

Wales & West Utilities future network planning - overview

Bethan Winter

System Operations Manager

Wales & West Utilities



OUR FUTURE FOR ENERGY

PREPARATIONS FOR A GREENER FUTURE, NOW

Bethan Winter
System Operation Manager



WALES & WEST
UTILITIES

Wales & West Utilities



We are the Gas DSO & Designer for Wales & south west England

We supply c.2,000 micro generation sites (CHPs)

We have 37 power stations connected with 1.76 GW total capacity

We have 1.7 TWh green gas connected to our network (19 AD sites)

We flexibly deploy 58 GWh of storage each day (UK 210 TWh seasonally)

We're investing in our future low cost and green gas/H₂-ready network

Our network is resilient to severe weather and climate change projections

On a cold winter day over 80% of heat & power is transported in the gas network.
The energy system is becoming more integrated and our role is changing.

Understanding the challenges

Secure

Reliable supply
and infrastructure that
meet demand



Sustainable

Decarbonised and
carbon neutral



Affordable

Cost-effective across the
whole UK population



Decarbonisation Pathways - BEIS

A number of technologies hold potential, but there is no consensus on which approach will work best at the scale needed – for consumers and for minimising whole system costs.

Electrification

- conversion to electric heat pumps or other electric technologies
- particularly useful for buildings not on the gas grid



District heat networks

- cost effective where there is sufficient density of heat demand
- likely to be an important part of the mix in the long term



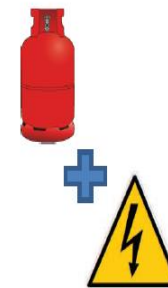
Decarbonising the gas grid

- using hydrogen or biogas
- more work is needed to assess cost and feasibility



Hybrid solutions

- two different heating technologies and energy sources working together



11 December 2017

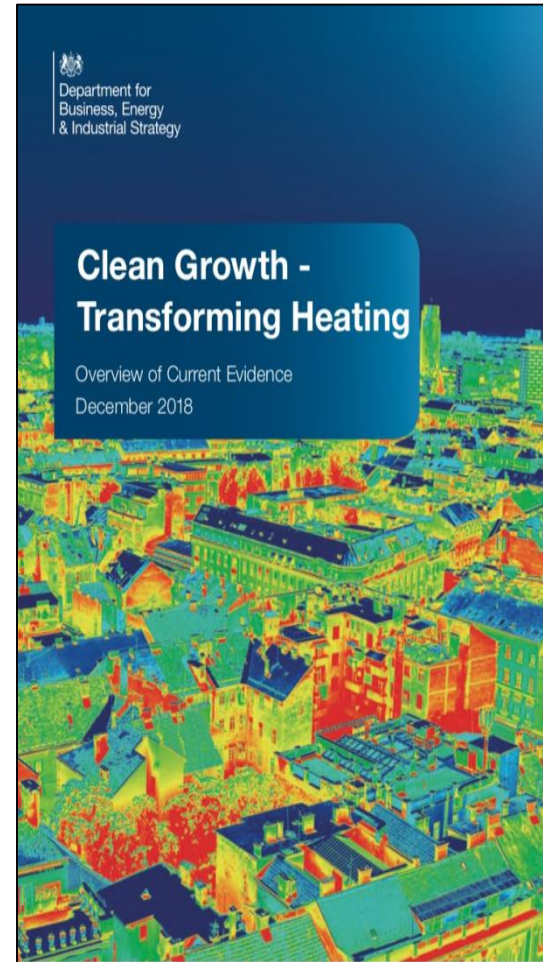

Department for
Business, Energy
& Industrial Strategy

Future pathways

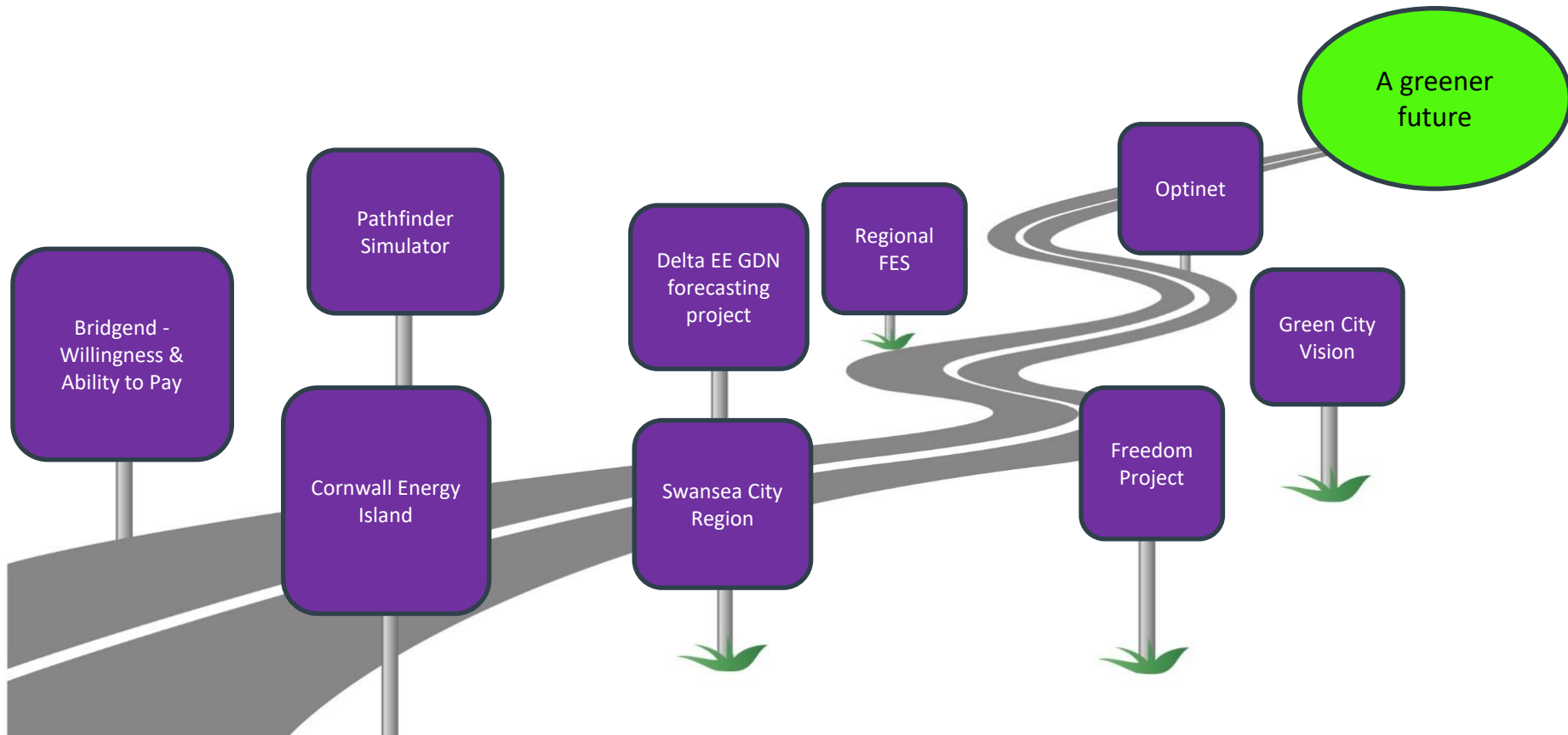
- Hybrids and Freedom extensively referenced
- Next steps – developing a new policy framework
- Enable the most cost effective transition

Options:

- Electrification
 - Hydrogen
 - Bioenergy
- Smart hybrids cross over all three

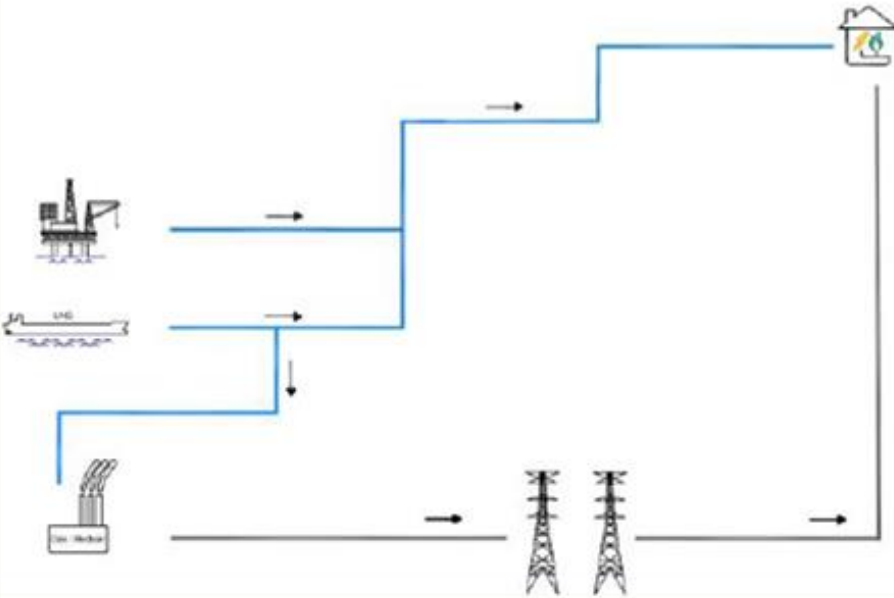


Our vision journey



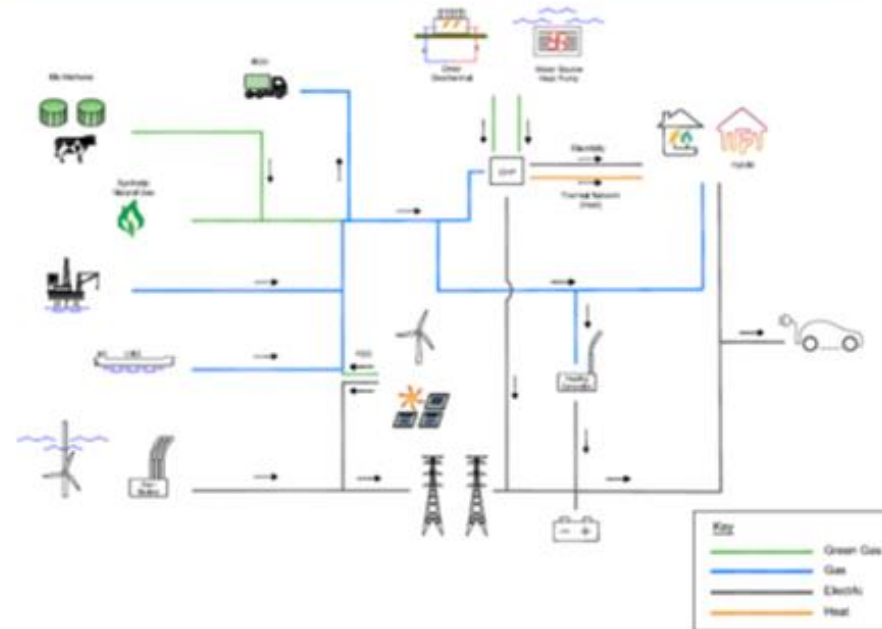
Energy networks are changing

LEGACY Gas & Electricity Networks



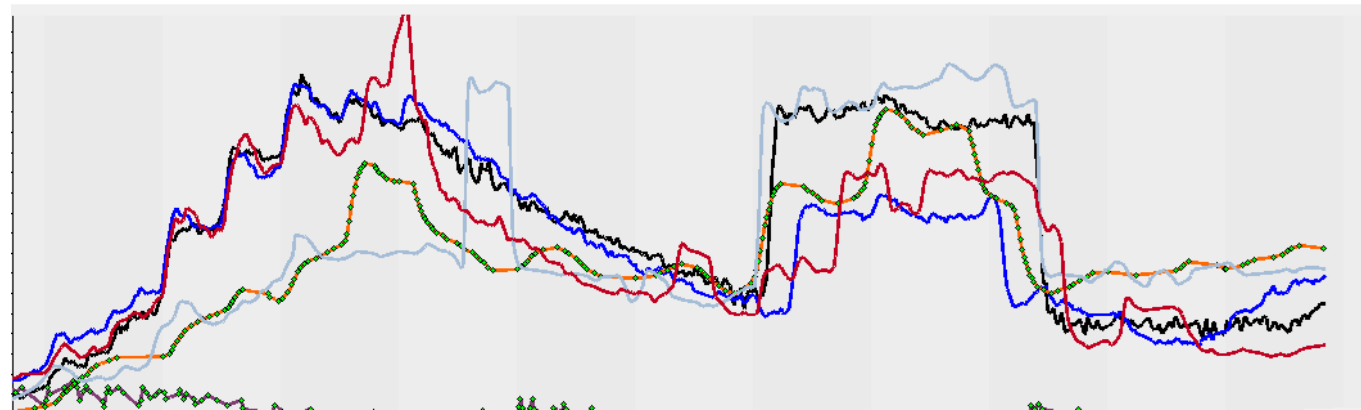
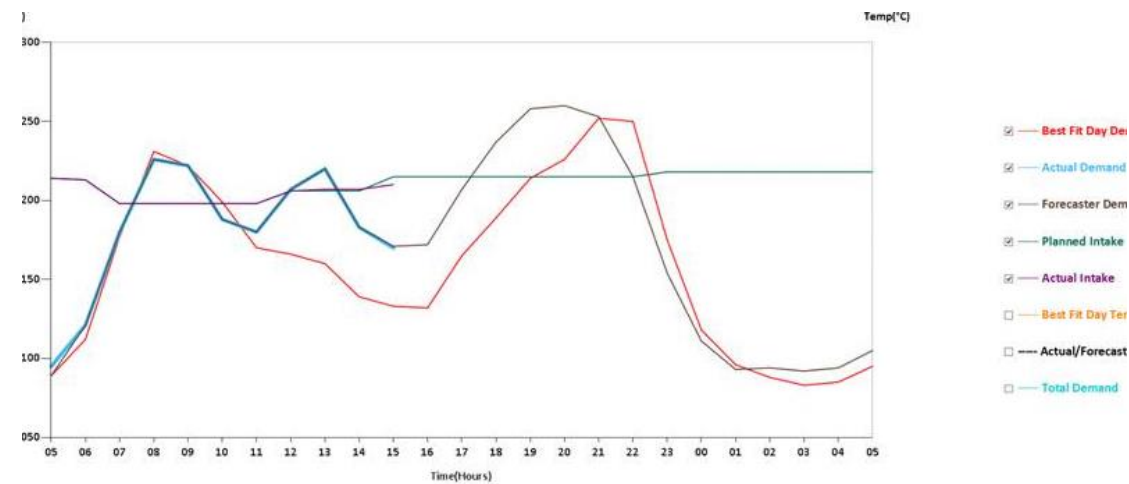
Stand-alone Electricity & Gas
Networks

CURRENT Gas & Electricity Networks



Increased integration - leading to a
need for whole systems consideration

Sunday – 05th May 2019



Why it matters

