

HYBONT BRIDGEND GREEN HYDROGEN September 2024

The project

Marubeni Europower is developing plans for HyBont, a green hydrogen production and refuelling facility at Brynmenyn Industrial Estate. This will be partially powered by a solar farm at Bryncethin, which will be connected directly by a private wire.

The HyBont project will help tackle the climate emergency, reduce carbon emissions by providing a low carbon fuel for transport and industry, and support Welsh Government and Bridgend County Borough Council's net zero targets.

About Green Hydrogen

Hydrogen is an element found in many compounds such as water. It can be produced using both renewable and non-renewable methods. The HyBont proposal uses electricity from renewable energy sources – from local wind power offsite (via the grid) and solar PV panels located at Bryncethin – to produce green hydrogen using electrolysis, which can then be used to fuel vehicles.

Green hydrogen projects are now a feature of many cities across the world and the UK Government intends for 10 gigawatts (GW) of low carbon hydrogen to be in production by 2030. The first Hydrogen refuelling station was opened in 2017 and since then this provision has expanded to includes sites across the UK. Many more production and refuelling facilities are scheduled to be operational by the end of this decade.

The HyBont facility at Brynmenyn is a small-scale hydrogen production site, similar in scale to a petrol station and other hydrogen production facilities operating in urban environments in the UK (including Tyseley in Birmingham and Kittybrewster in Aberdeen).

Safety-led design

Hydrogen, in line with other fuels such as petrol and natural gas, is covered by international codes, regulations and standards to ensure its safe production, storage, transportation and use. It has been used within the UK for a range of industrial purposes for decades, and the UK has a strong track record in the safe storage and distribution of combustible gases, including hydrogen.



Safety is of paramount importance, both in terms of the design and operation of the HyBont project, with a range of measures incorporated into the safety-led design. This has been further enhanced in revisions to the site layout to enhance operational efficiencies following discussions with manufacturers of the component parts.

Environmental considerations

A range of environmental surveys and assessments have informed the evolution of the proposals for the HyBont Green Hydrogen Project. This includes landscape and visual impact, biodiversity, air quality, flood risk and noise. All these factors have been considered and mitigation measures proposed where appropriate.



Further to the initial noise impact assessment in March 2023, the noise levels have been reassessed and a design review of the development has been undertaken, with extensive mitigation identified to minimise potential noise impacts. This includes noise-reducing measures to the electrolyser, a quieter air compressor, redesigned site layout, introducing a 5mph speed limit on site and increasing the wall height along the southern and eastern perimeter of the site.

Local benefits

It is anticipated that the green hydrogen produced will be used locally, providing low carbon fuel for local vehicles such as waste collection vehicles, buses and other fleet vehicles.

This would reduce air pollutants and carbon emissions locally to improve air quality. The development is also expected to create circa 110 temporary jobs during construction period and circa 10 permanent specialist jobs to operate and maintain the facility. The project also has the potential to support numerous businesses as they switch to green hydrogen - and could therefore support considerably more jobs indirectly.

Council's Consultation

Bridgend County Borough Council is consulting on key amends to the project following the planning application submission in Spring 2023. The updates include:

- Layout refinement to optimise operations following further discussions with manufacturers.
- Increasing the process area wall from 3m to 8m to the south and east, to act as an acoustic barrier to ensure that the facility operates within permitted noise levels.



To find out more please visit our dedicated HyBont website:

