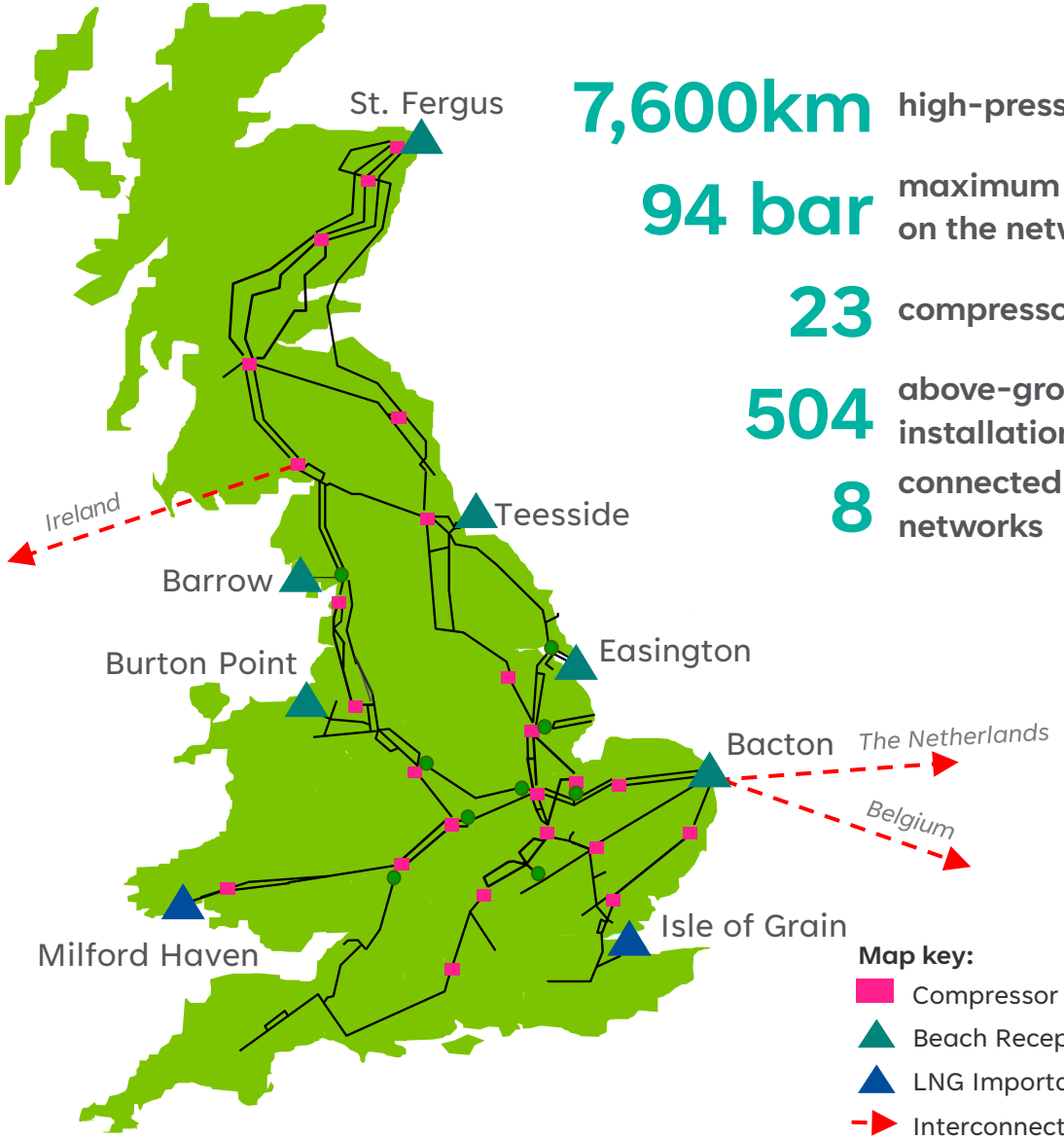
Carbon Capture and Storage (CCS)

October 24

national gas transmission

The National Transmission System (NTS)

- National Gas Transmission owns and operates the gas National Transmission System (NTS) – a vast pipeline network that transports gas from terminals and ports to every part of Britain.
- The gas transported in our pipelines plays a critical role in meeting Britain's energy needs, helping to power electricity generation, to fuel industrial processes and to heat businesses and homes.
- It also provides the energy security needed to help Britain achieve its net zero carbon objectives in the coming decades



7,600km high-pressure pipe

94 bar maximum pressure on the network

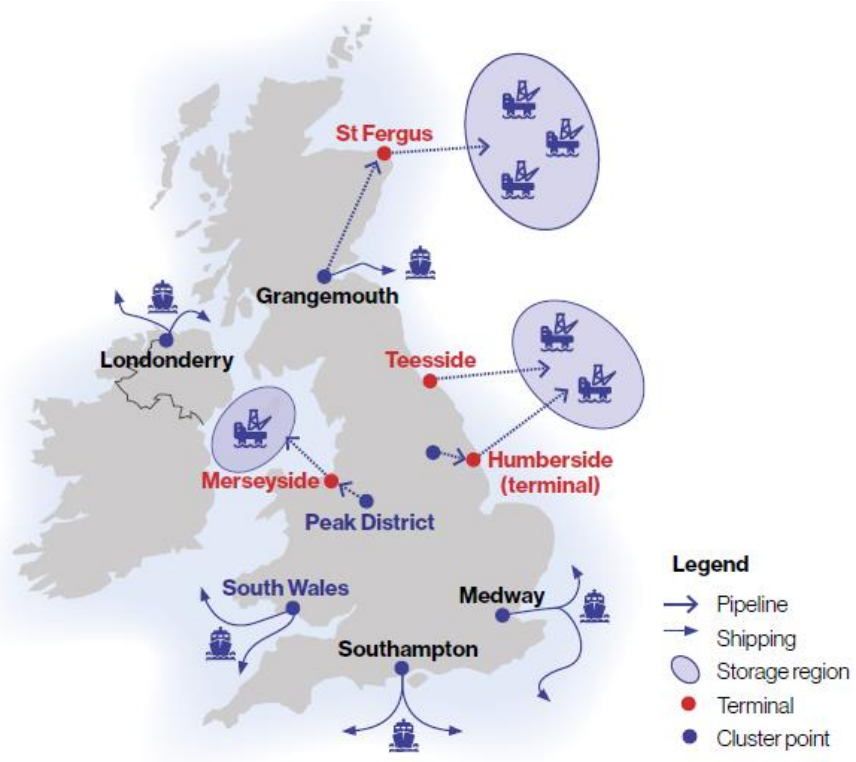
23 compressor stations

504 above-ground installations

8 connected distribution networks

Context

Main UK industrial cluster CO_2 emissions



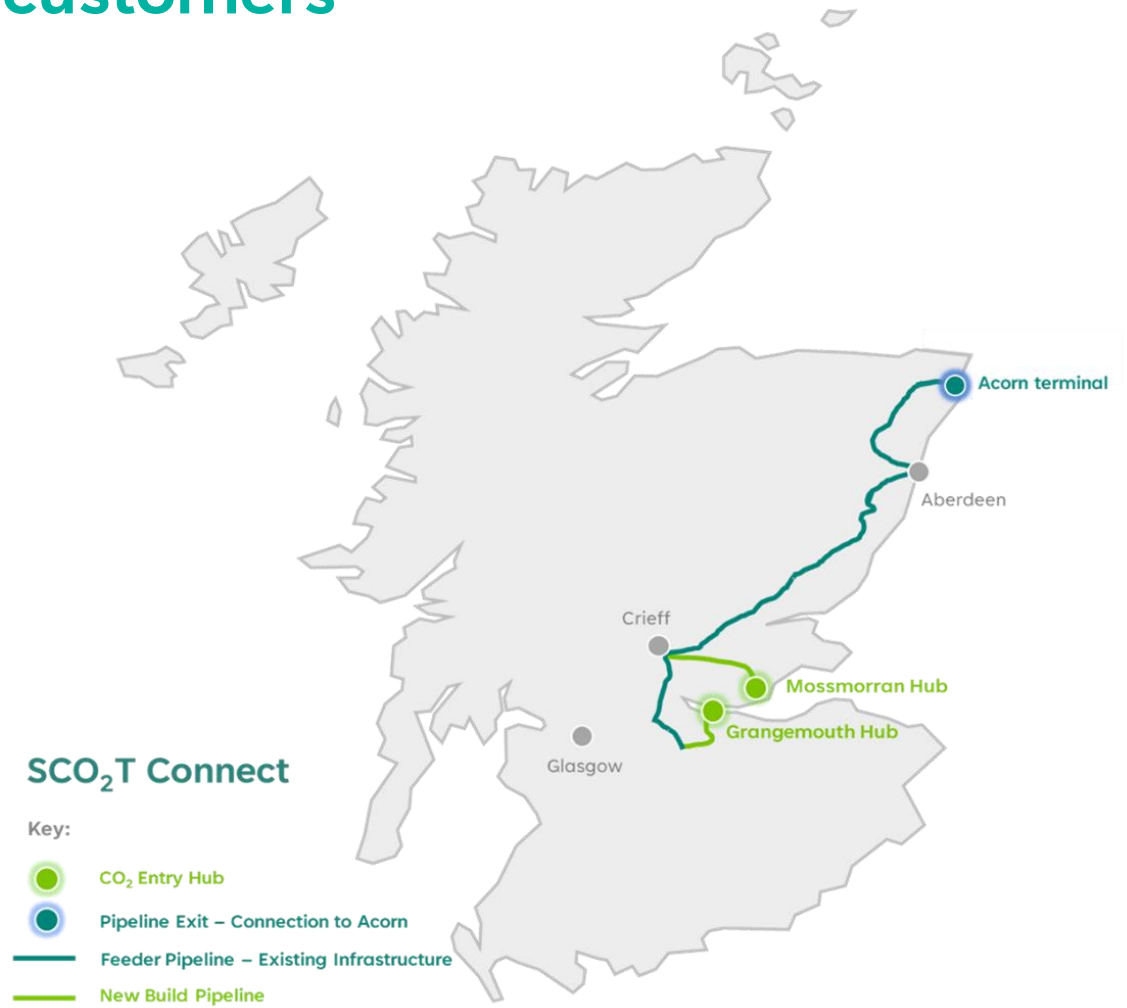
National Commitment on decarbonisation

- The UK Government is legally committed to achieving Net-Zero greenhouse gas emissions by 2050, following an amendment to the UK's Climate Change Act of 2008 in 2019.
- Scotland committed to a more ambitious net-zero emissions target of 2045. The Scottish Cluster is key to delivering this and could reduce up to 10% of Scotland's total CO2 emissions

The Cluster Sequencing Process

- To enable progress towards the targets, HMG's 10 point plan published in Nov 2020, included a commitment to deploy CCUS in two industrial clusters by the mid 2020s and a further two by 2030.
- A "cluster" is defined as a transport and storage (T&S) network and associated first phase of at least two CO2 capture projects.
- Track 1: mid-2020s deployment. HyNet and East Coast Cluster selected Track 1 (Scottish Cluster Reserve) in Oct-21.
- Track 2: in July 2023, Acorn and Viking projects were confirmed as Track-2 clusters subject to due diligence checks and value for money assessment.
- Business Model support for T&S, Industrial Carbon Capture, Power and Hydrogen under development
- £21.7bn announced in funding to support delivery of the Track-1 cluster projects

NG and Project Acorn are working collaboratively across the CO_2 value chain to deliver a Transportation and Storage (T&S) system to Scottish customers



Onshore Pipeline – SCO_2T Connect

The primary onshore pipeline, established by National Gas, will be Scotland's first **CO_2 onshore transportation network**

280km Repurposed Pipeline

60km New build pipeline

20-35barg Operating pressure

Repurposing Existing Natural Gas Assets

Repurposing assets to enable an cost effective and efficient approach to project delivery

Benefits have been identified in several areas, the most significant range from the significant environmental benefits of not constructing hundreds of new kilometers of steel pipe, in addition to cost and time savings

Environmental

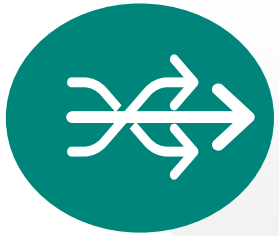
Reduced environmental impact by using assets already in situ

Time

Programme savings achieved v new build alternative in construction phase

Cost

Reduced cost to deliver and financial benefits to existing gas user base

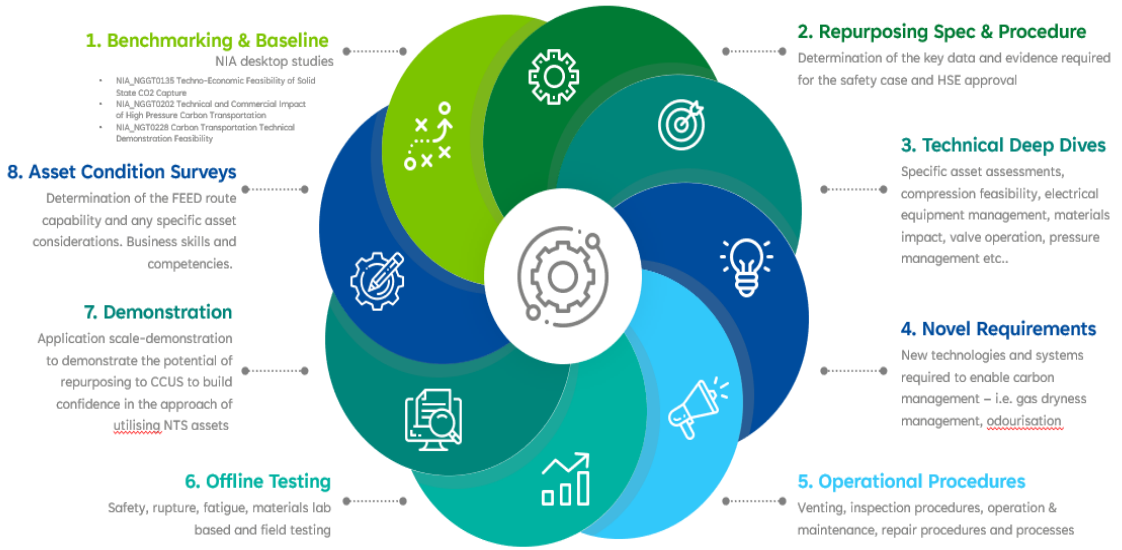


Simplify

To enable an efficient approach to the land acquisition and procurement

CO2 Innovation Programme and Safety Case

Key Activities of the CO2NTS Programme



Getting to the Carbon Safety Case