

Role of gas networks in delivering the hydrogen economy

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Cadent
Your Gas Network



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Why does hydrogen need gas networks?

- **Market coupling,**
- **Energy storage and resilience**
- **Enables Flexibility**
- **Connectivity and efficiency**
- **Energy independence**
- **Enables scale**
- **Enables users**

Gas networks will support constrained electrical infrastructure

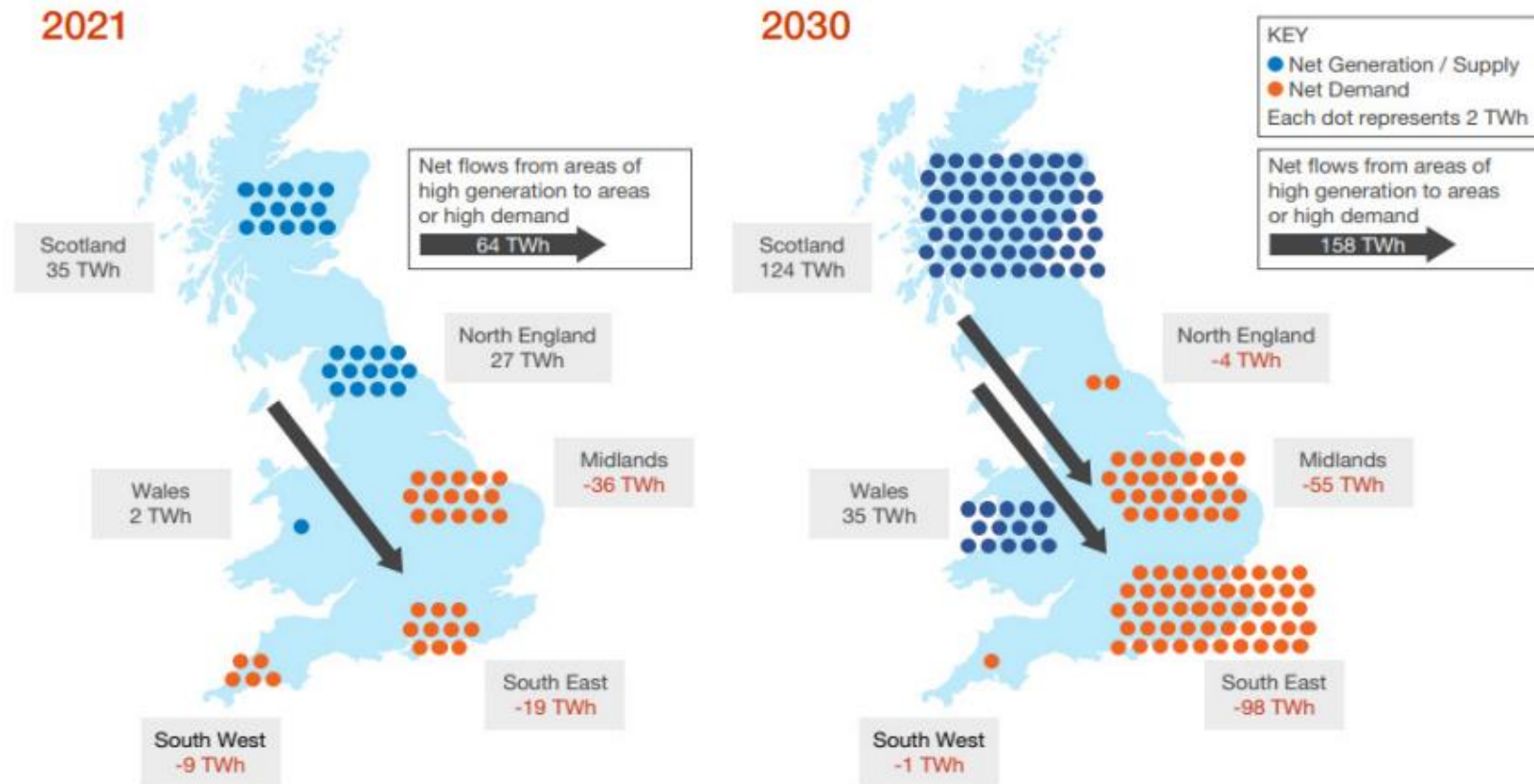
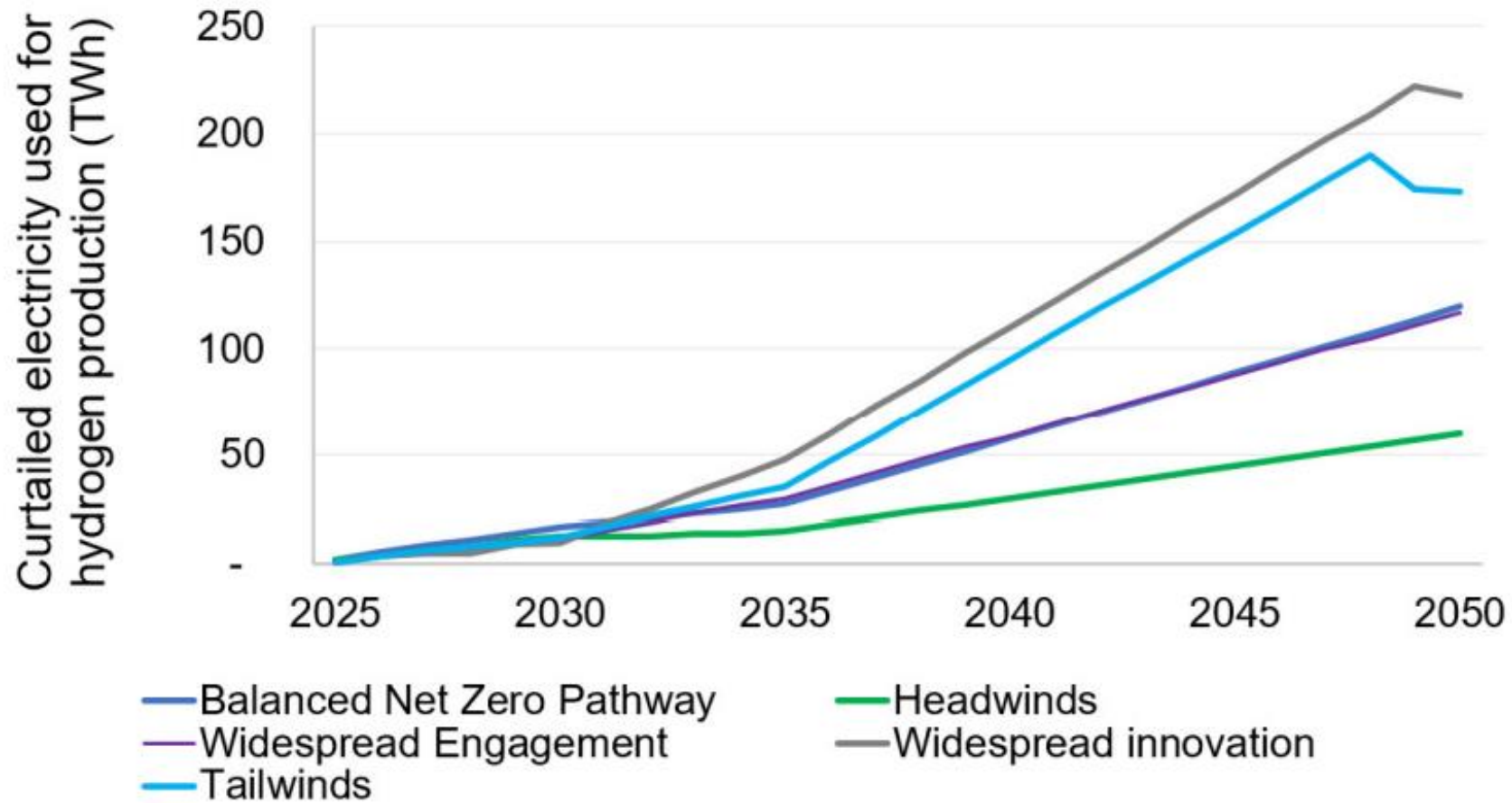


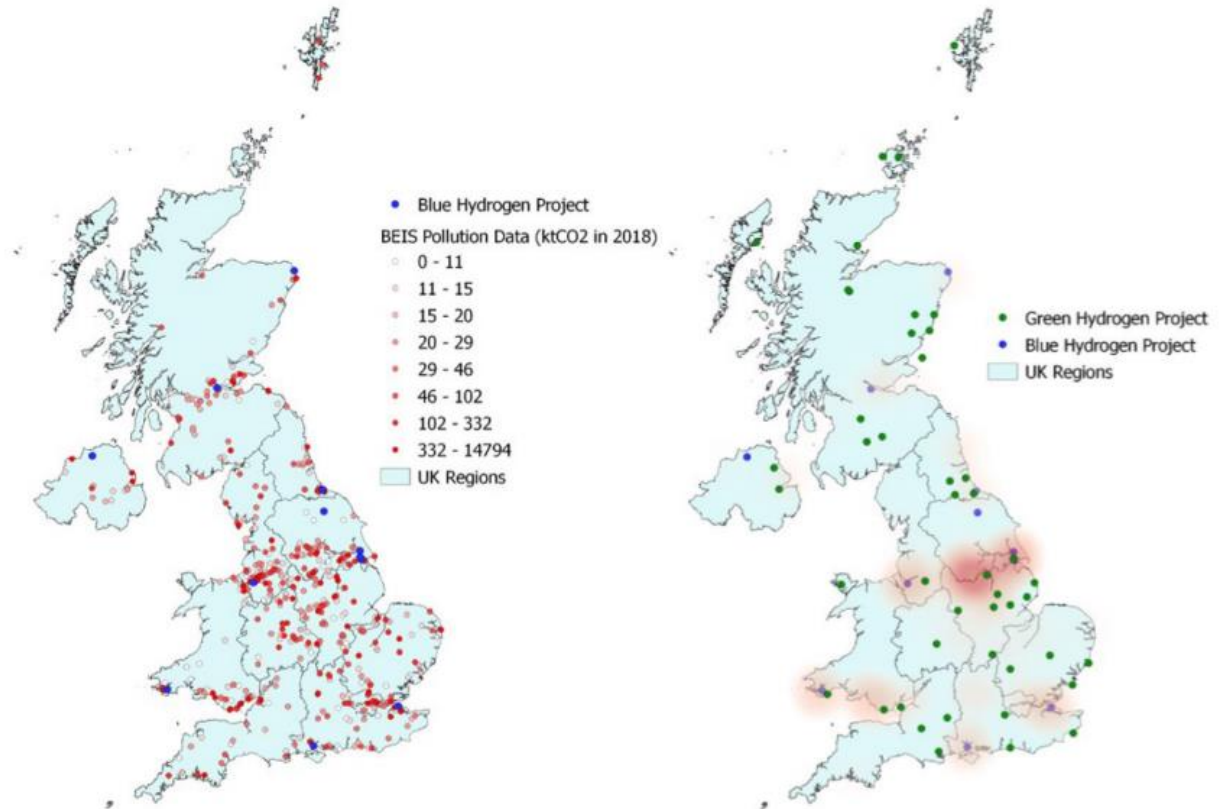
Figure 1: Geographical Disparity between Hydrogen Production and Industrial Emissions (FES)

Helping alleviate Curtailment Payments



Maintaining the UK's industrial base

- 53% industrial emissions in clusters
- 47% dispersed
- Early electrolytic will match to demand
- Networks to enable expansion



100% hydrogen will require a phased delivery



100 % hydrogen repurposing:

The technical and safety evidence for full hydrogen conversion is progressing

Network Safety

SGN
Your gas. Our network.

Cadent
Your Gas Network

Northern Gas Networks

H21
Network Safety (NGN led - funded by all networks)



HyGrid
Closing final evidence gaps (all GDN's & BEIS)



H100
Hydrogen Neighbourhood



Village Trial
Hydrogen village conversion



Safety in buildings

Hy4Heat
demonstrating hydrogen for heat

Department for Business, Energy & Industrial Strategy

Hy4Heat BEIS
Establishing safety evidence in the Home. 80% of building types



HyGrid 'End Use' Workstream
Safety case for remaining building types and non-domestic appliance development



Key Hydrogen Network Recommendations



Take interim measures to facilitate design and planning before the design of Transport Business Models



Design Regulated Asset Base models in both growth and steady state phases



Create a strategic planning body which facilitates the coordination between networks and storage infrastructure projects



Political commitment to the development of a national network of 100% hydrogen pipelines



Determine a national strategy to decarbonise industry.

Thank you

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