



Cartrefi Hydrogen Homes Retrofit

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www.cartrefihydrogenhomes.cymru

Project Prologue

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Context



‘Trust based collaboration’ of five RSLs operating in Blaenau Gwent utilising and leveraging each organisation’s unique skills, expertise and resources to tackle the shared challenge of decarbonisation.



Optimised RetroFit Programme

Welsh Government funding programme testing new approaches to decarbonisation.





The Project

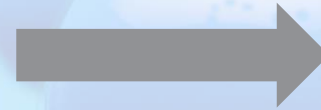
Aim

Explore and demonstrate hydrogen as a low carbon / zero carbon fuel for appliances as part of retrofit works to existing homes.

Real Homes

Real Challenge of
Retrofit

Real Opportunities



How

By delivering up to two 100% hydrogen retrofit demonstrator properties in Blaenau Gwent.

Stage 1

- Feasibility study.
- Case for safety.
- Identification of appropriate H2 supply and appliances.
- Full designs.

Stage 2

- Deep retrofit of properties and H2 retrofit.
- Demonstrator run to simulate usage generating data.
- Learning, sharing and engagement.





Opportunities

For housing providers...

Alternative low carbon /
zero carbon affordable
warmth for customers.

Thinking shift
“no gas” to “no natural gas”.

Sustainable and resilient solutions
to home heating challenge.

Investment maximisation but
disruption minimisation.

For the community and supply chain...

Refinement of standards in applied environment.

Expanding demonstrators across the UK.

Accessible real world application of appliances.

Real world carbon impact comparisons.

Supporting HSE Evidence building.

Demystification of hydrogen technology.

Inward investment to local area.

Educating consumers.

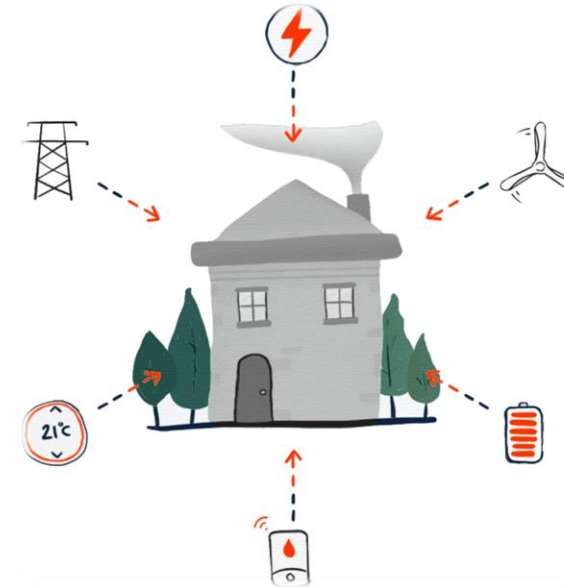
Engagement and upskilling of workforce.



Project Update

Where are we today....

- HSE currently reviewing safety case for project
- Retrofit works nearly complete
- Hydrogen retrofit due to start following safety case approval.
- Community engagement due to commence in November.
- Go live ambition early 2024.





Safety

Safety Controls

Hydrogen Supply

- Property will have a Hydrogen above ground installation (HAGI) with PE services connected to feed the demonstrator
- Hydrogen boiler and cooker due to be installed
- Supply will be isolated at the end of each day when not in use for demonstration purposes.
- Demonstrator will be managed by individual to ensure compliance and engage consumers in consistent messaging
- Hydrogen sensors to be installed within the property.
- Studies will be carried out to test 'usability' of services to compliment H21 study on service sizes for hydrogen



Training & Competence

- WWU Emergency engineers will be trained on differences in H2 detection and natural gas detection to carry out daily checks.
- H2 detection equipment being used to support the project.
- Hydrogen appliances to be installed by appliance manufacturers.

Communications

Communications Plan

Pre-Project Planning

- Scoping to establish landscape in local area.
- Key messaging agreed across project partners.
- Partner co-production of FAQs.

Go Live Planning

- Community engagement.
- Briefing of key political stakeholders.
- Proactive and reactive media engagement.

Launch Planning

- Launch event.
- Development and promotion of post-launch activities.
- Visitors booking system being developed.

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