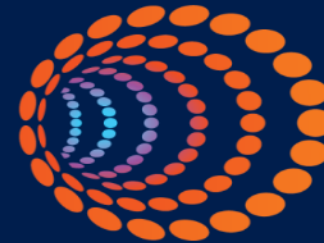


H100 Fife Overview – UNC MOD 799

25 February 2022



SGN

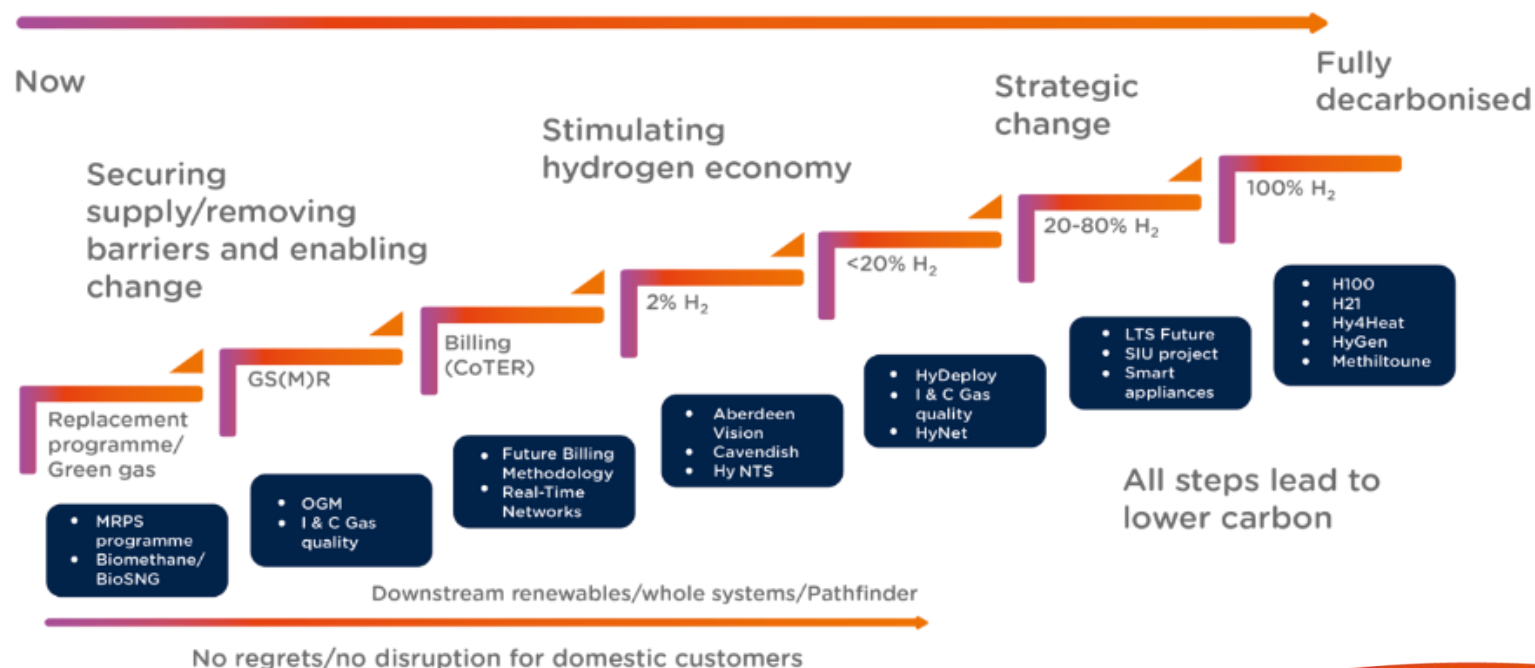
Your gas. Our network.

Hydrogen Context

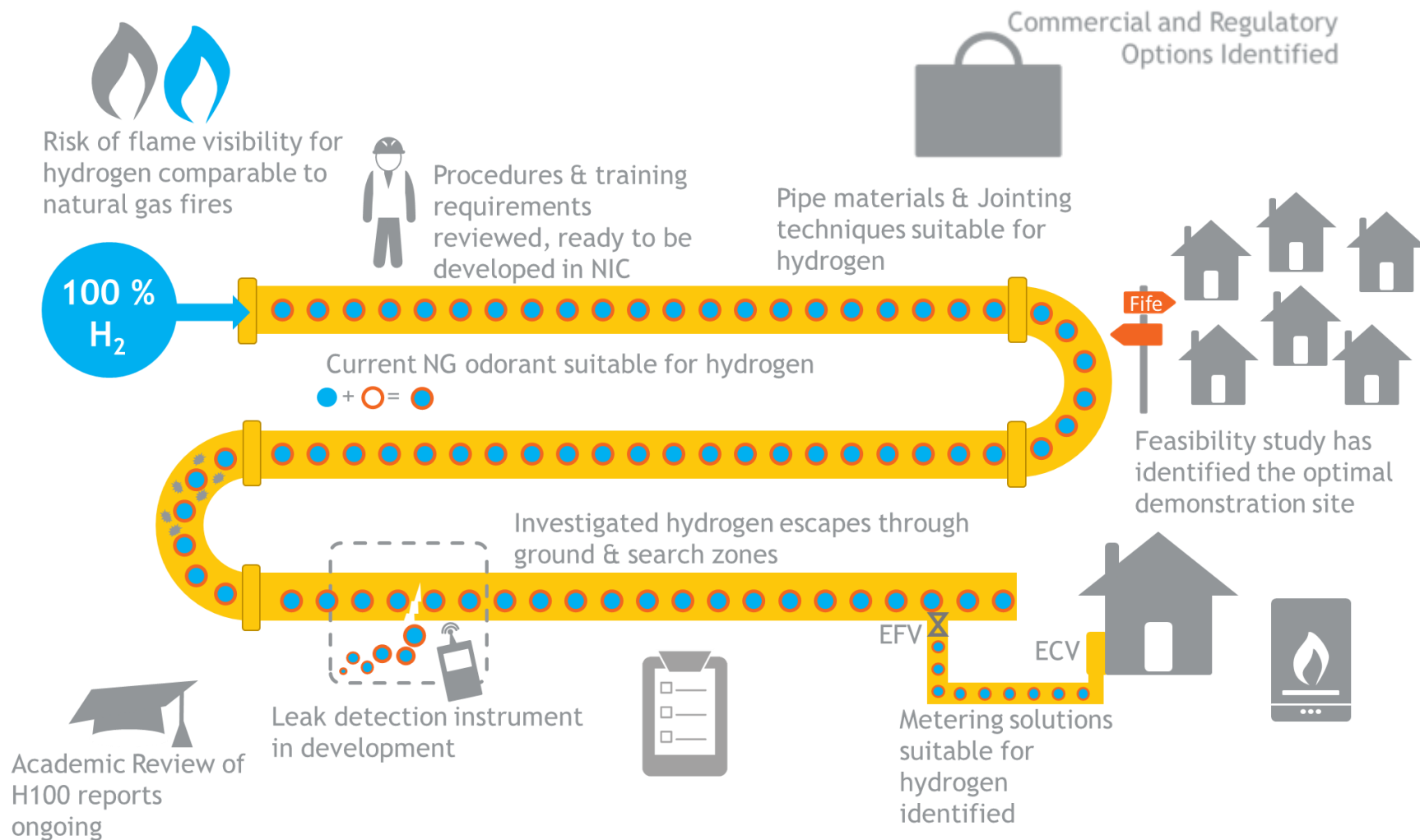
H100 Fife is recognised by the networks, industry and government as a key demonstration project with critical national significance in evidencing the role of hydrogen to decarbonise the gas networks.



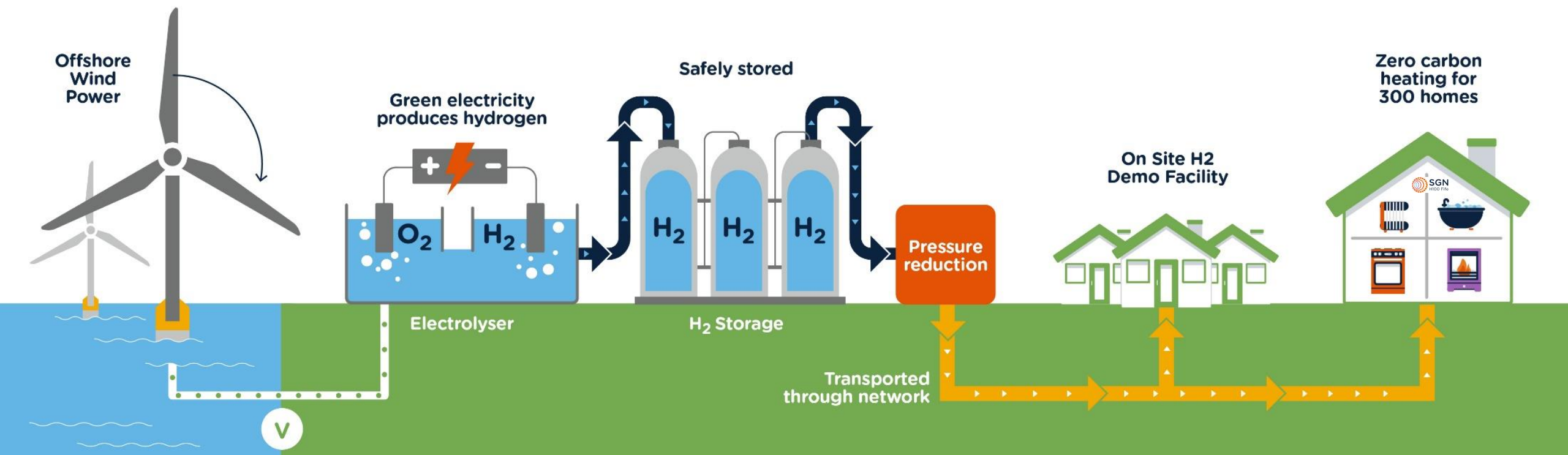
The gas quality decarbonisation pathway

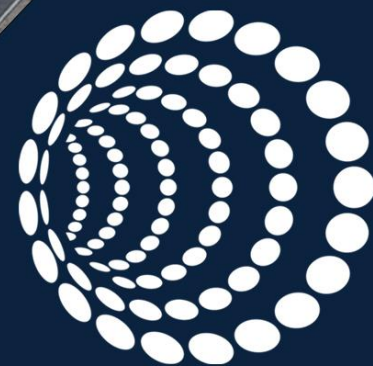


Hydrogen Evidence Base



System Overview - End to End Demonstration





SGN
H100 Fife

An end to end 100% hydrogen system

H100 Fife – Levenmouth Site

Defined network area with up to 300 customers, minimum of 270



Energy Park Fife



● Project coverage area ● Green hydrogen facility ● Offshore wind turbine



Governance

Project funders

The 'Project funders' section contains six logos arranged in a 2x3 grid. The top row includes SGN, Cadent (Your Gas Network), and Northern Gas Networks. The bottom row includes Wales & West Utilities, ofgem, and the Scottish Government logo.

ofgem
Making a positive difference for energy consumers

Company Secretary
Scotland Gas Networks Plc
Axis House
5 Lanehead Drive
Newbridge
Edinburgh
Scotland
EH28 8TG

Email: Cara.Yates@ofgem.gov.uk
Date: 16 April 2021

Dear Company Secretary,

Network Innovation Competition: Decision on outcome of Condition 3 of the 2021 Project Direction for Scotland Gas Network Plc's H100 Fife Project

Background
Scotland Gas Networks Plc (ScGN) was awarded NIC Funding in November 2020 for H100 Fife ("the Project") subject to compliance with the terms contained in the Amended Project Direction issued on 8 February 2021 ("the February 2021 Direction").

These terms included, under Condition 3, a requirement for ScGN to submit a report to the Authority by 17 March 2021, demonstrating an end-to-end regulatory framework plan, covering regulatory issues identified by the Authority, proposals to resolve these and indicators of what the ScGN considers should constitute evidence of resolution and an estimated date of resolution for each issue.

This letter contains our decision on the outcome of Condition 3 and sets out, in Annex 1, the Authority's amendments to the February 2021 Direction ("the April 2021 Direction").

The 2020 decision

http://www.ofgem.gov.uk/system/uploads/2021/02/25109_fife_amended_project_direction_2021_final_signed.pdf

The Office of Gas and Electricity Markets
Commonwealth House, 32 Abbot Street, Glasgow, G1 1UH. Tel 020 7901 7000
www.ofgem.gov.uk

DFG1161

Department for
Business, Energy
& Industrial Strategy

HSE
Health & Safety
Executive

Project Partners

The 'Project Partners' section features a collection of logos. On the left, the SGN H100 Fife logo is prominent. Below it are logos for Cadent, Northern Gas Networks, and Wales & West Utilities. On the right side, there are logos for BAXI HEATING, WORCESTER, BOSCH, HyFires, Enertek International, GAZCO, Valor, Charlton & Jenrick, HyCookers, and GlenDimplex.

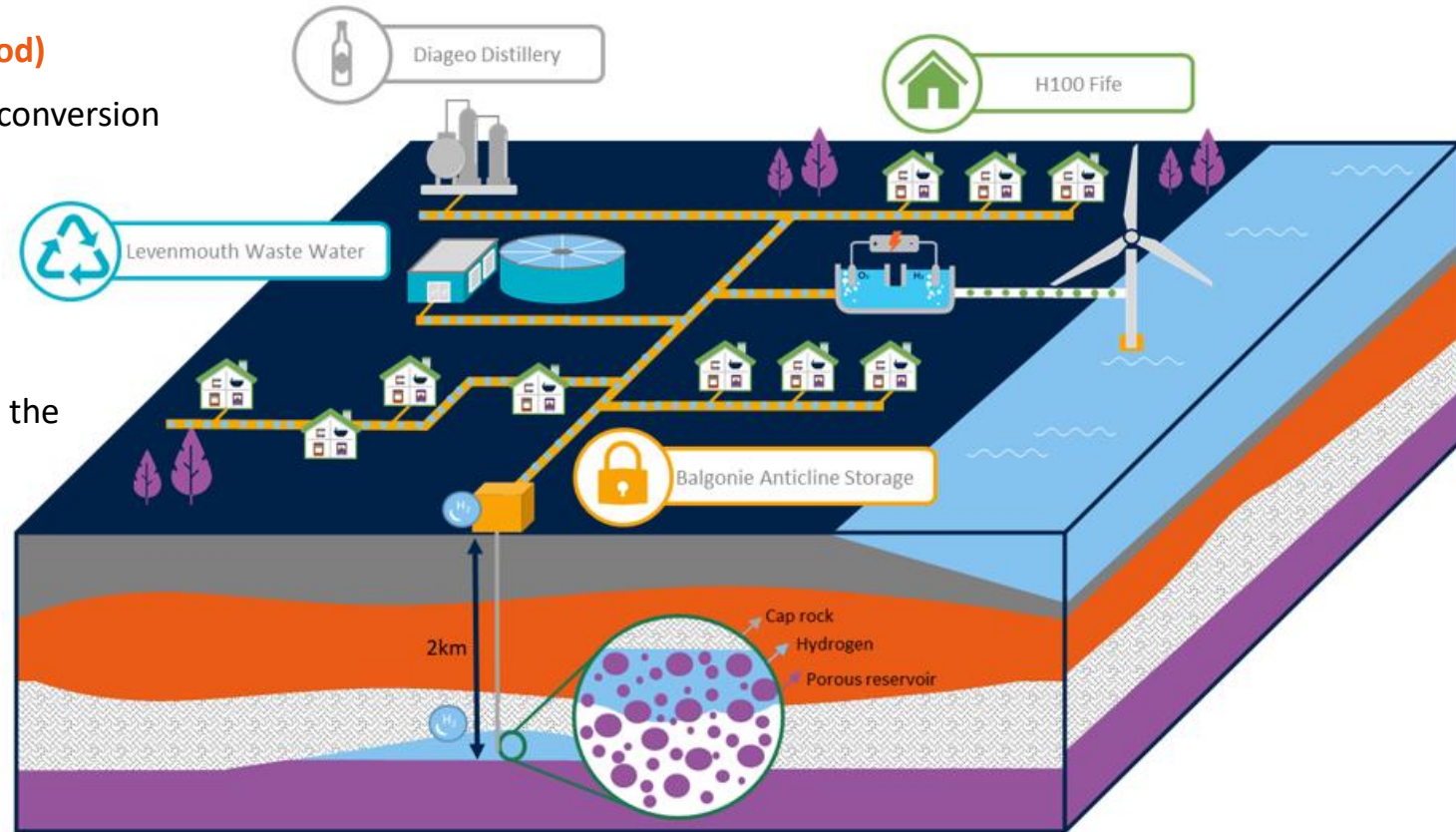


Project Phasing & Staging

- **Phase 1 – 300 homes on hydrogen (Hydrogen Neighbourhood)**
- **Phase 2 – Increase number of homes on hydrogen with grid conversion (Hydrogen Village)**
- **Phase 3 – Industrial and commercial hydrogen supply**
- **Phase 4 – Hydrogen transport**
- **Phase 5 – Whole systems solution**

At a high level, the project stages of Phase 1 can be split out into the following:

- **Stage 1:** Project Development April 2020-March 2021
- **Stage 2: Pre-Construction April 2021- 2022**
- **Stage 3:** Construction 2022-2023
- **Stage 4:** Operation 2023-March 2027
- **Stage 5:** Project Exit/Enduring Strategy

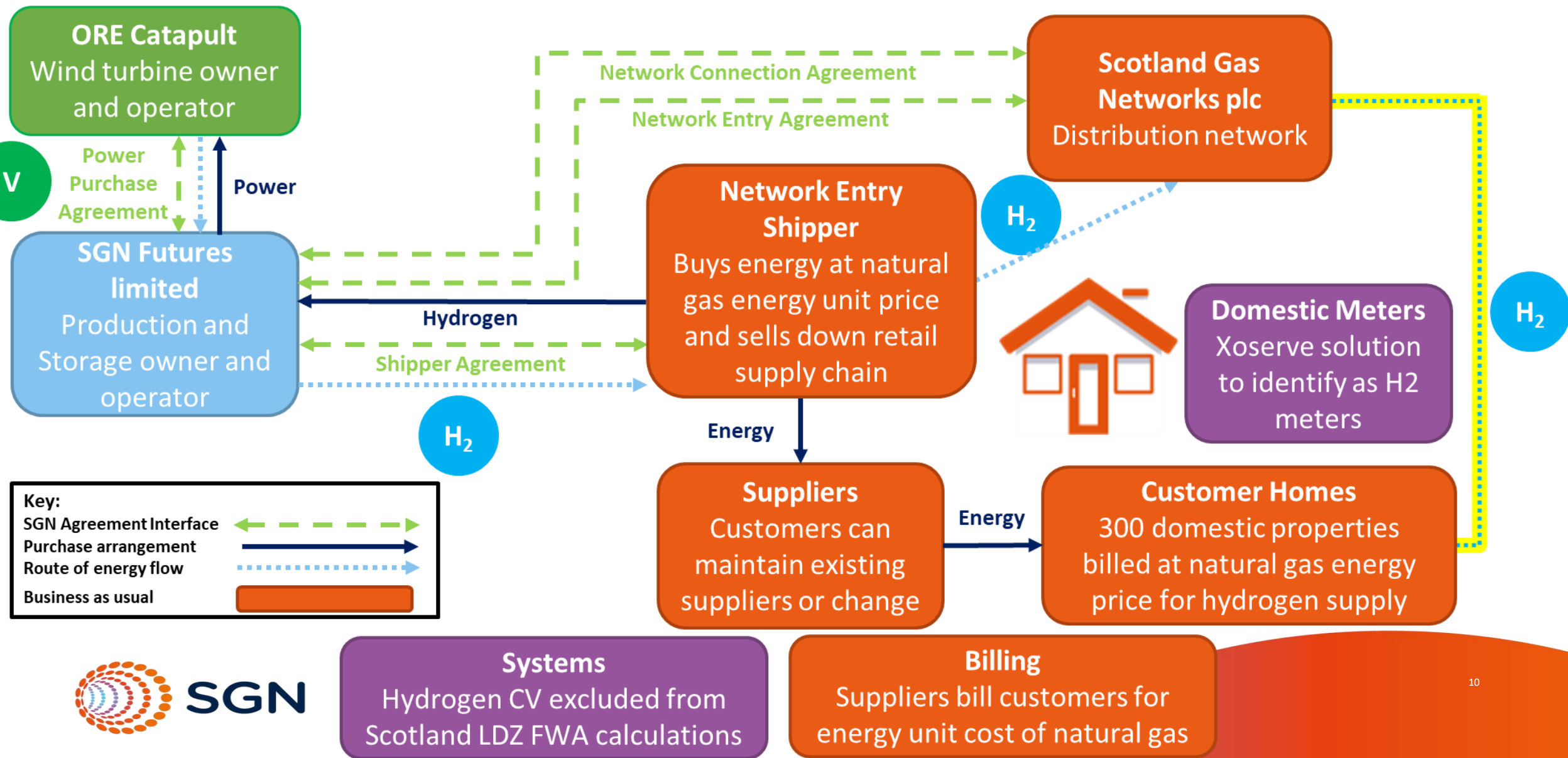


Customer Promise

- £ • Cost neutral for customers to participate
- 🐷 • Free hydrogen gas appliances/meters, replacing existing natural gas appliances/meters
- 👛 • 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
- 📄 • Existing gas customers will be invited to opt-in, can also opt-out during participation
- ↔️ • Customers can switch suppliers at will
- ⏪ • Customers that opt-out reverted to natural gas at no cost



Customer Centric Regulatory Model



Billing

- The current gas market system bills customers based on energy value (Calorific Value or CV) of the gas. As hydrogen has a lower calorific value, an unmodified billing system would charge customers incorrectly. Therefore, a bespoke billing solution is required.
- Project specific CV through declared CV approach.
- Consultation period 18 October – 8 November 2021
- Consultation shared with:
 - UK Link Change Distribution List, Energy UK - Regulation Managers, Joint Office, REC Smart Energy Code, Citizens Advice – Regulation Policy Team, Ofgem, GDNs direct
- **Multiplication Factor** defined specifically for project hydrogen meters. When a Valid read is received, this MF value will be used in consumption calculations to account for difference in volume required for hydrogen to deliver the equivalent energy of natural gas.

**Outcome: Option 2
Multiplication Factor
approved at Change
Management on 10
November 2021**

**Status: Ongoing design
phase for Option 2
Multiplication Factor due
to conclude April 2022,
targeting November 2022
major release**

2918.4 - MT - PO - XRN5298 - H100 Fife Project - Phase 1 -
Solution Review

This Change Pack is out for a 15 working day consultation. We invite the industry to review the information and provide any responses. At the ChMC meeting in November, we will seek approval for the change.



2918.4 - MT - PO - XRN5298 - H100 Fife Project -
Phase 1 - Solution Review
updated 18/10/21



Start Date:
18th October
2021
**Consultation
end date:**
8th November
2021

[Download](#)

AOB



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