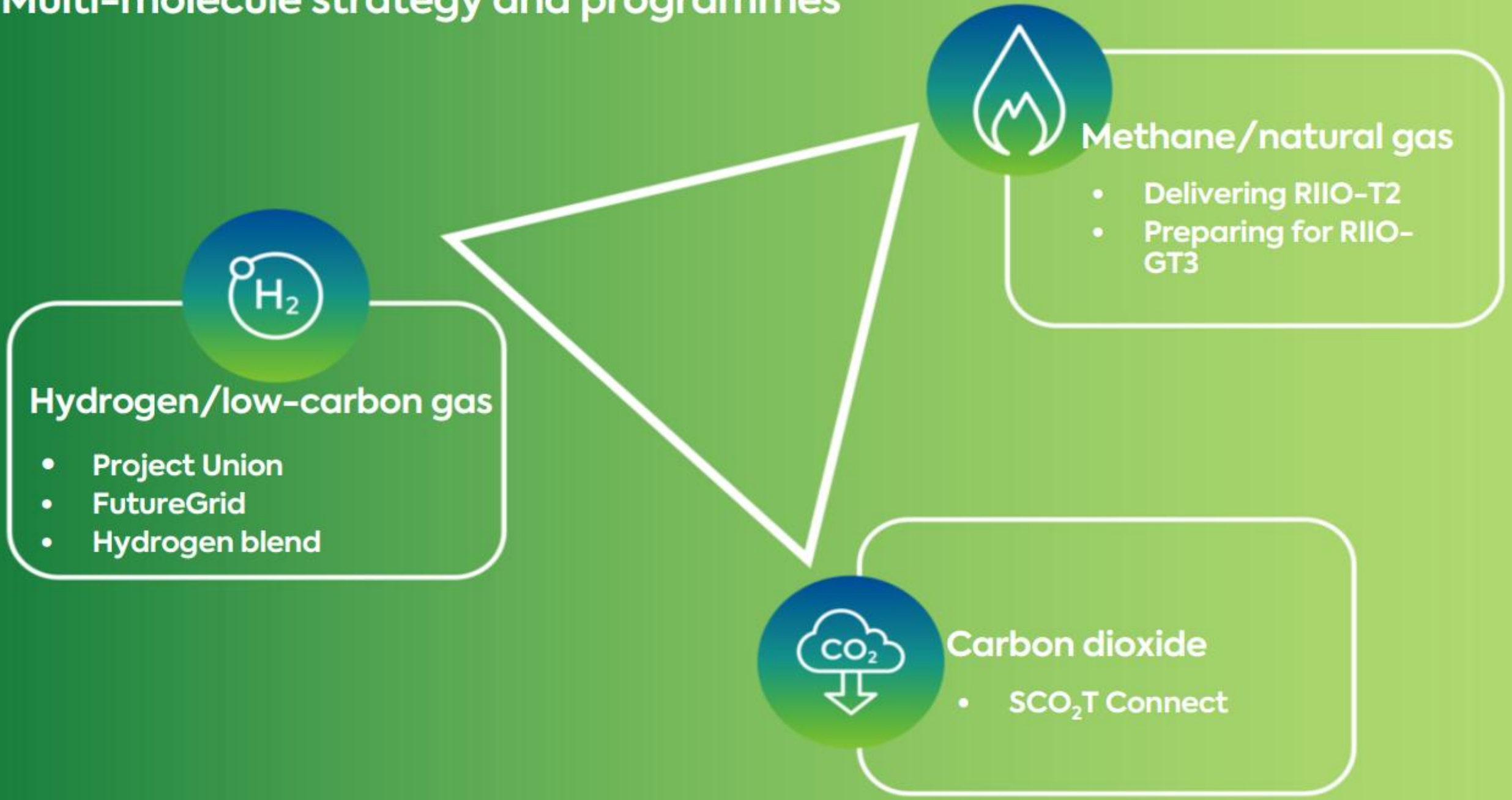


~17GW of gas swing = ~75mcm/d of gas use

Gas plant operations for electricity are hitting new intra-day highs to complement the growth of intermittent renewables.

Source: NESO, National Gas analysis.

Multi-molecule strategy and programmes



Our ambition is to build Britain's core hydrogen network and create a competitive hydrogen economy in the process.

Project Union is our vision for a core hydrogen network, as recommended by the Climate Change Committee, National Infrastructure Commission, and Royal Academy of Engineering.

A c.1,500-mile core hydrogen network **connecting hydrogen production, strategic storage, and demand to deliver net zero** through clean power and industrial decarbonisation.

Utilise existing infrastructure, building new pipelines only where needed, to **deliver a cost-effective transition of gas infrastructure** to build the hydrogen economy.

Create a resilient hydrogen backbone which **enables a UK-wide hydrogen market and interconnection with continental Europe** through the European Hydrogen Backbone (EHB).

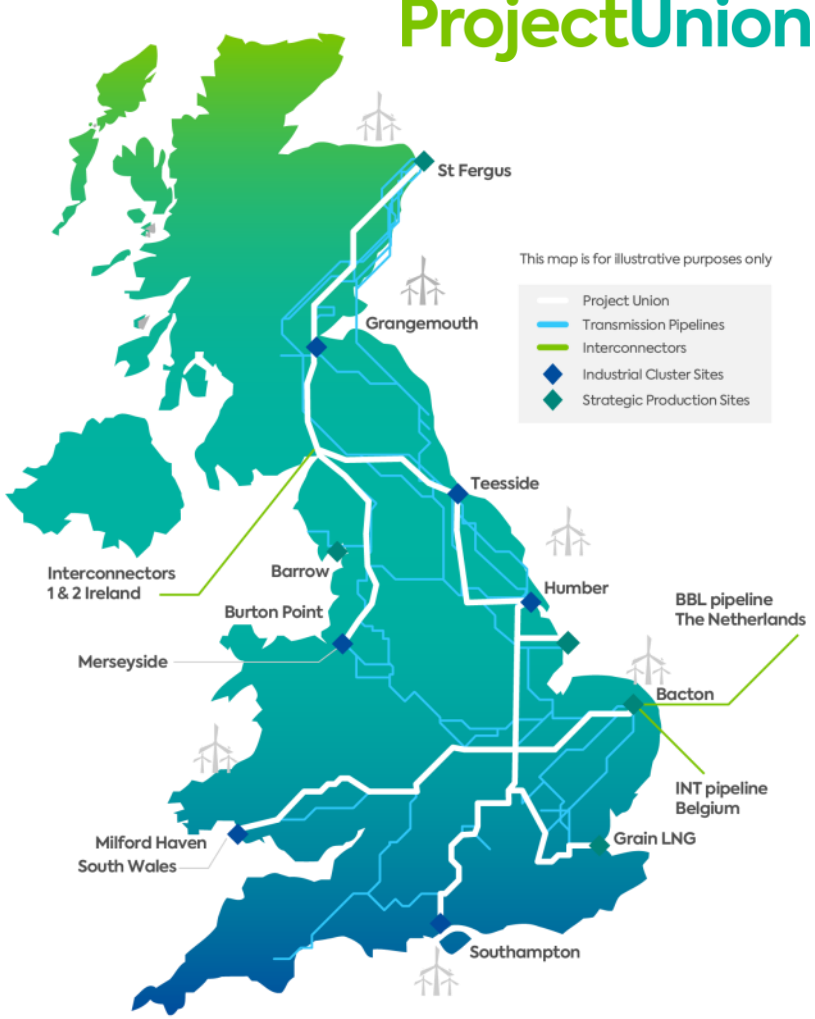
Provide hydrogen producers and demand – such as **power stations and major industry** – with the confidence that a market will be available for low carbon hydrogen at scale.

£38bn
System cost saving[1]

3,100
jobs at peak construction[2]

£300m
GVA to the UK economy[2]

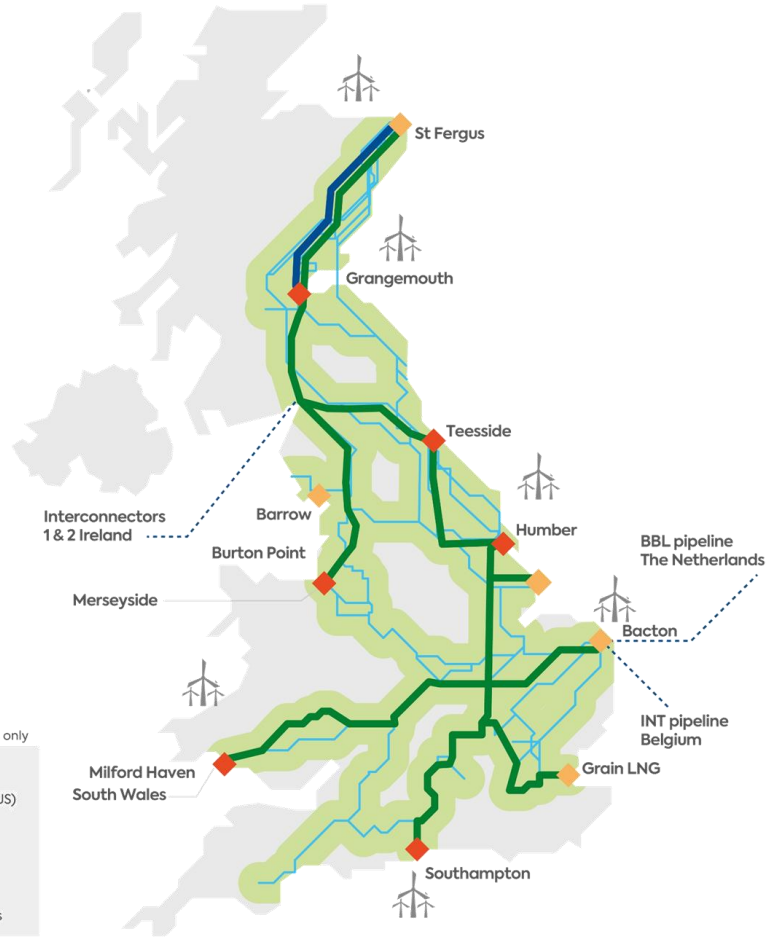
£164m
Initial Ofgem funding



Great Britain's core hydrogen network will unlock clean power, drive industrial decarbonisation and support economic growth.

1) Gas and Electricity Transmission Infrastructure Outlook [GETIO], 2021, 2) Project Union Feasibility Report, 2021 values.

We will support the UK to reach clean power and net zero by driving forward hydrogen blending, in addition to carbon dioxide transportation for CCS in the Scottish Cluster.



Transmission blending – growing hydrogen production across GB

CCS in Scotland – using our pipelines to decarbonise Grangemouth

Project Union – starting 100% hydrogen in Humber and Teesside

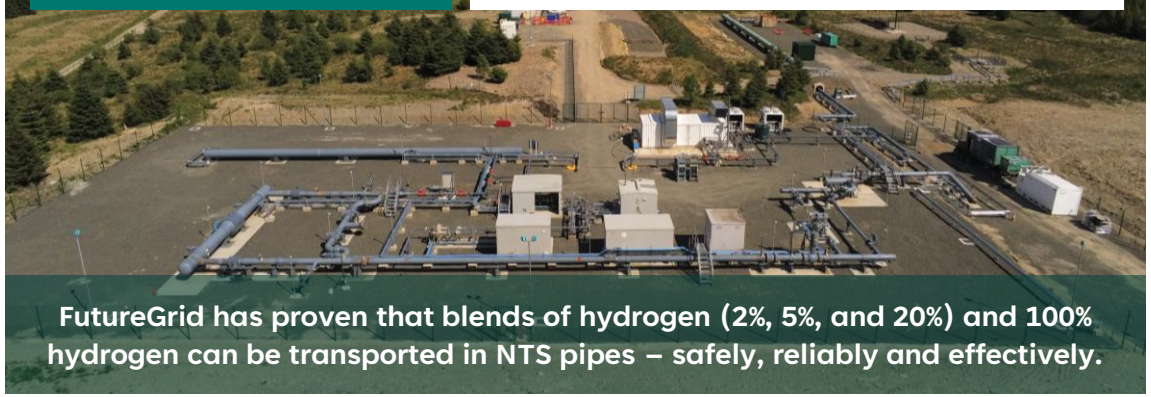
FutureGrid

RAF Spadeadam

A global-first, world-class facility

Project partners:

THE UNIVERSITY of EDINBURGH · fluxys · HSE · Durham University · Northern Gas Networks · DNV



FutureGrid has proven that blends of hydrogen (2%, 5%, and 20%) and 100% hydrogen can be transported in NTS pipes – safely, reliably and effectively.

Net Zero 2050

Levelling up and job creation

Global Leader in green innovation

Providing flexibility and optionality

Blending will supercharge the growth of all forms of low carbon hydrogen and enable continued security of supply with Europe.

Whilst the role of gas is changing, it's value in the UK's energy system remains critical.

Gas in power generation is changing from "volume to value", with reduced utilisation over a year, but an increase in peak gas demand for both days and weeks.

The NTS will remain crucial over the coming decades as we continue to supply natural gas, but also as we repurpose our pipes for hydrogen and carbon dioxide.

Decarbonisation pathways must deliver energy security, economic resilience, and be affordable.

Thank you.

national gas