



Feasibility study into a hydrogen fuelled HGV network

16 November 2021



UNIVERSITY OF
BIRMINGHAM



ERA facts and figures

£120m

CO-INVESTMENT
COMMITTED
From over
**40 INDUSTRIAL
PARTNERS**

£60m

Capital
funding via
INNOVATE UK

9

Key Midlands
partners

INVESTING IN OVER

**23 new
R&D
facilities**

More than
400

ACADEMICS

Over
1,000

RESEARCHERS

STRATEGIC FOCUS



Energy
Transformation



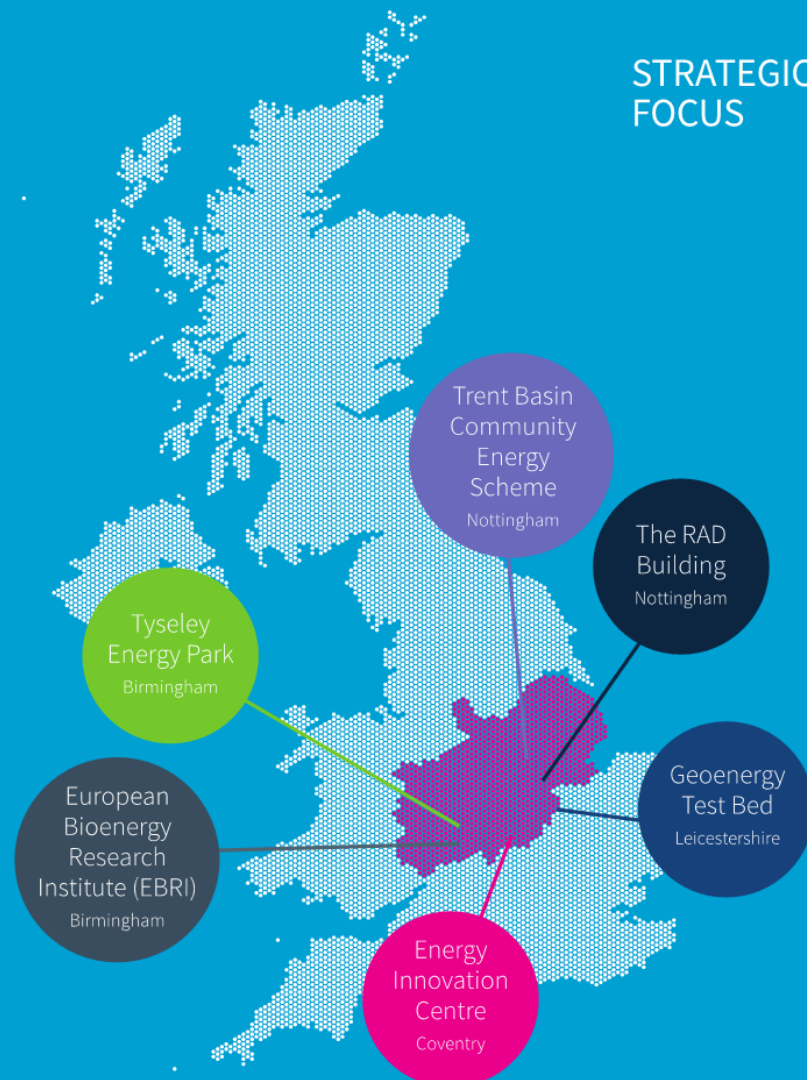
End Use
Energy Demand



Energy
Storage



Energy
Integration



Supported >1000
Midlands SMEs

£60m →
£450m in new
investments in
energy R&D

Delivered by



Funded by





HYDRO FLEX



HyDeploy



**Cranfield
Aerospace
Solutions**



Hydrogen Generation [HyPER]

Delivered by **MIDLANDS INNOVATION**

Funded by **UKRI Innovate UK**

Aston University
BIRMINGHAM UK

UNIVERSITY OF BIRMINGHAM

Cranfield University

Keele University

UNIVERSITY OF LEICESTER

Loughborough University

University of Nottingham
UK | CHINA | MALAYSIA

WARWICK
THE UNIVERSITY OF WARWICK

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

H2GVMids in context



Department
for Transport

Innovate
UK



5

LOW CARBON HYDROGEN
Pioneer, commercialise and deliver
hydrogen solutions

Thanks to exceptional business, industry and academic innovation, the Midlands is already pioneering next generation, cost-effective hydrogen technologies, with powerful potential to scale up. A pan regional hydrogen task force will ensure that the Midlands Engine capitalises on the opportunities presented by hydrogen, playing a national leadership role in decarbonising transport, logistics and heating, creating jobs and accelerating net zero UK.

AIMS

- Reduce greenhouse gas emissions
- Capitalise on regional, world-leading hydrogen expertise
- Reduce energy costs and imports
- Improve energy security
- Create high-value jobs
- Increase public and private investment opportunities
- Strengthen regional leadership in transport, logistics and heating sectors

Delivered by

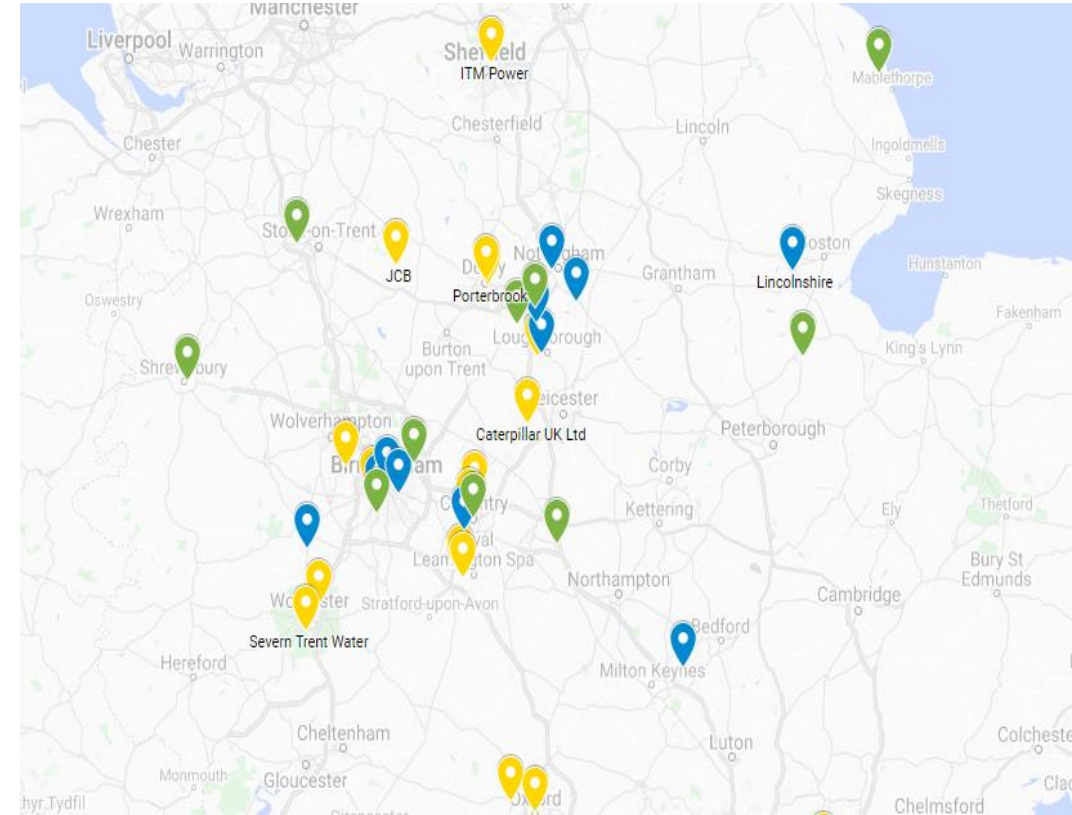


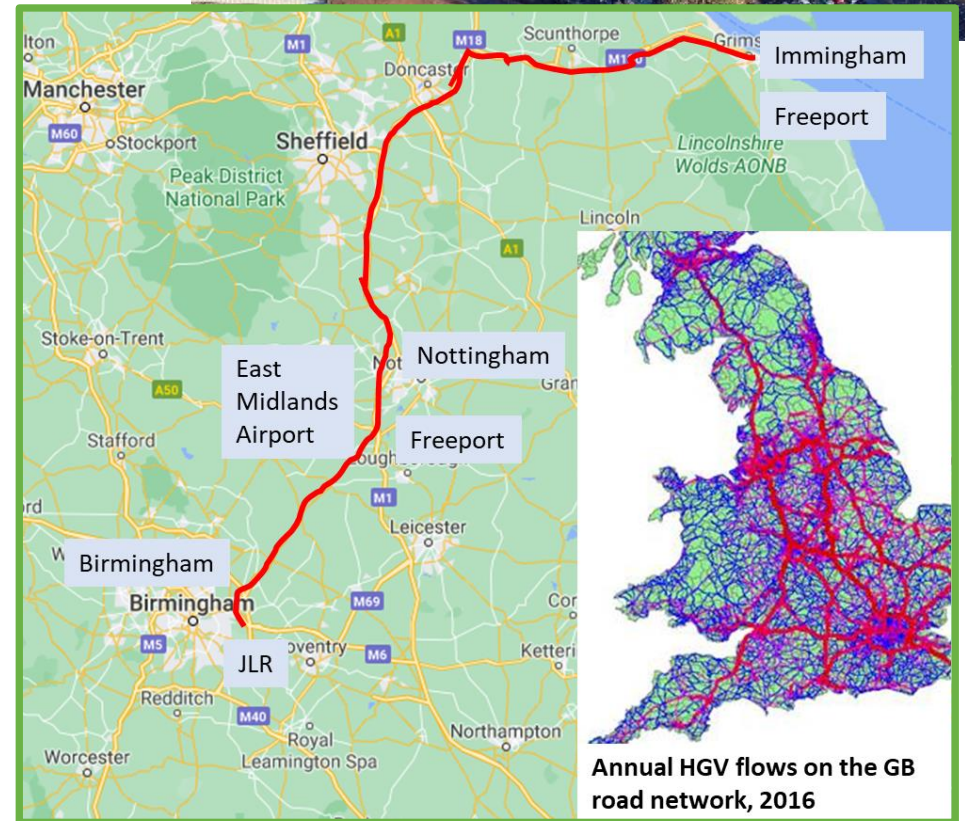
Funded by



Why Midlands Focused?

- 90% of UK businesses located within four hours by road of Midlands.
- Logistics Golden Triangle
- Key transport hubs at Immingham, East Midlands Airport, DIRFT
- Automotive expertise – e.g. MIRA, JLR, Toyota
- Two successful Freeport applications at the East Midlands Airport and the Humber.
- Freight contributes 21% of road-based transport carbon emissions in the Midlands
- Only large-scale refuelling station in the UK at Tyseley Energy Park





Source: MDSTransmodalGB Freight Model

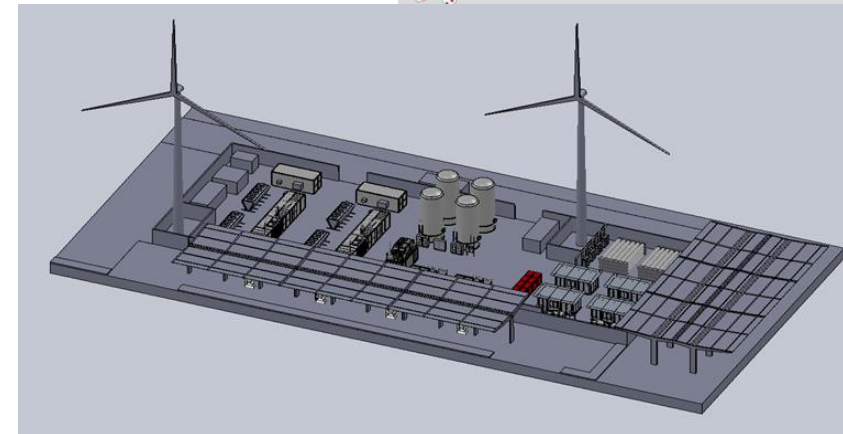
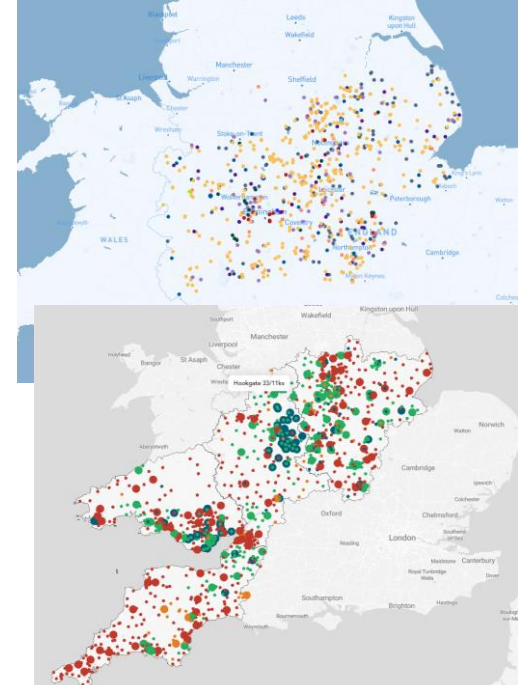
Planned Outputs

- The **feasibility study** will provide:
 - A design of a 44t HGV including a detailed analysis of the fuel requirements and fuel efficiency
 - Modelling of logistics routes
 - A plan for the optimal distribution of hydrogen refuelling stations, and green h2 generation both on- and off-site
 - Skills evaluation
 - Midlands-based supply/value chains identifying gaps and opportunities
- A **Green Book ready business case** for a demonstrator
- A wider engagement group will ensure connectivity across the value chain
- **Engagement with DfT, Innovate UK.**
- Focus on inward investment and economic growth



Key Tasks Underway

- Understanding end user requirements
- Vehicle requirements and vehicle acquisition
- Understanding potential for UK supply chain of vehicles and maintenance
- Identification of green sources of hydrogen
- Locations and designs for re-fuelling stations
- Understanding freight movement
- Modelling the costs of a trial and business plan
- Identifying a trial route



How you may be able to help:

- Land suitable for refuelling stations
- If you want to participate in the proposed trial

More details:

Website and press release:

www.era.ac.uk/h2gvmids

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