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HYDROGEN PRODUCTION **FACILITY AT GORDONBUSH WIND FARM**

August 2022

INTRODUCTION

SSE Renewables is developing a proposal to co-locate a Green Hydrogen Production Facility at Gordonbush Wind Farm, near Brora.

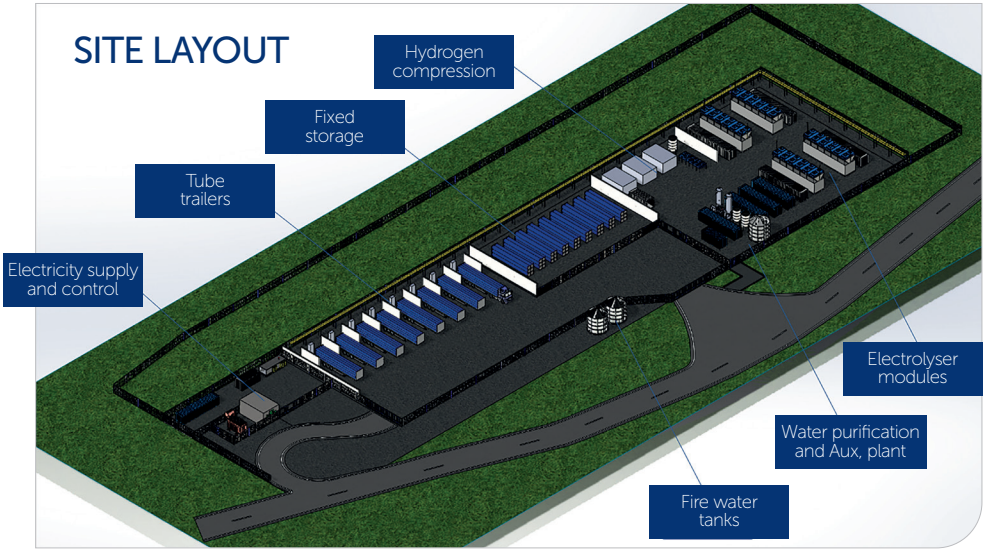
At this stage, the detailed design of these elements has not been fully developed and a level of refinement of the scheme is expected prior to submission of the planning application.

The proposed development comprises of a green hydrogen production facility, which would be located within the existing infrastructure of Gordonbush Wind Farm. We will no longer be including a battery energy storage system as part of the green hydrogen development.

The proposed facility would produce Green Hydrogen, by splitting the elements of water (H2O) into the component parts of Hydrogen and Oxygen, using a process called Electrolysis.

Following consultation we will be reducing collections by approximately 50% to 4-5 vehicles per day (8-10 vehicle movements).

The initial indicative layout would involve the following infrastructure:



For further details on the proposed development visit: **www.sserenewables.com/GordonbushH2**

ANTICIPATED TIMELINE

- **March 2022** — Pre-applicaton Consultation Workshop with Highland Council. Scoping submitted.
- **April 2022** — Hazardous Substance Consent Submitted. First Public Exhibition.
- **Q3/Q4 2022** — Surveys to inform EIA - Hydrology, Peat Probing, Otter surveys, Transport surveys etc.
- **Q4 2022** — Second Public Exhibition.
- **Q1 2023** — Submission of Town and Country Planning Application.
- **Q3 2023** — Earliest Construction Phase.
- **Q2 2024** — Earliest Operational.

WHY HYDROGEN?

Hydrogen has been produced and used daily in the UK for decades, for example in the manufacture of microchips and in the pharmaceutical sector.

Green hydrogen has an important role in ensuring net zero is met by the decarbonisation of sectors that are difficult to electrify including heating, manufacturing, transportation.

Scottish Government Hydrogen Action Plan clear ambition to have 5GW installed hydrogen production capacity in Scotland by 2030 and 25GW by 2045.

Hydrogen can be used as a clean alternative to petrol or diesel and is being used globally as a solution to transport zero emissions e.g. Aberdeen, London, Paris, Seoul, Tokyo and also in California.

The burning of fossil fuels produces carbon dioxide and other poisonous greenhouse gases. When hydrogen is burnt as a replacement to these harmful fuels, the only waste product is water vapour.

Innovative events, such as this years' HebCelt in Stornoway, have significantly powered their festivals with Green Hydrogen.

SAFETY

Keeping the public safe and making sure that everyone working for us gets home safely takes precedence over everything we do.
The production and storage of hydrogen is closely regulated to ensure high levels of safety are adhered to at all times. This is through the design, installation, operations and transportation processes.

Hazardous Substance Consent

As part of the wider pre-application consultation required to develop the planning application, we have submitted an application for a Hazardous Substance Consent from the Hazardous Substance Authority (HSA) which, in this case is the Highland Council. This is required for both the production and storage of hydrogen.
In accordance with these regulations, the Highland Council are required to consult with the Health and Safety Executive (HSE) and other statutory consultees including the Scottish Fire and Rescue Service and Police Scotland, who undertake a comprehensive review and independent assessment of the proposal to produce and store Hydrogen on the site.

In addition to our own assessment, the HSE will undertake complex, detailed and technical work to consider the nature and severity of the risk to persons in the vicinity and the local environment arising from the presence of a hazardous substance at the proposed development's location.

Control of Major Accident License (COMAH)

In addition to this, we have also submitted notification for Control of Major Accident Hazards (COMAH) to obtain a COMAH License to the COMAH competent authority, which is also HSE. This application will determine the safety measures meet the COMAH regulations sufficiently during both the construction and operation of the facility. The ongoing review and governance will ensure the necessary measures are taken to prevent major accidents.

Both the assessment for the Hazardous Substance Consent and COMAH License are subject to technical peer review to ensure robustness. The rigour of this process is designed to ensure safety is at the forefront of the application and continuously high safety standards are adhered to when undertaking the production and storage of hydrogen.

The HSE have advised their response is likely to be provided within the next 26 weeks.

SSE's Safety Family is built on four well-communicated statements:

- We take care of ourselves, each other and the environment;
- We take pride in our workplace;
- We plan, scan and adapt;
- We see it, sort it, report it.

ENVIRONMENT

Following submission of our Screening Request in April 2022, we received the Highland Council's Screening Opinion which determined an Environmental Impact Assessment (EIA) is required for the Development.

A number of surveys and feasibility studies are currently ongoing and further works will be undertaken to inform the EIA. This will include a proposed Habitat Management Plan, Peat Management Plan and an assessment of the Hydrology, which is specifically in relation to determining appropriate water sources, water usage and waste water discharge.

Water supply and water discharge

Taking on board the feedback from the exhibition on the abstraction from Boreholes and potential impact on associated local supplies. We are currently carrying out investigations to confirm the most appropriate option for the Proposed Development.

Transport

Similar to the transportation of LPG, diesel, petrol and heating oil; the transportation of hydrogen is heavily regulated and will be conducted in line with The Carriage of Dangerous Goods by Road regulations (ADR). These are highly prescriptive and cover carriage, loading, unloading and handling, driver training, construction and approval of transportation vehicles etc.

We will work closely with the Highland Council Roads and Transport department, who will determine if any upgrade works are required.

We welcome your feedback on how we can ensure any impacts of transportation are minimal. The collection and delivery schedule can be flexible and arranged for times of the day which would cause the least disruption to the local community.

SSE RENEWABLES – SUPPORTING **COMMUNITIES IN SUTHERLAND**

SSE Renewables is a proud member of the communities in East Sutherland area as a developer, constructor and operator of important assets across the region.

Value Delivered Across East Sutherland

£2.4M
allocated projects within the Gordonbush area since 2011

£6.7M
to be invested in East Sutherland communities over the wind farms' lifetime

Gordonbush Apprenticeship Scheme supported

26 businesses **34** young people, with 14 still actively engaging in learning

FREQUENTLY ASKED QUESTIONS

Q: How long would the construction phase be?
A: We anticipate construction of the facility taking 8-12 months.

Q: What is the transport route for the construction phase and operation of the facility?
A: The modular components for the Electrolyser would be transported to the North of Brora, then via the Clynelish road to the C6 Strathbrora road before entering the Gordonbush site entrance.

In order to service the Hydrogen Production Plant, vehicles would collect hydrogen and deliver it to customers situated within the Sutherland and wider Highland area. The short route from the Wind Farm to the A9 would also use the C6 Strathbrora and Clynelish roads.

Q: Will the lorries need to be escorted?
A: No, all lorries that would be used during operation of the proposed development will be conventional sized heavy goods vehicles.

Q:How will you ensure the road is suitable for tankers transporting the hydrogen?
A: We are currently conducting transport surveys to assess the current condition of the road and identify any upgrades that may be required. We will liaise with the Highland Council Roads and Transport department, who will determine if any upgrades are required. Any upgrades required will form part of the planning conditions.

Q: How much peat would be displaced during construction of the facility?
A: We are using existing infrastructure on the site, which means very little peat will be displaced. This will be done in accordance with a Peat Management Plan.

Q: Will the facility create any jobs for local people?
A: The project would create jobs in the short-term during the construction phase and support the long-term ambition of developing green hydrogen production and a supply chain locally.

Q: Will the development produce Caustic Soda?
A: The development will not produce or transport caustic soda. Previously we were looking at Electrolysis process which used Lye, contained within the process vessels. This is no longer the case as we have changed the process technology to remove this substance altogether.

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If you have any feedback or queries about the project, please do not hesitate to contact:

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