

Location and layout: green hydrogen facility

Site selection

The HyClyde project aims to design, construct, install, and operate a hydrogen electrolyser at this site co-located with the Auchentoshan Distillery, which is located at the foot of the Kilpatrick Hills on the outskirts of Clydebank to the west of Glasgow, south of the A82.

During COP26, Marubeni Corporation committed to collaborating with Scottish Government to accelerate the country's decarbonisation through green hydrogen production. MEL has since initiated green hydrogen development plans, intentionally focusing on Glasgow as the starting point of deployment as a testament to the commitments made at COP26.

At the same time, Beam Suntory had developed Proof Positive Sustainability Commitments to promote environmental sustainability in its operations. A key part of this strategy is the decarbonisation of Auchentoshan distillery in Clydebank, one of the few distilleries in Glasgow area.

Recognising the widespread benefits of this project, Marubeni Corporation and Beam Suntory agreed to collaborate on the HyClyde project.

Key reasons the site was identified as suitable for a green hydrogen facility include:

- **Close to primary end user:**
The site is well located to fuel the Auchentoshan distillery
- **Available land:**
Potential grid capacity at nearby substation (which are hard to find across the UK), as well as potential for "purpose-built" renewable power sources in proximity, which could be connected directly via a private wire (solar and hydro) were identified.

Other sites including Glasgow City were considered however, this was discounted due to lack of grid infrastructure or land availability, and distance from Auchentoshan.

Ardmore distillery (another distillery owned by Beam Suntory) was considered but not chosen due to unavailability of grid capacity, as well as absence of additional off-taker who could offtake the excess volume of hydrogen produced.



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Careful consideration has been given to the design of the green hydrogen facility, to optimise production and minimise hazards.

1. Access:

The access point will be of from Great Western Road. Current road infrastructure in place for the Auchentoshan Distillery will be utilised to get to the entrance of the site. The road will be on a flat gradient for all vehicles.

2. Green hydrogen production:

The electrolyser is located close to compression and storage and pipeline interface. This is to minimise high pressure hydrogen movements. The admin building is located in closed proximity to allow monitoring and maintenance of the equipment.

3. Hydrogen storage:

The storage equipment is located as close as possible to the electrolyser to minimise the hydrogen pipework, and furthest from potential ignition sources such as the admin building. Firewalls are also located between each individual storage unit, as well as between hydrogen equipment and site personnel, to reduce the risk of an escalation to a larger incident.

4. Substation:

The high voltage (HV) substation will be located closest to the access road and separated from the hydrogen elements of the facility. This will also facilitate 24/7 maintenance access by SPEN (Scottish Power Energy Networks).

