



Securing Britain's Energy.

Jake Tudge
National Gas

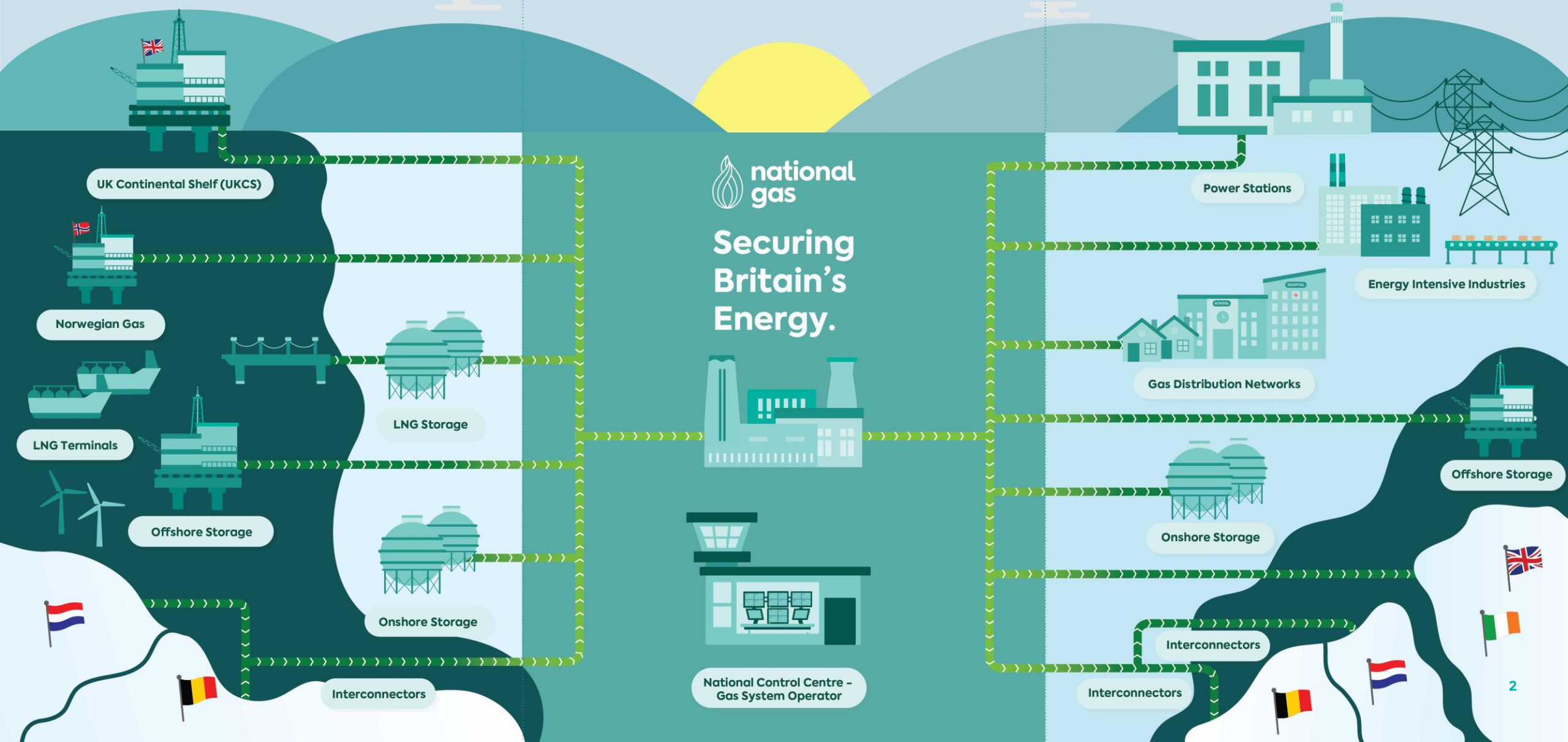
Westminster Energy Forum
5th November 2024



GAS SUPPLY

GAS TRANSMISSION

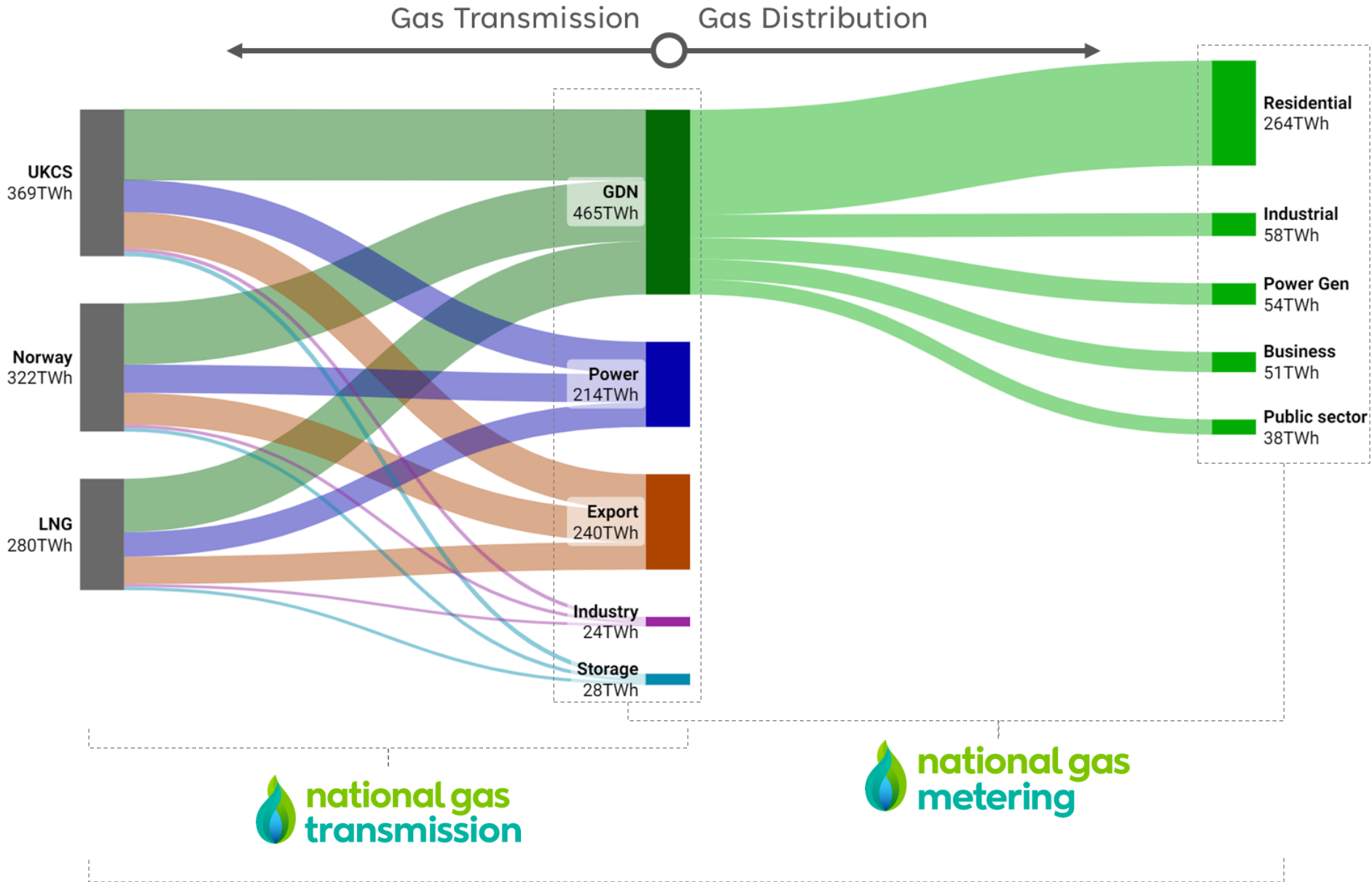
GAS DEMAND



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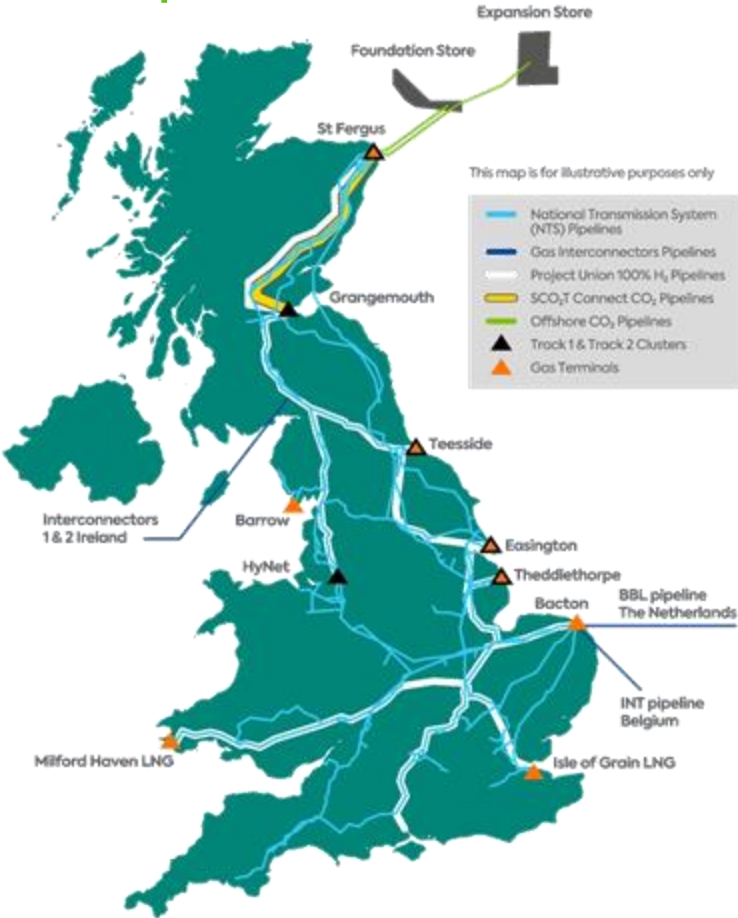


National Control Centre - Gas System Operator



Introduction to National Gas – who we are, our critical national infrastructure, and our role in securing Britain's energy whilst supercharging the delivery of 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 GB.

>50%

Dispatchable power capacity provided by gas (c.30GW).

100%

NTS reliability and availability in recent years.

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



Almost 5,000 miles of high-pressure steel pipeline



>60 jet engine compressors across 21 sites



3x the energy transported by the electricity grid



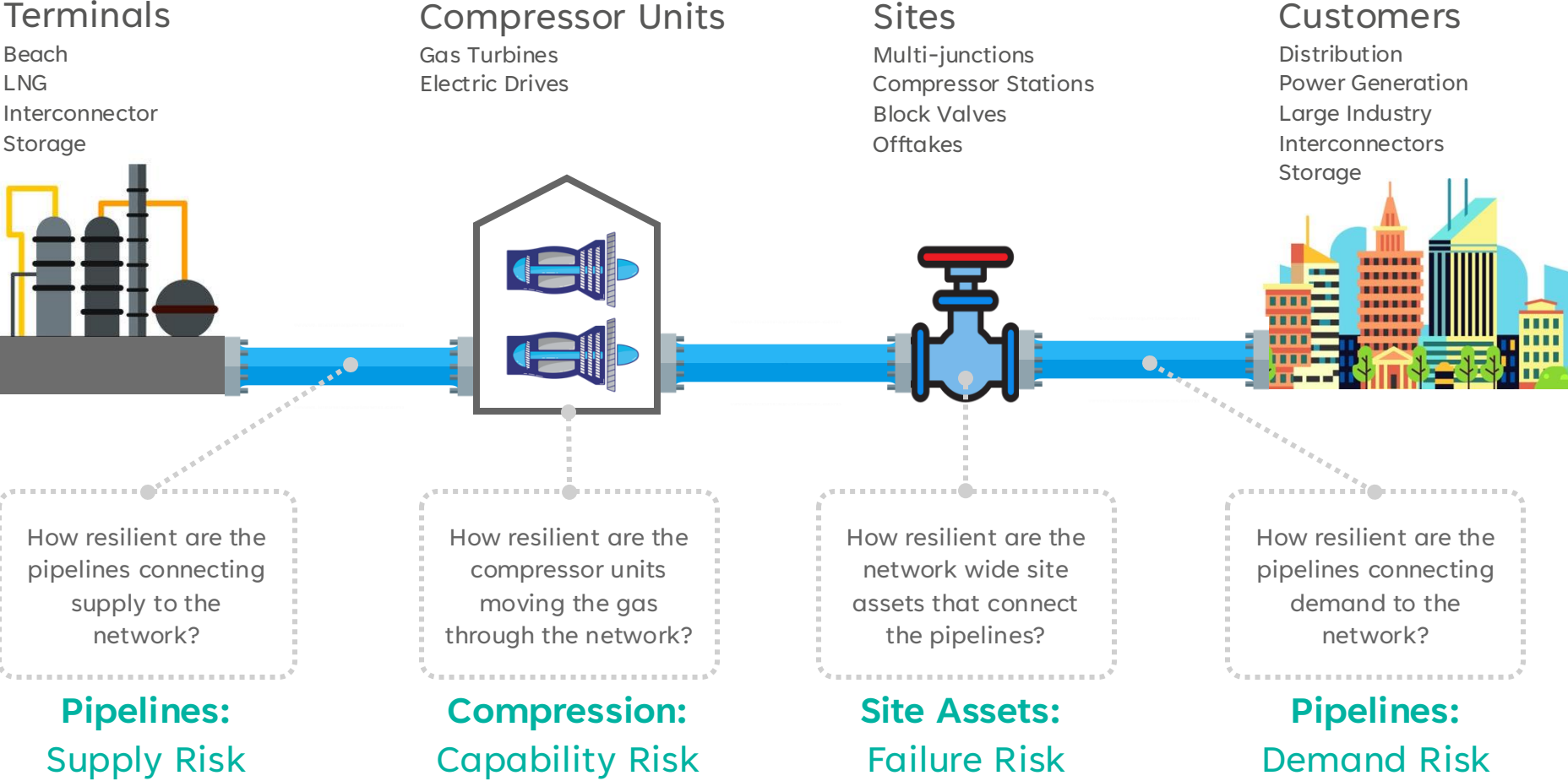
1/3rd of UK annual electricity generated from gas

£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.

Energy security – our role in maintaining a secure supply of energy, including as Network Emergency Coordinator (NEC).



What is the NEC?

The Network Emergency Coordinator (NEC) is an independent industry role whose duty is to co-ordinate the actions across affected points of the gas network to prevent or minimise the consequences of a Network Gas Supply Emergency (NGSE).

This is defined as “an emergency endangering persons arising from a loss of pressure in a network, or part thereof”.

Who is the NEC?

The role of the NEC is undertaken by National Gas – including our CEO Jon Butterworth – and is independent from any commercial interests of any organisation within the Gas Industry.


Industry participants such as Transporters and Shippers have a legal duty to cooperate with the NEC, who has the powers to direct the defined duty holders.


The NEC would engage directly with the highest levels of government during the unlikely event of a national gas emergency.

Hydrogen – our plans for a core hydrogen network and the opportunity to create a competitive hydrogen economy.

Project Union

 **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.**

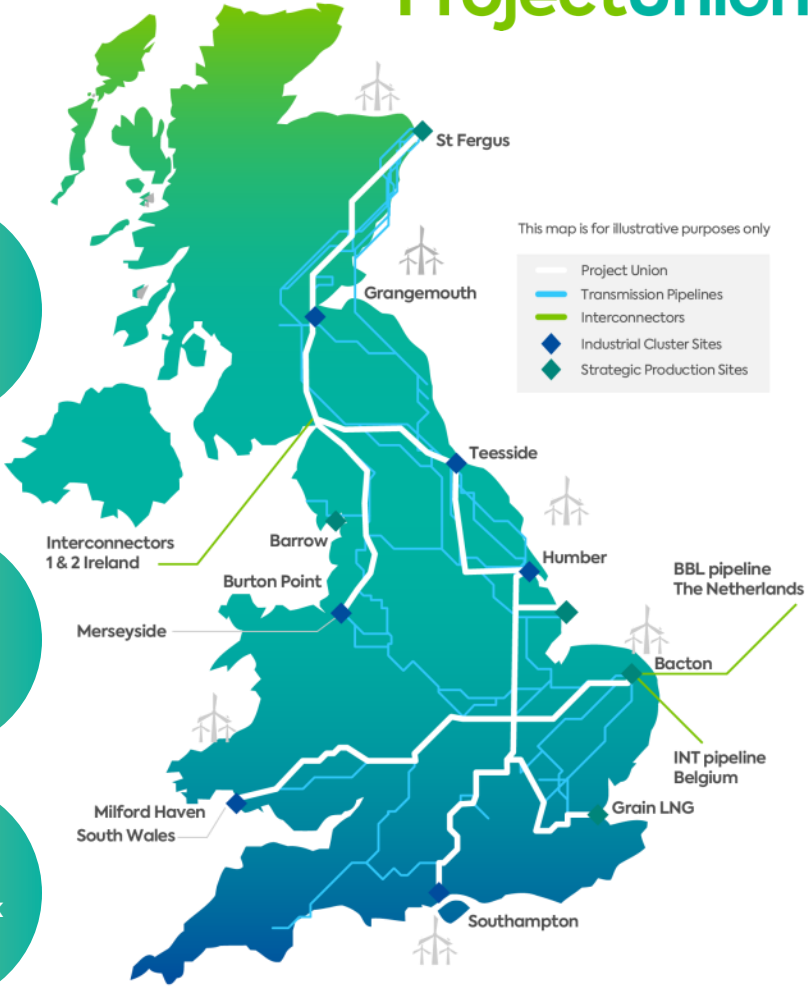
 Create a resilient hydrogen backbone which **enables a UK-wide hydrogen market and interconnection with continental Europe** through the European Hydrogen Backbone (EHB).

 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 saving¹

3,100
jobs at peak construction²

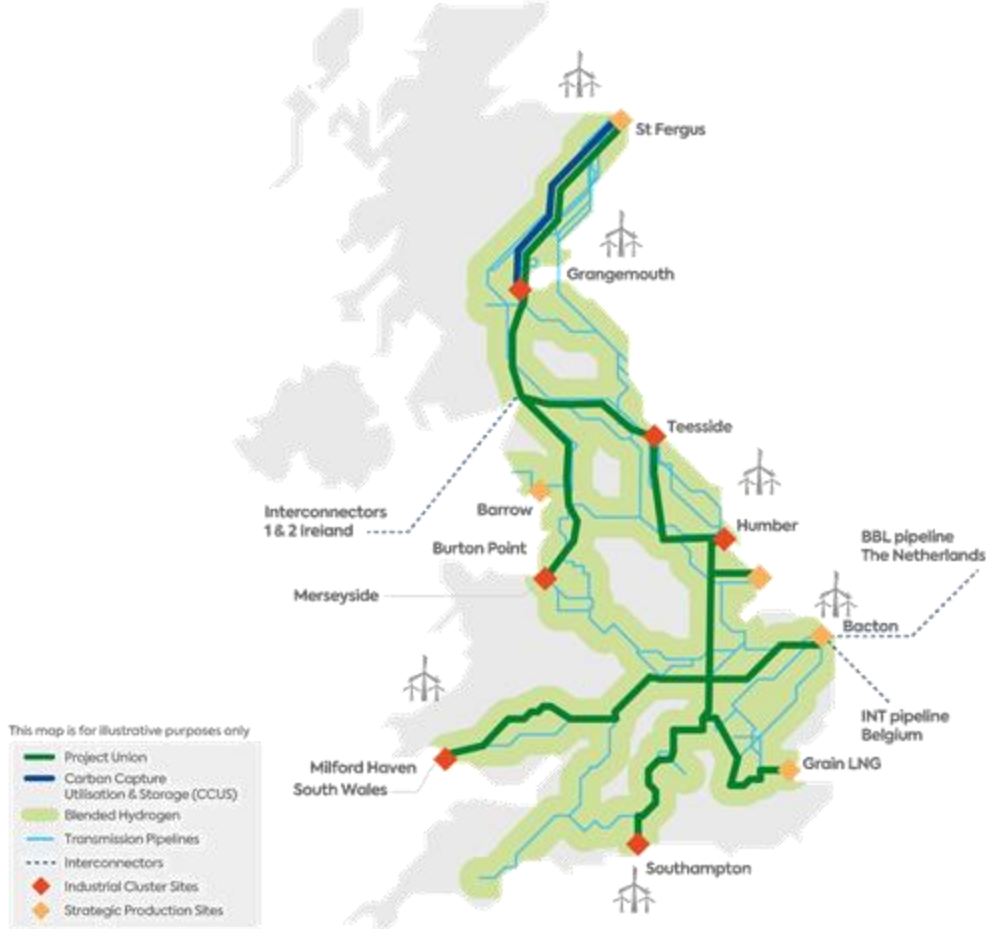
£300m
GVA to the UK economy²



Great Britain’s core hydrogen network will deliver 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.

Net Zero – we will support the UK to reach net zero and maintain energy security by blending into our transmission network and aligning with Europe’s blending plans.



Transmission blending – growing hydrogen production across GB

CCS in Scotland – using our pipelines to decarbonise Grangemouth

Project Union – starting 100% hydrogen in Humber / Teesside

FutureGrid

RAF Spadeadam

A global-first, world-class facility

Project partners:

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.

Thank you.

