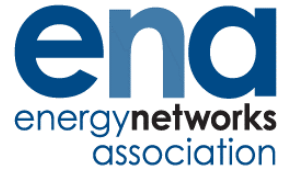


The Voice of the Networks

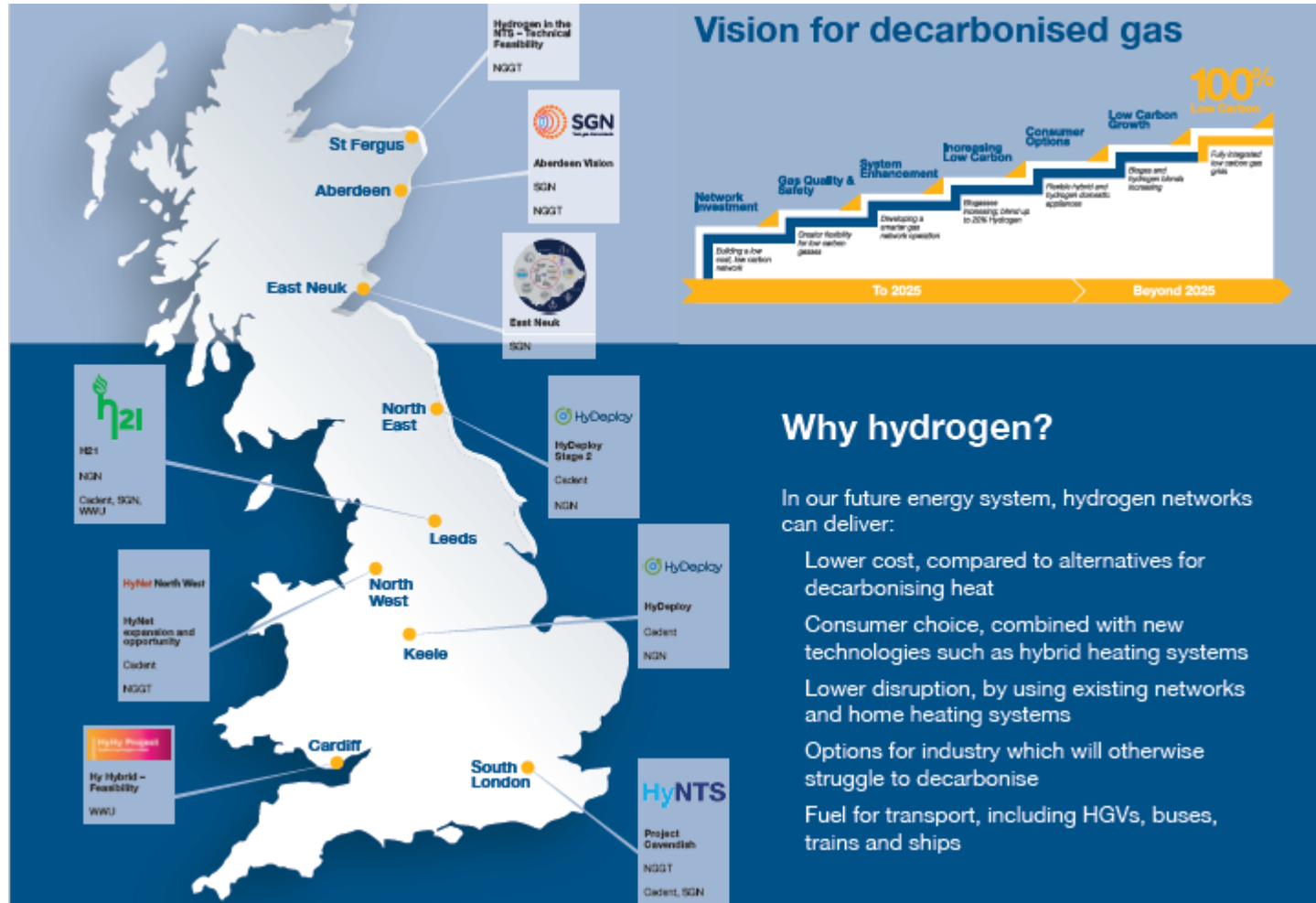


**Energy  
Networks  
Association**

# **A Pathway for Decarbonising the Gas Network**

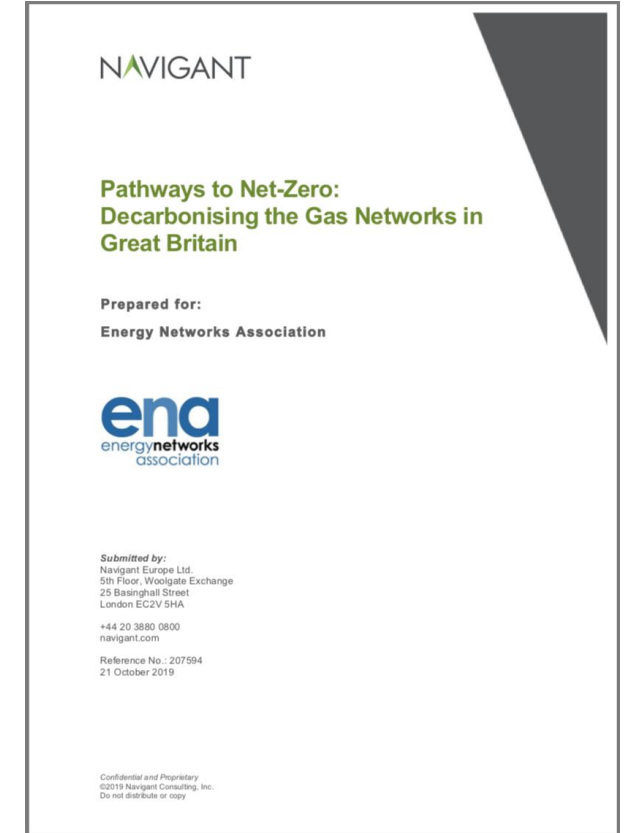
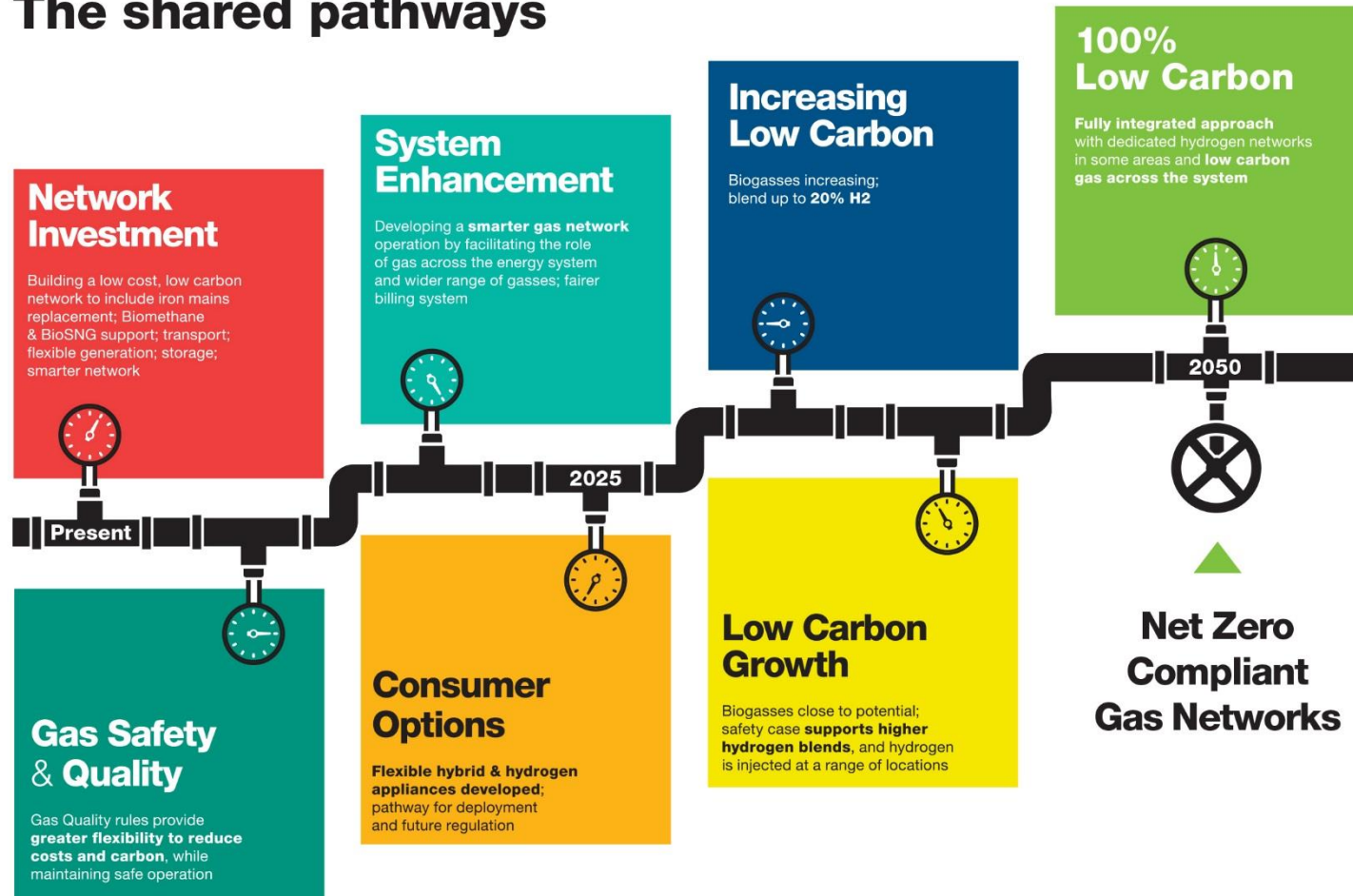
24 February 2020

# Network hydrogen projects underway



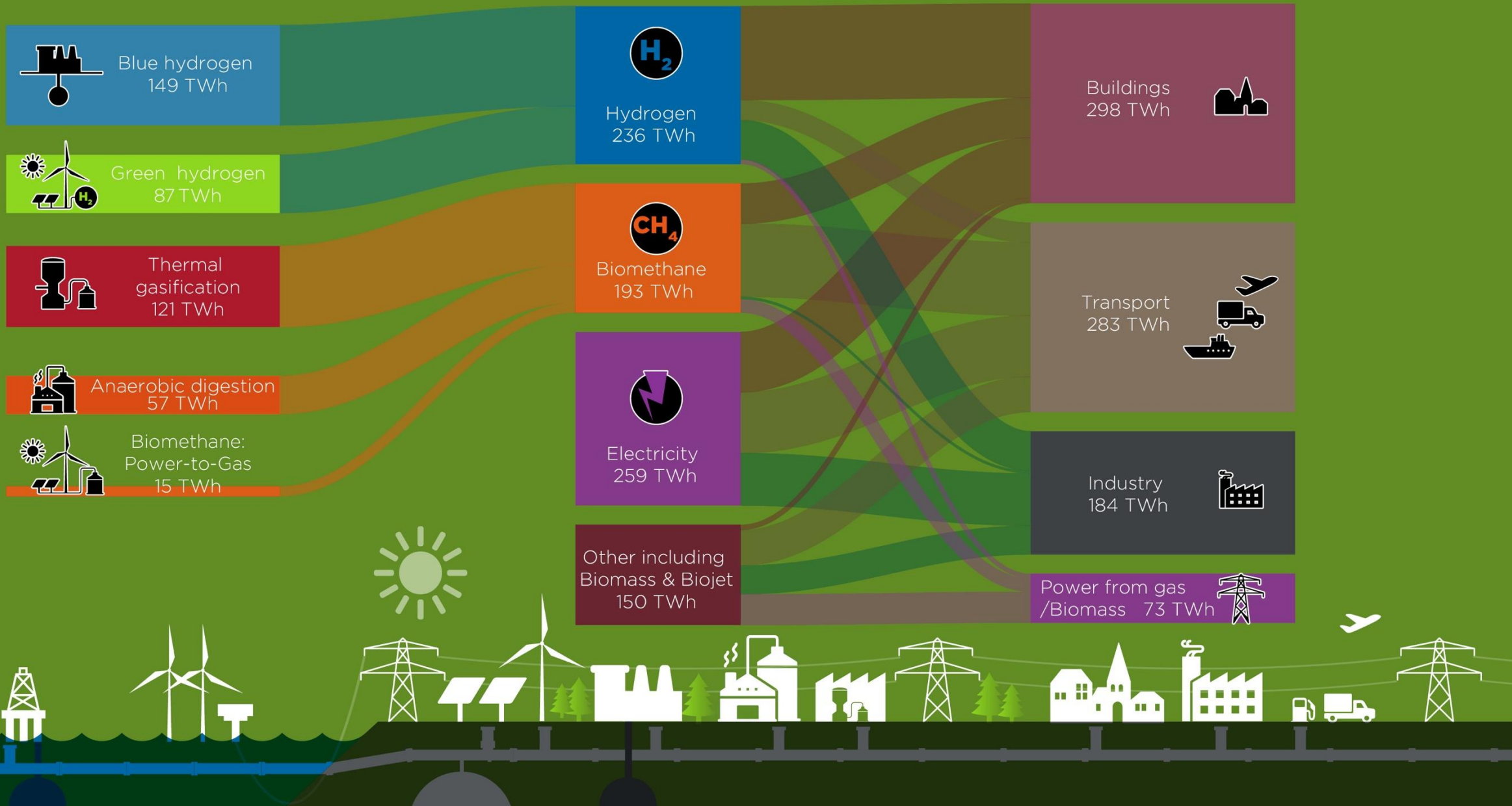
# ENA's Gas Decarbonisation Pathways Project

## The shared pathways



# A balanced combination of low carbon gases and electricity

The optimal way to decarbonise Great Britain's energy system and reach net-zero emissions



# Pathway to 2050

How the gas sector can contribute step-by-step to the decarbonisation of Great Britain's energy system



### 1 Preparing for Transition

Strategic, technical and policy planning to enable low carbon gases to play a significant role in GB's transition to net-zero, while maintaining safe and reliable operation

### 2 Facilitating Connections

More anaerobic digestion (AD) biomethane plants connected to the gas grid  
Preparations accelerate for first hydrogen projects  
Ramp up energy efficiency improvements throughout GB

### 3 Expanding Supply

First hydrogen projects integrated with carbon capture, utilisation & storage (CCUS) and anchored by baseload consumers, likely from industry and transport.  
Continuing scale-up of biomethane supply

### 4 Expanding the Demand Base

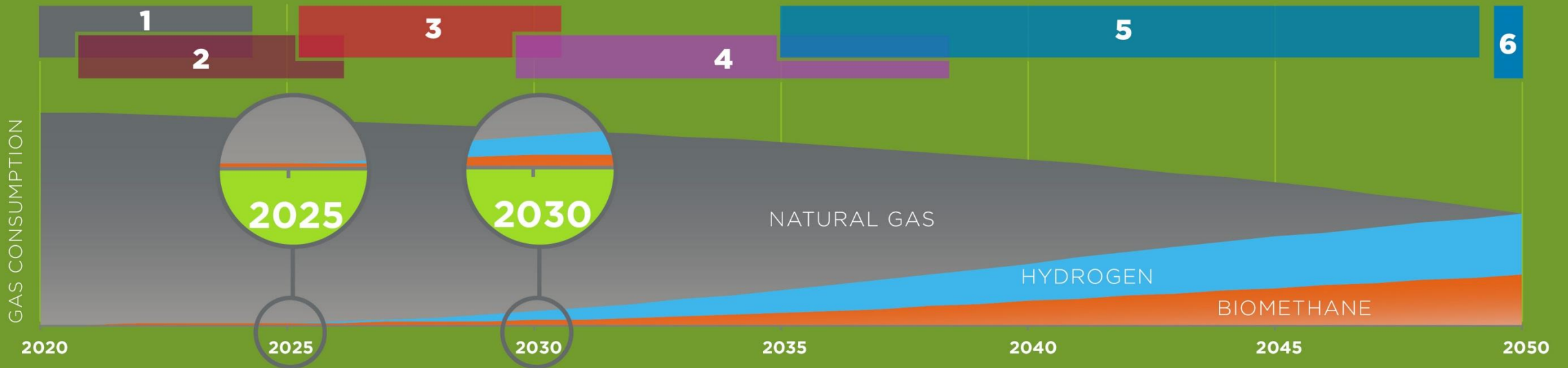
Hydrogen use extends to commercial and residential consumers near the first hydrogen projects, initially via low blends (up to 20%) but developing into 100% hydrogen clusters  
Consumers in other regions continue to receive natural gas, with rising blends of biomethane

### 5 Increasing Low Carbon Gases

Hydrogen clusters spread and connect to become extensive hydrogen zones, enabled by an evolving, carefully managed National Transmission System (NTS)  
Greater volumes and diversification of low carbon gas supply as more production methods mature technically and economically

### 6 100% Low Carbon Gases

Low carbon gases fully integrated across the GB energy system, with distinct regional solutions  
All gas end-users are supplied with hydrogen and/or biomethane, the principal type varying by region  
Natural gas no longer used, unless abated with CCUS for blue hydrogen production  
Net-zero energy system achieved in 2050



# Thank you

**Find out more at:**

[www.energynetworks.org/gas/futures](http://www.energynetworks.org/gas/futures)

**Get in touch:** [matthew.hindle@energynetworks.org](mailto:matthew.hindle@energynetworks.org)

