

H100 Fife: Placing Scotland at the forefront of the clean energy revolution

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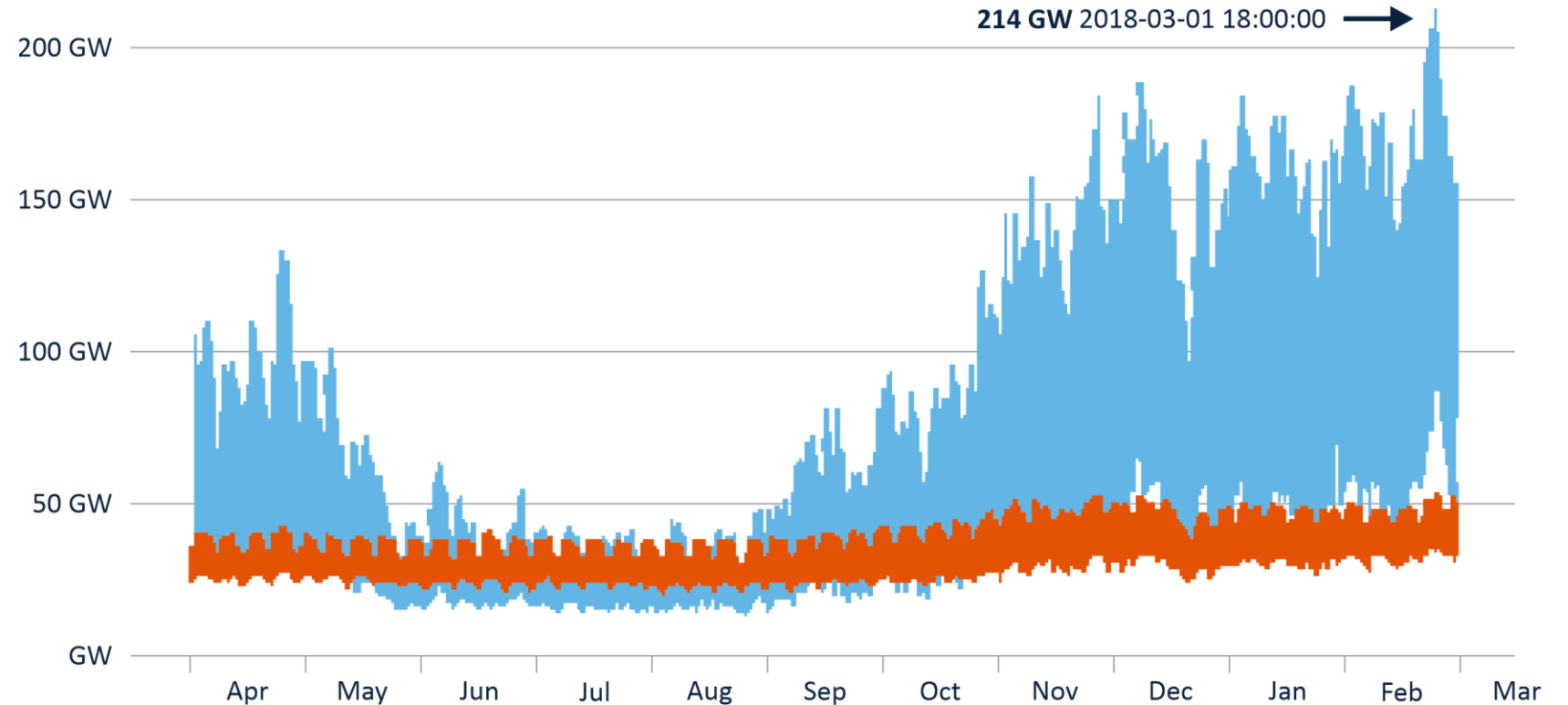


SGN

Your gas. Our network.

System challenge: decarbonisation of heat

The gas network transports **four times** more energy a day than electricity networks in the winter and we need to ensure the energy system remains secure and reliable as we decarbonise heat.



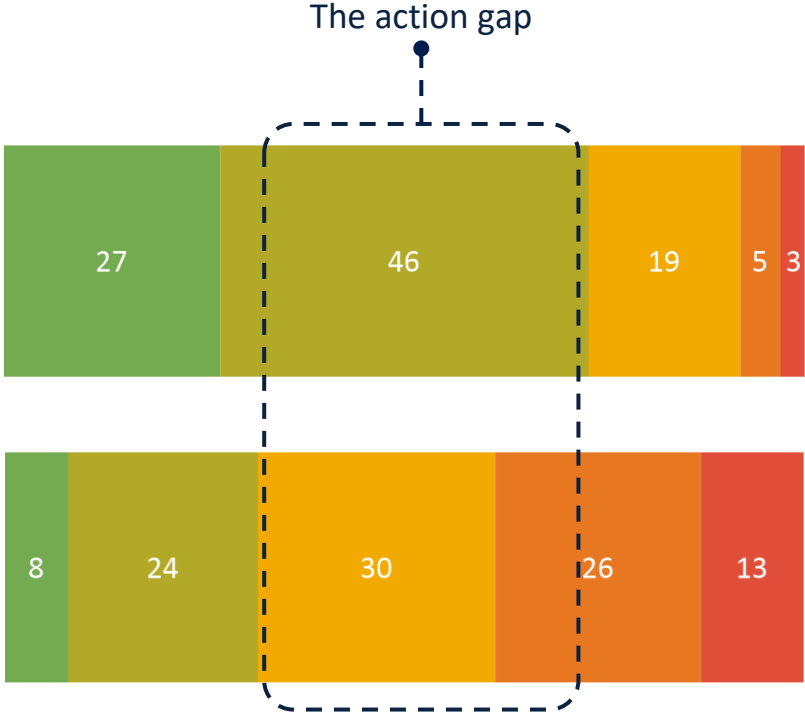
Gas and electricity demand during the 'Beast from the East' in 2018

Customer challenge: the decarbonisation of heat

Key outcome statements

“ I support the replacement of gas boilers with low carbon green home heating alternatives ”

“ I would switch my home heating to a greener alternative even if it costs me money ”



● Strongly Agree ● Agree ● Neither Agree nor Disagree ● Disagree ● Strongly Disagree

From our research in Scotland, there is a clear divide in what people say they want and what they are willing to do

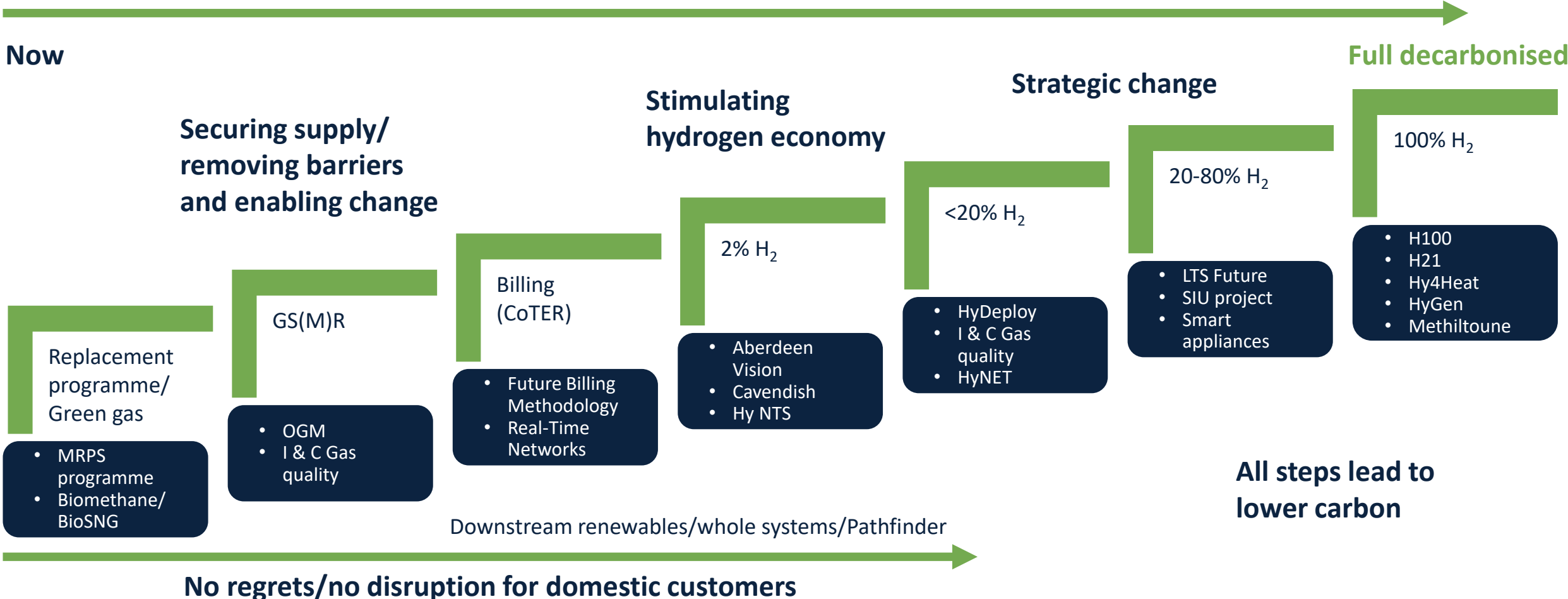
- **73%** say they support replacing their boiler with a greener alternative
- But only **32%** say they would pay for this switch.

A system transformation through hydrogen can increase consumer options and help to plug the gap.

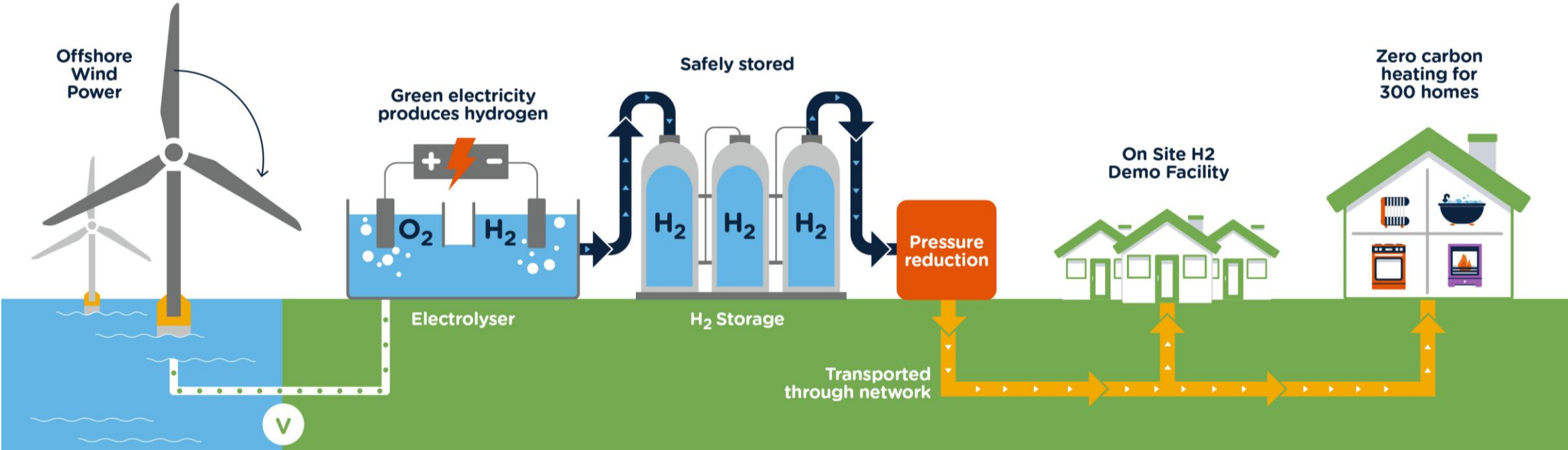
The role of H100 Fife

H100 Fife is as a national demonstration project which will evidence the role of hydrogen to decarbonise emissions from the home

The gas quality decarbonisation pathway



H100 Fife – demonstrating green hydrogen to customers



H100 Fife will provide technical and consumer evidence to support government policy decisions on heat decarbonisation

2020

Funding from shareholders, Ofgem and Scottish Government secured

2021

Planning and consent

2022

Procurement and construction

2023

Delivering zero carbon heat/green hydrogen to customers

H100 Fife

Levenmouth Site



ORE Catapult 7MW Turbine



Energy Park Fife

Customer Promise



Cost neutral for customers to participate



Free hydrogen gas appliances,
replacing existing natural gas appliances



Free maintenance and servicing of appliances



Billed for hydrogen gas supply at energy
unit price of natural gas



Caution in not over-incentivising
participation to protect validity of learning



Time off gas during switch not
expected to exceed 24 hours



Customers will be invited to opt-in,
can also opt-out during participation



Customers that opt-out reverted to
natural gas at no cost

Project promotion and hydrogen awareness in local area

Customer Engagement Process

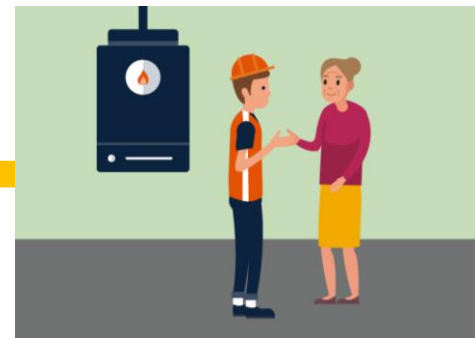
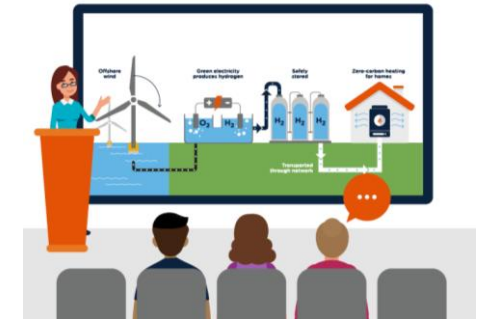
1. Build interest



2. Register interest



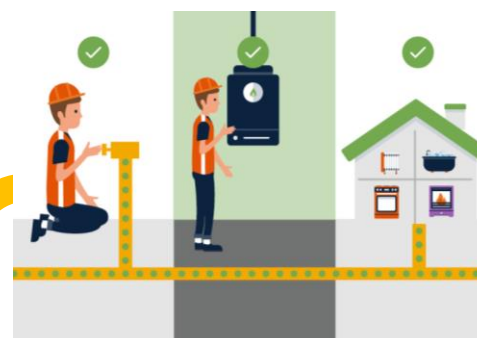
3. Hydrogen demo facility events to learn about the project & book home visit appointments



4. Property Assessments



5. Customer agreement



6. Home works



7. Support throughout trial

Critical H100 Fife Outcome Examples

Prioritised learning to inform hydrogen system transformation

Validation of 80% of 280,000km network materials, components, construction and operation on a live network

Quantifying and qualifying customer and social acceptance of hydrogen for heat in real-world trial

End to end system interfaces management and learning across the whole system

Statistically significant and scalable

Informs heat policy decisions and future regulation

Shared learning & knowledge transfer to facilitate hydrogen projects & roll out

Market creation

Thank you



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