RWE and SGN announce green hydrogen partnership for domestic heat in Scotland

Swindon, 14 June 2022

Supplying Scottish towns and rural communities with sustainable hydrogen gas will be the focus of a landmark partnership announced today between gas distribution company SGN and renewables generator RWE.

A Memorandum of Understanding (MoU) has been signed between the two companies to investigate the development of electrolysers, powered by RWE’s 10 onshore wind farms in Scotland which have a combined capacity of 213 megawatts, to supply homes and businesses with hydrogen gas via Scotland’s gas network.

Hydrogen has a crucial role to play in achieving net zero and is an essential component to decarbonise sectors like industry, heavy load transport, aviation and heat. Published in April 2022, the UK Government’s Energy Security Strategy doubled its ambition for low carbon hydrogen production capacity to 10GW by 2030. Similarly, the Scottish Government’s Hydrogen Action Plan aims to create 5GW of hydrogen by 2030 and 25GW by 2045.

The partnership will investigate the decarbonisation of homes and businesses connected to the networks of Campbeltown, Stornoway, Oban, Thurso and Wick, which are not connected to the mains gas network. These networks are currently supplied by Liquified Natural Gas (LNG) and Liquified Petroleum Gas (LPG), which when swapped with hydrogen could save 21,000 tonnes of carbon each year and decarbonise around 9,500 properties. The partnership will define how much hydrogen is needed, the requirements to convert these networks to hydrogen, and the supply of green electrolytic hydrogen from RWE’s renewable onshore wind farms nearby. In doing so, the project could also unlock onshore wind farm developments in grid-constrained areas, by providing a use for the green electricity generated.

A feasibility study will also be conducted over the coming months into a 100-megawatt (MW) electrolyser at RWE’s Markinch CHP biomass plant. This could produce green hydrogen from...
local and grid connected renewable energy, to connect into SGN’s gas network in Fife. It would build on the work SGN is already undertaking in Levenmouth on their world-first H100 Fife project.

Steve Boughton, RWE Director Hydrogen Development, said: “This MoU is a perfect partnership to develop options for the decarbonisation of domestic and business gas networks, and to help Government achieve its ambitions for 10GW of hydrogen production. Hydrogen will play an essential role in the pathway to net zero, particularly in industry and homes which is hard to decarbonise, and RWE is perfectly positioned to support the development of the UK hydrogen economy.”

Fergus Tickell, SGN System Transformation and Business Development Lead, said: “We’re delighted to partner with RWE which shares our belief that hydrogen gas has a leading role in the decarbonisation of homes, businesses and industry in Scotland and the rest of the UK.

“We’ll explore how hydrogen produced locally can be delivered through the world-class networks we’ve been operating for decades, to all of Scotland’s communities, including in Fife, Campbeltown, Stornoway, Oban, Thurso and Wick. We also look forward to investigating more opportunities across the UK.”

The knowledge and experience gained from these initial studies will enable a better understanding of the practicalities and economics of the entire hydrogen cycle and will be an important precursor to a potential funding application under the UK Government’s Net Zero Hydrogen Fund.

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Notes to editors

SGN delivering Hydrogen and decarbonisation
SGN has a leading role in decarbonising gas. In 2010, it connected the first biomethane plant to gas network and is now spearheading a whole-system transition of Great Britain’s gas networks to hydrogen. It believes changing the gas supplied through our networks to green gases like hydrogen, will allow people to continue to enjoy instant heat and control over their heating while taking a natural and pragmatic step forward towards net zero. A low carbon gas network integrated with the electricity network can also deliver an energy system that’s resilient and flexible helping meet energy demands that vary significantly throughout the year.

SGN is delivering the world’s first hydrogen neighbourhood on the east coast of Scotland – H100 Fife – which is part of the BEIS evidence base for hydrogen and will deliver a hydrogen neighbourhood for up to 300 customers in 2023. The gas company has secured £29.9m funding to determine whether Great Britain’s transmission networks can be repurposed for hydrogen gas. It has
also set out a transformational and accelerated pathway to 100% hydrogen for Scotland’s gas networks targeting one million homes by 2030, and kick-started studies in London and Edinburgh to design hydrogen visions for our capitals. In addition, SGN is carrying out critical projects to help decarbonise industry with hydrogen, including in the port of Southampton and surrounding areas.

RWE leading the energy revolution
RWE is one of the world’s leading renewable energy companies, and is responsible for supplying almost 15% of the UK’s electricity. The company is at the forefront of driving green innovation and delivery at pace and is committed to investing £15 billion in the UK to deliver new green energy infrastructure up to 2030.

RWE has a wealth of knowledge and experience in the development of hydrogen projects across Europe, including involvement in GET H2, NorthH2 and AquaVentus. It is committed to playing a full part in the delivery of this emerging technology in the UK, and at the same time creating skilled green jobs. Furthermore, the company has ambitions to develop floating wind in the Celtic Sea, and an initial 100MW hydrogen plant in South Wales; it also supports the UK Government’s ambition of achieving 10GW of Hydrogen production, with a minimum 50% green hydrogen target.

RWE
RWE is leading the way to a green energy world. With an extensive investment and growth strategy, the company will expand its powerful, green generation capacity to 50 gigawatts internationally by 2030. RWE is investing €50 billion gross for this purpose in this decade. The portfolio is based on offshore and onshore wind, solar, hydrogen, batteries, biomass and gas. RWE Supply & Trading provides tailored energy solutions for large customers. RWE has locations in the attractive markets of Europe, North America and the Asia-Pacific region. The company is responsibly phasing out nuclear energy and coal. Government-mandated phaseout roadmaps have been defined for both of these energy sources. RWE employs around 19,000 people worldwide and has a clear target: to get to net zero by 2040. On its way there, the company has set itself ambitious targets for all activities that cause greenhouse gas emissions. The Science Based Targets initiative has confirmed that these emission reduction targets are in line with the Paris Agreement. Very much in the spirit of the company’s purpose: Our energy for a sustainable life.

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