APPG Energy Costs

Hydrogen: cost, storage and transportation

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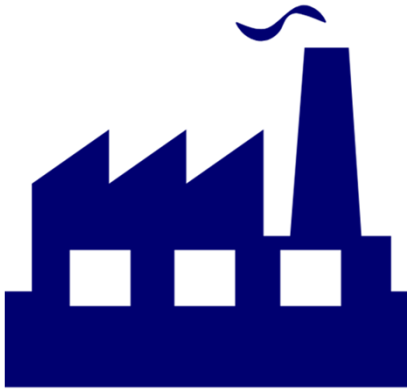
Hydrogen: cost, storage and transportation

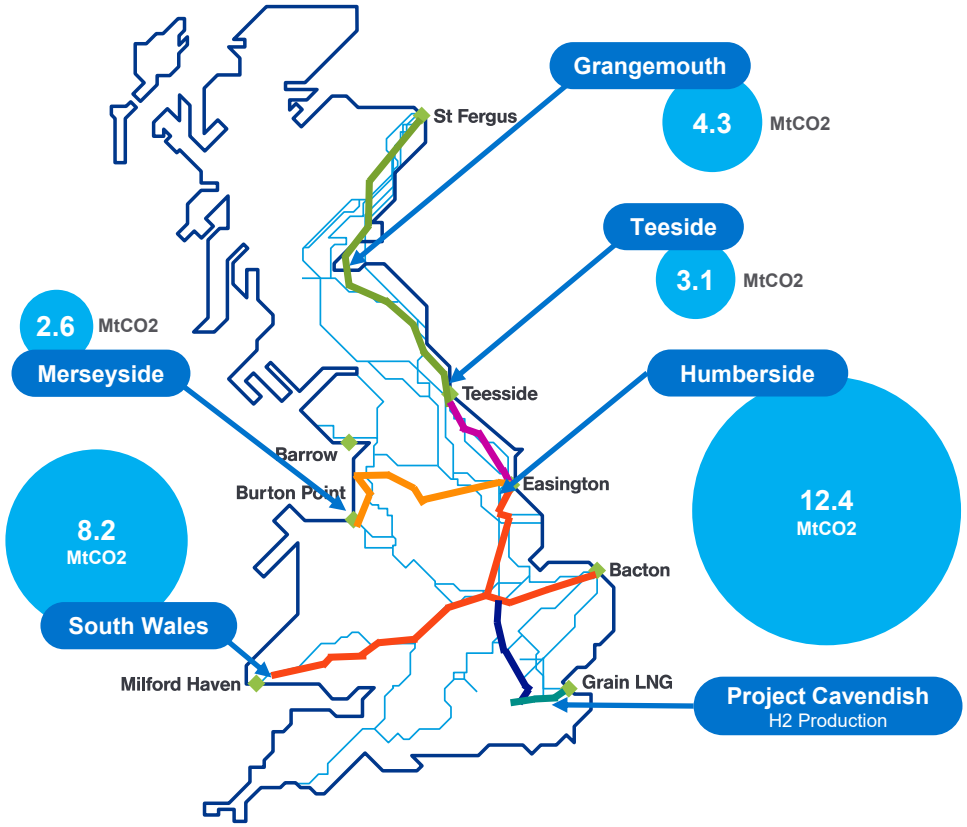
We need blue hydrogen at scale to deliver large industrial CO2 reductions while green hydrogen and renewable generation develops



+ Blue ‘Grid’ quality hydrogen
+ Delivers early scale and maximises early CO2 reductions
+ Utilises UK infrastructure and resources
- Transition technology as not net-zero

+ Green 100% pure hydrogen
+ Delivers solutions for hard to decarbonise sectors eg HGVs, trains, maritime
+ Potential for distributed deployment eg P2G
- Requires R&D investment to mature and scale

Repurposing Gas Networks



HyNTS FutureGrid

Phase 1 Overview

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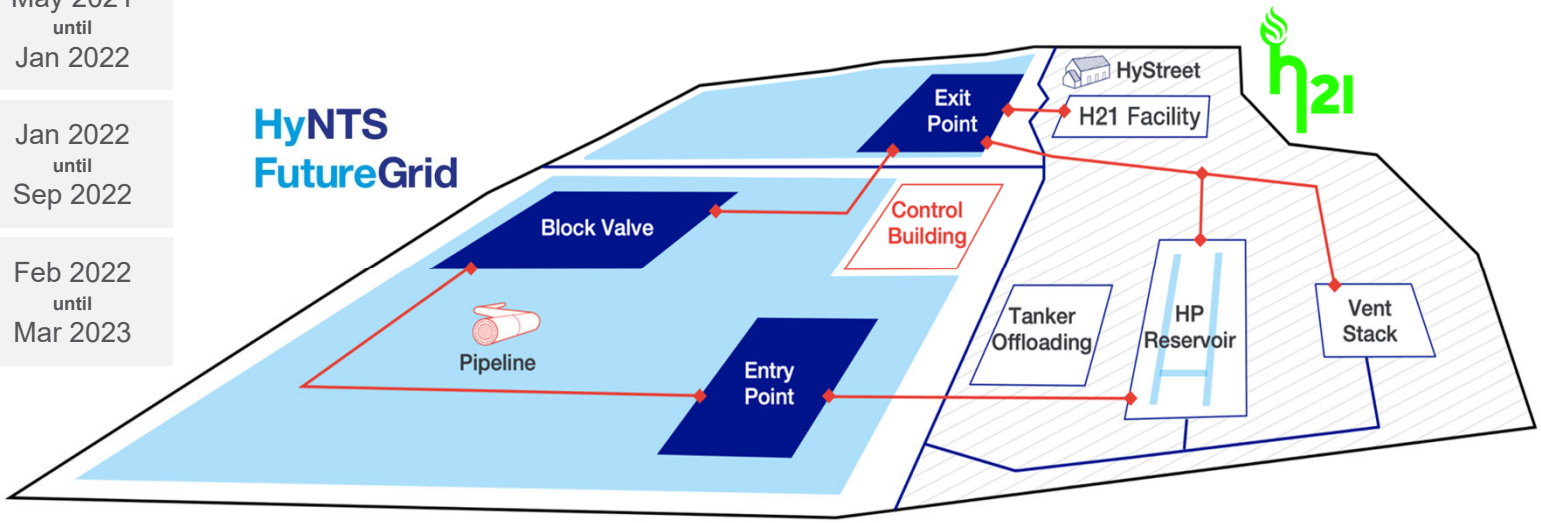
This ambitious programme seeks to build a hydrogen test facility from decommissioned assets at DNV GL Spadeadam to demonstrate the National Transmission System (NTS) can transport hydrogen.

The project will be delivered in three phases:

Phase 1a	**Offline Facility Build**	May 2021 until Jan 2022
Phase 1b	**NTS Asset Testing**	Jan 2022 until Sep 2022
Phase 1c	**Safety & Risk Impact**	Feb 2022 until Mar 2023

The FutureGrid test facility will connect to the existing H21 distribution facility creating a representative UK Hydrogen Testing and Training Facility:



FutureGrid Project Partners:

DNV·GL · HSE · Northern Gas Networks · fluxys · Durham University · The University of Edinburgh

Consumer research on heating

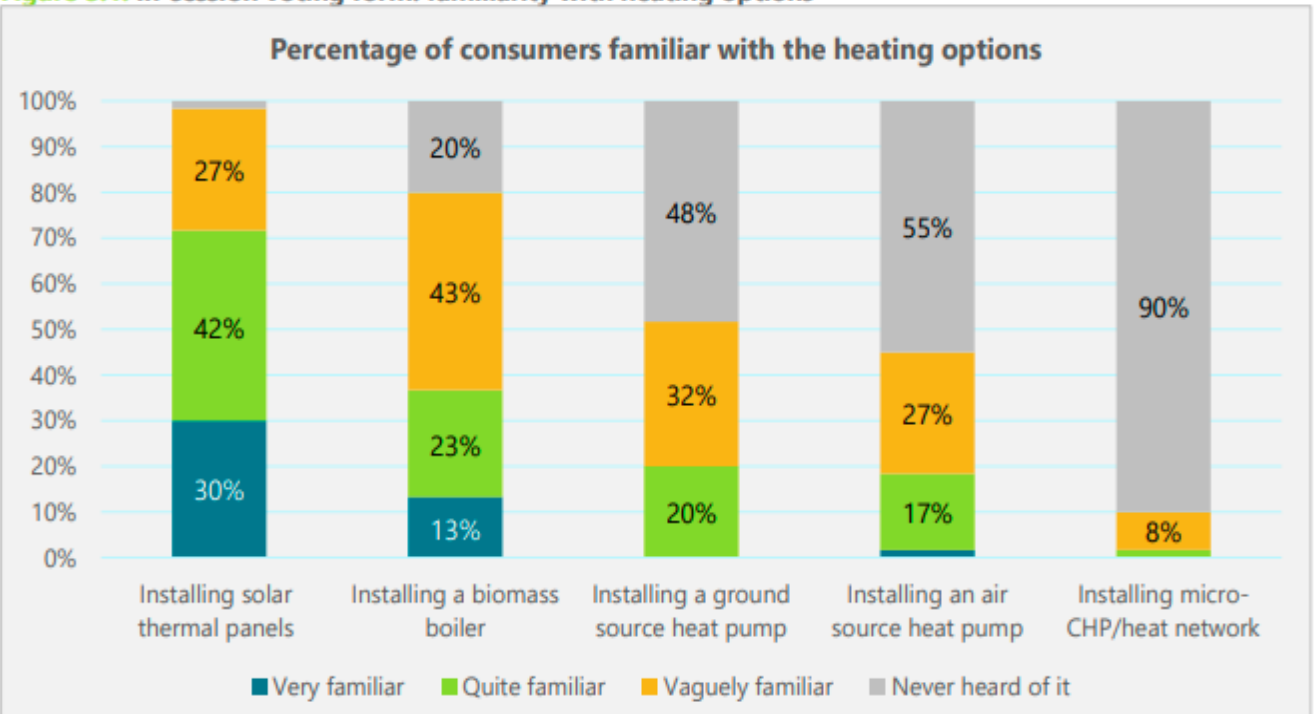
If we're to meet the UK's goal of net zero by 2050, one of the areas we need to transform is how we heat our homes. Our new research gives consumers a voice about adopting lower emission ways to keep the nation warm.

93% of respondents indicated climate change is a serious or very serious issue

88% Supported government's 2050 Net Zero target

5% Thought heating and other household uses of energy was a main contributor to climate change

Figure 3.1: In-session voting form: familiarity with heating options



Research found that consumers had not registered hydrogen as an option for heating

Conclusions

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- Hydrogen has a role to pay across all sectors
- Network repurposing is possible - technical review is progressing well
- Consumers need to be actively involved in decisions
- The gas networks have capacity to meet 2050 requirements

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