



H21

GASNZ Industry Forum 2018, Wellington

Friday 9th November 2018, 10:25am – 10:55am

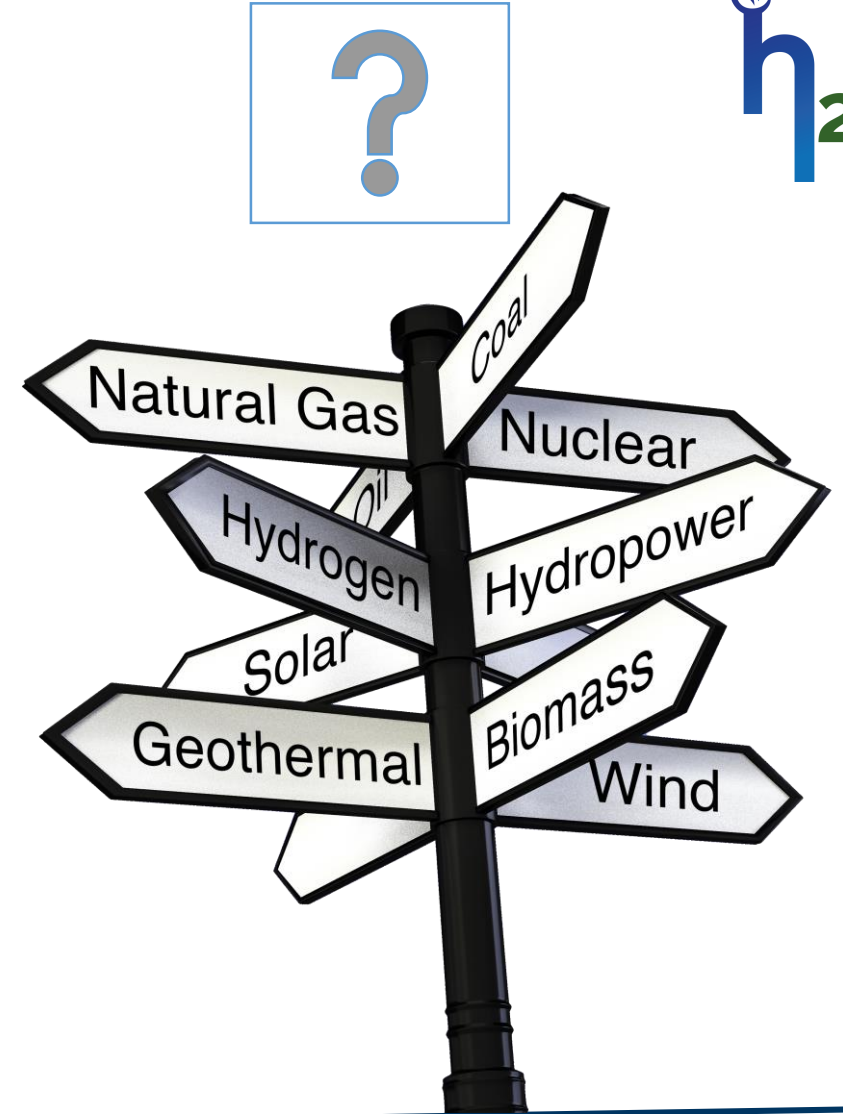
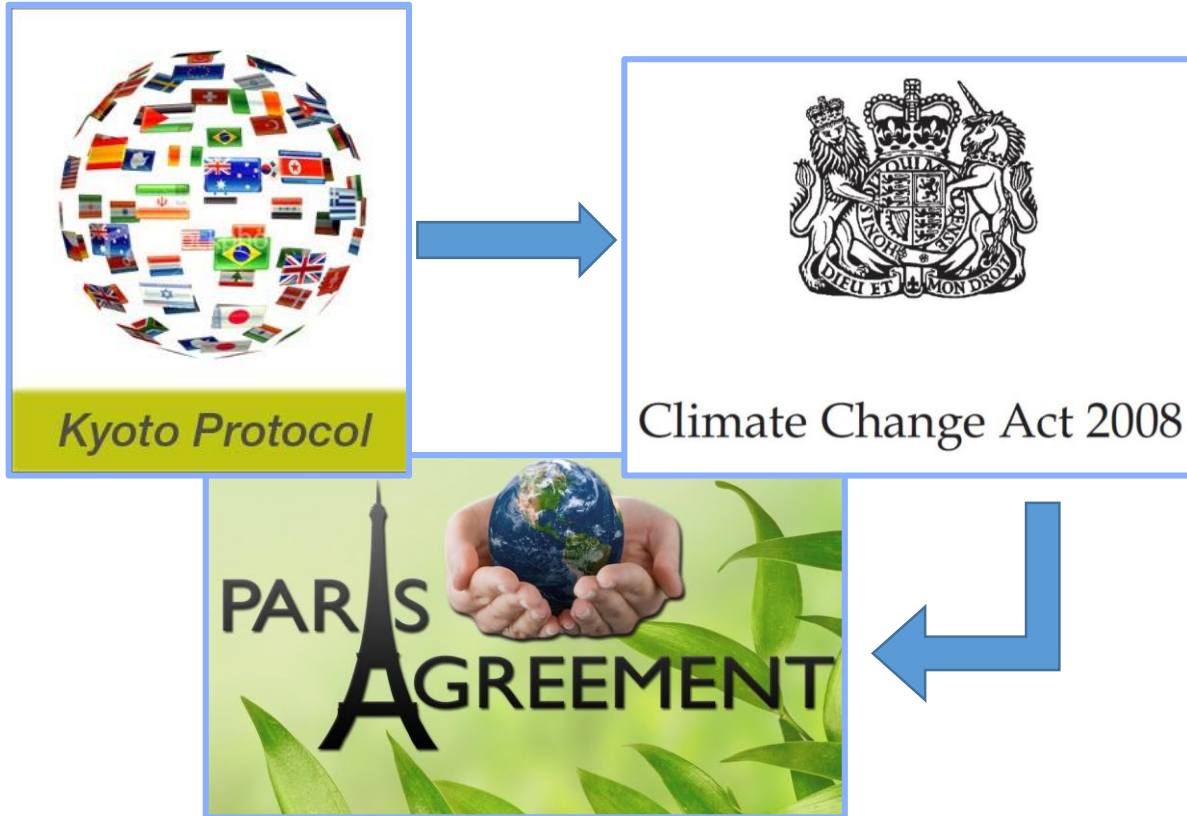




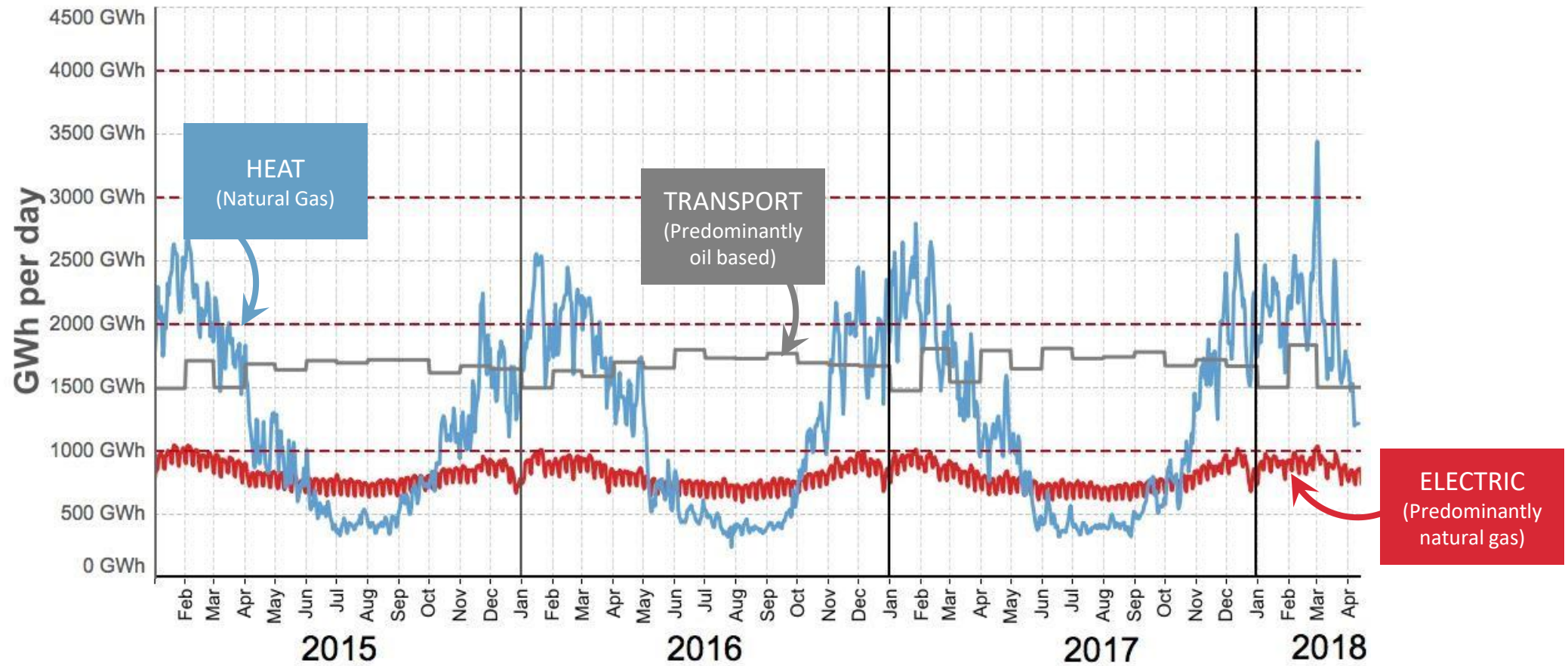
In this session...

- The decarbonisation challenge
- Why hydrogen?
- Evidence required
- Update on H21 NIC and H21 North of England projects
- The future of H21

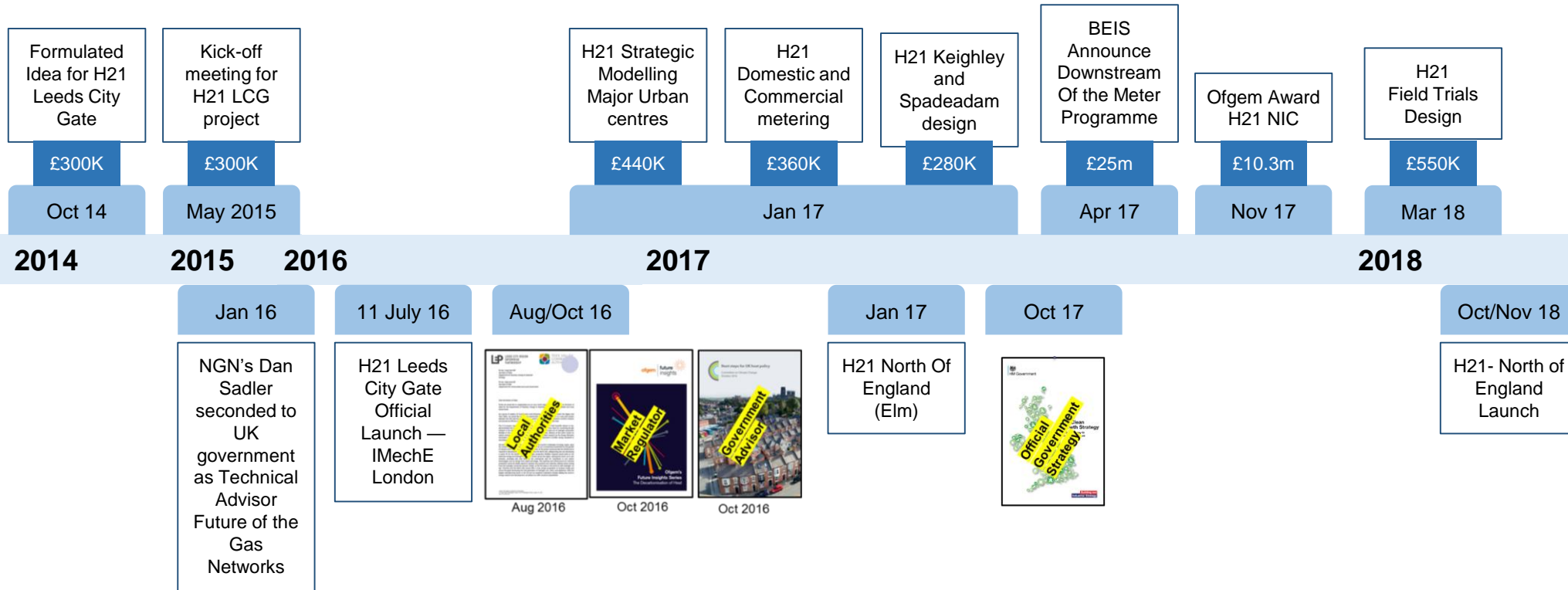
The Future of Energy



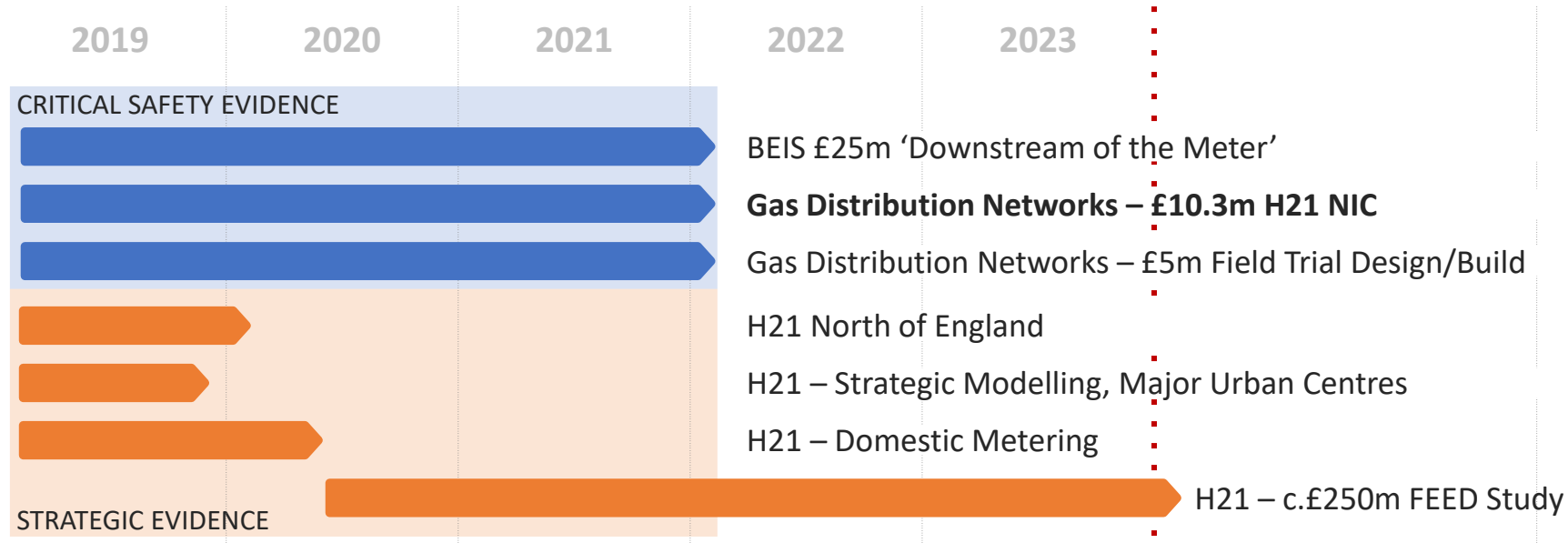
Why Hydrogen?



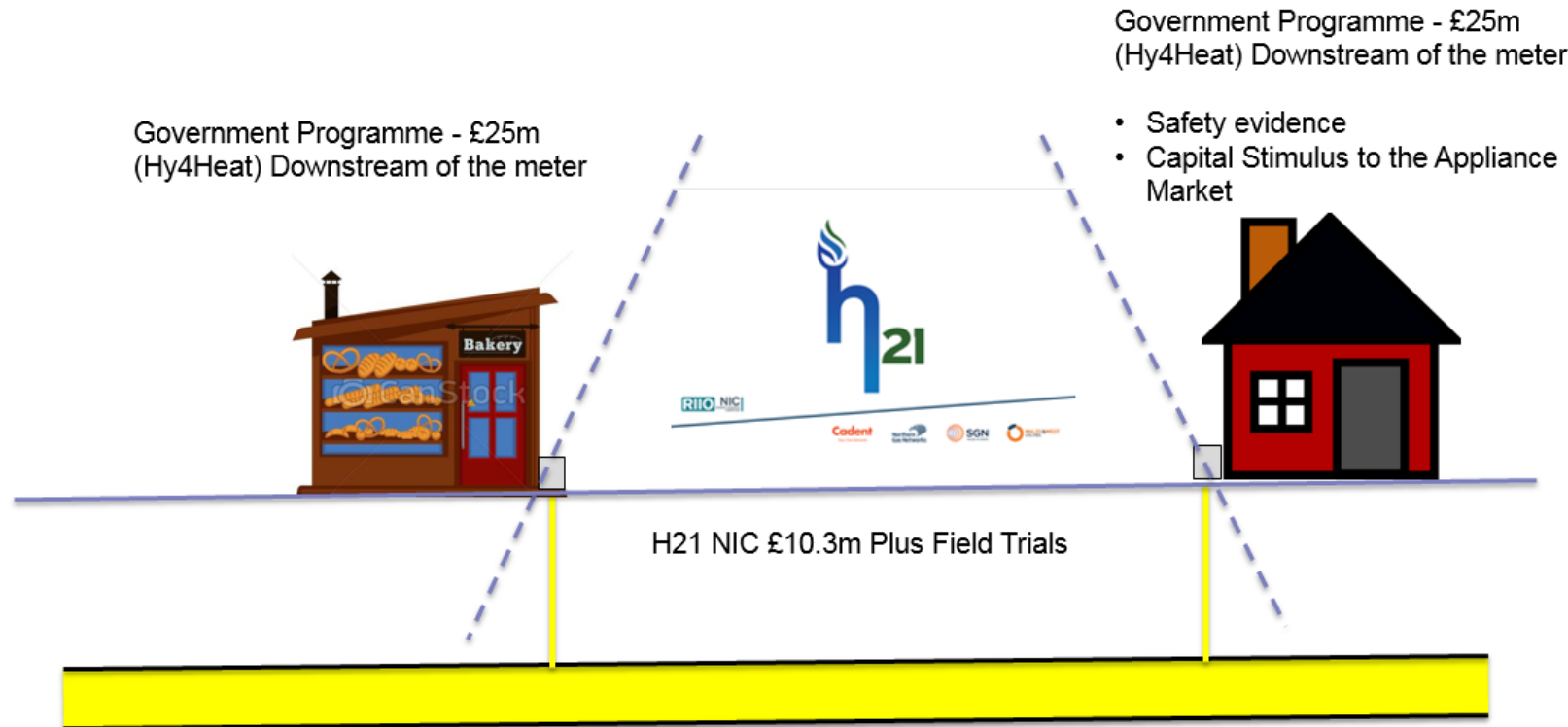
H21 Momentum



Strategic vs. Critical Evidence



Complimentary Projects



Critical Evidence - H21 NIC



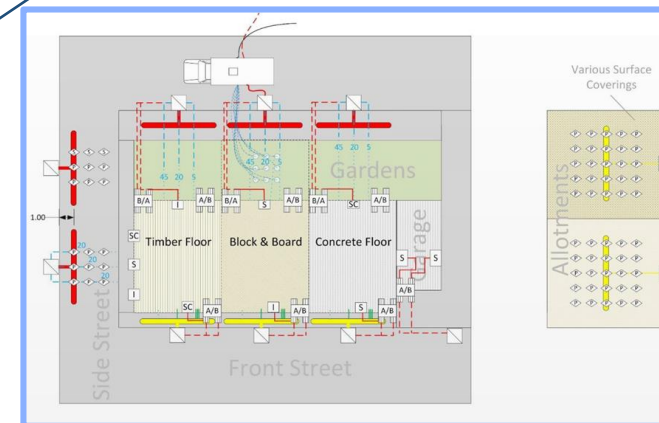
Phase 1a



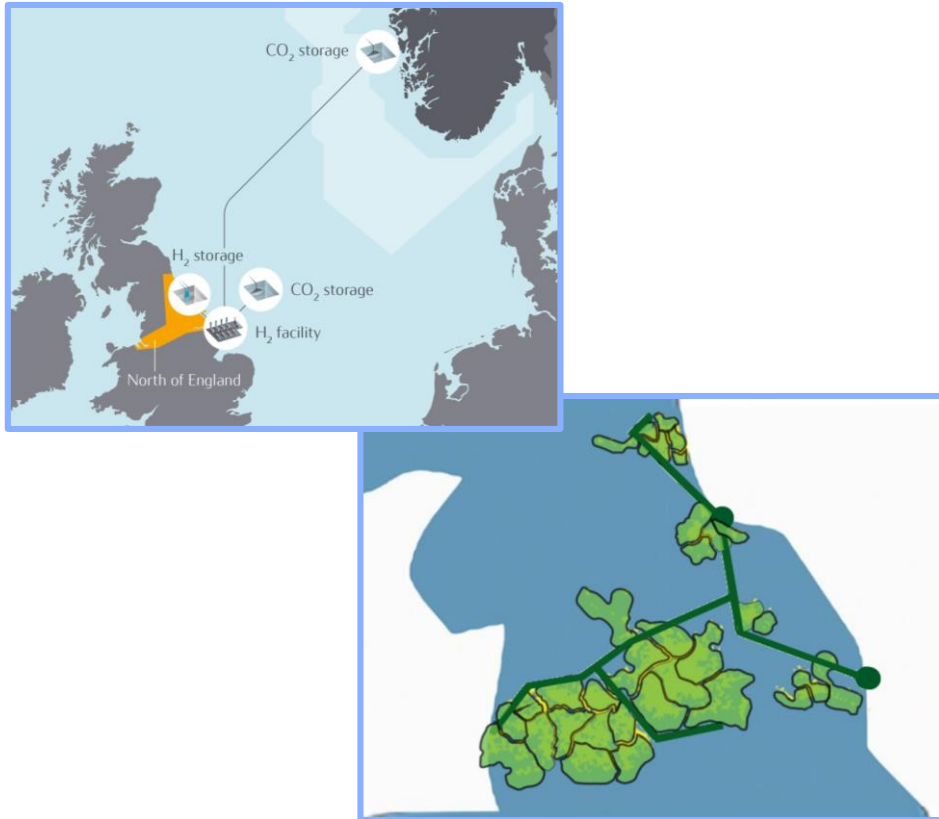
RIIO NIC
NETWORK INNOVATION
COMPETITION



Phase 1b



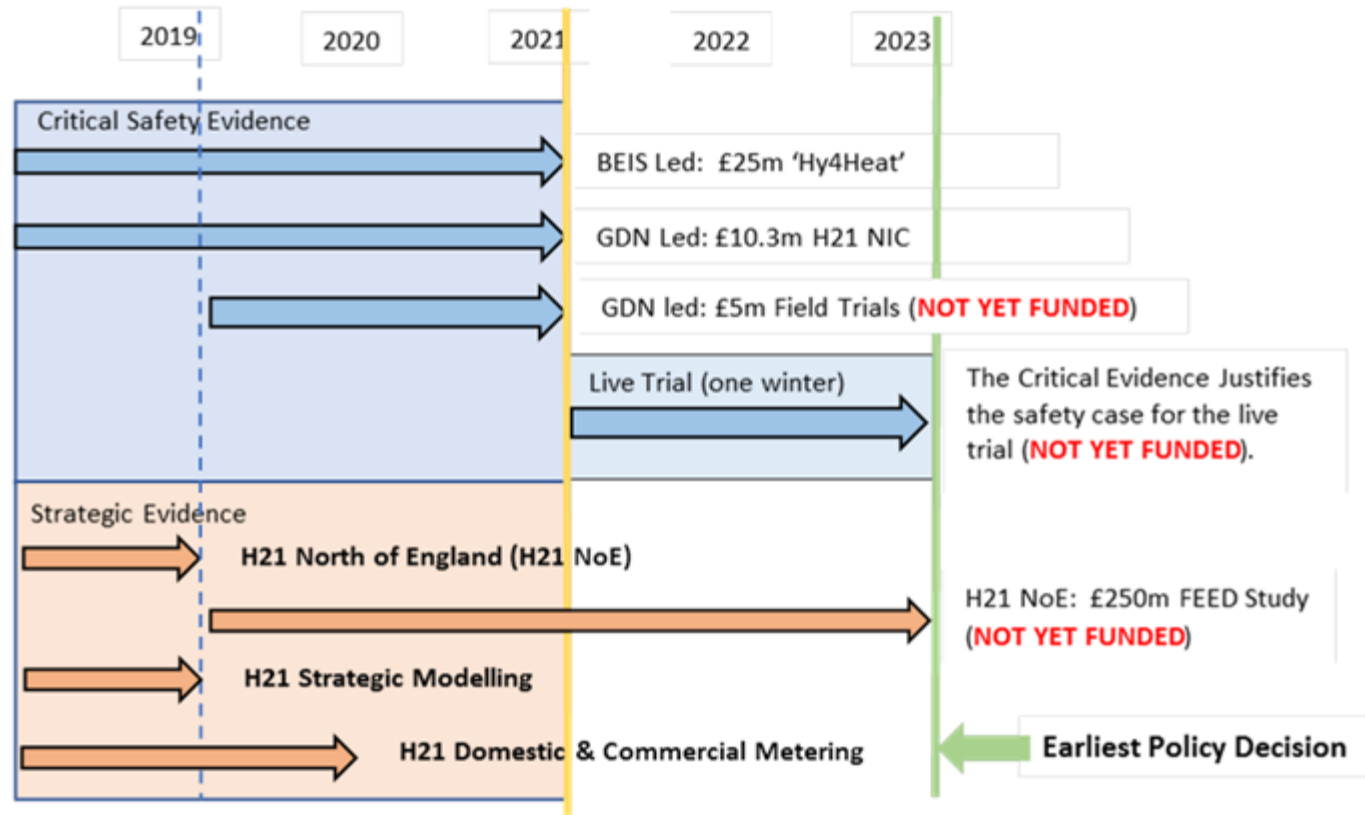
Strategic Evidence - H21 North of England



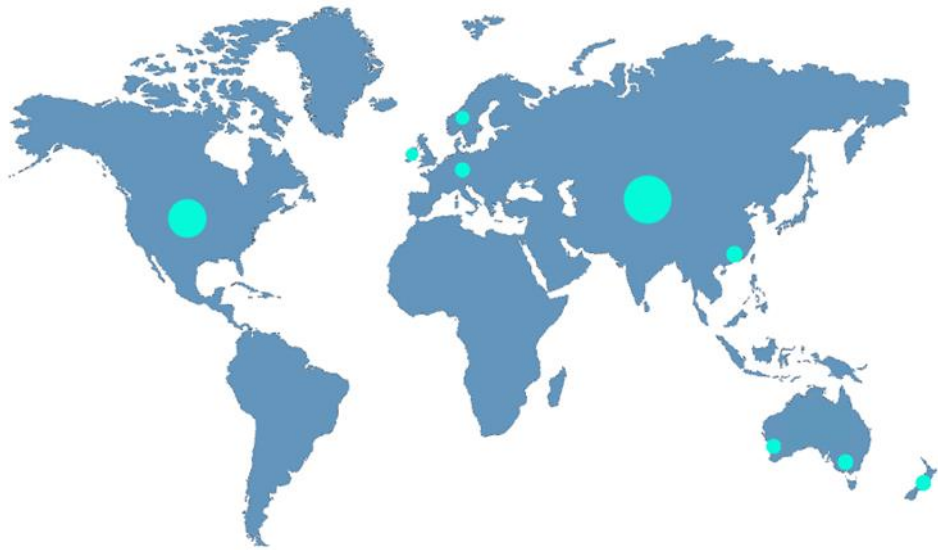
Key Features

- H21 Leeds City Gate was a 'blueprint' study
- H21 North of England is designed as a potential first policy.
 - Conversion between 2028 - 2035, 12.5% of UK population covered by one project decarbonising **heat** (Leeds, Bradford, Wakefield, Halifax, Manchester, Liverpool, Hull, York, Newcastle and Middlesbrough).
 - Hydrogen annual energy requirement of 85 TWh. This is equivalent to 13 times H21 LCG (6TWh).
 - Equivalent security of supply for customers during peaks in winter (the beast from the east).
 - Over 17m tonnes of carbon removed per annum.
- Supporting potential decarbonisation of **transport** with hydrogen fueling stations and **electric** with decentralised and centralised generation.
- With a total cost less than Hinkley Point C but decarbonising over five times the energy including reusing the gas networks and appliance upgrades.

The H21 Political Timeline



H21: A UK Project with a Global Following



Countries which have an interest in H21 and/ or have begun to establish their own H21 style projects include:

- Australia
- Canada
- China
- Czech Republic
- France
- Germany
- Holland
- Ireland
- Italy
- Japan
- New Zealand

The H21 team have provided direct support at government, industry, and academic level to a varying degree across these countries.

Re-cap

- Doing nothing is not an option
- 100% hydrogen is one of the most viable options
- H21 projects will provide critical safety and strategic evidence to support the 100% hydrogen option
- Internationally transferable solution



Thank You any Questions?

