

# 2G delivers 100% hydrogen CHP to the UK

## GROUNDBREAKING PROJECT TO DECARBONISE KIRKWALL AIRPORT'S ENERGY SUPPLY RELIES ON 2G HYDROGEN TECHNOLOGY

*The European Marine Energy Centre (EMEC) is collaborating with Highlands and Islands Airports Limited (HIAL) to decarbonise heat and power at Kirkwall Airport through green hydrogen technology. 2G Energy was selected to deliver a CHP plant which generates heat and electricity of 100% hydrogen – the first one in the UK.*

**2G are strong innovators of CHP technology installing thousands of CHPs worldwide.**

Mark Holtmann | Managing Director  
2G Energy Ltd.



CHP system will be coupled with the airport's existing heating system to meet the heating and power requirements of the main airport buildings. Due to be deployed for an extended trial period at the airport, the CHP plant will use green hydrogen supplied by EMEC to generate electricity as well as recover and use by-product heat to deliver an efficient and comprehensive energy solution.

### 2G has extensive experience with 100% hydrogen CHPs

Mark Holtmann, Managing Director of 2G UK is proud of the development success: "2G are strong innovators of CHP technology installing thousands of CHPs worldwide. We cover a variety of different gas types; however, hydrogen is by far the most exciting application to date. Even though there are already 2G CHPs operating on 100% hydrogen around the world, we look forward to a strong and successful partnership with Doosan Babcock to deliver the first 2G 100% hydrogen CHP solution in the UK using our agenitor range. We look forward to this project becoming a stepping-stone for many other industries to follow in the UK."

This project forms part of a package of initiatives being driven by EMEC and HIAL to decarbonise the airport. A range of opportunities were identified in an energy consumption study delivered by EMEC through the ReFLEX Orkney project. The study found that space and water heating demand in the airport terminal represented the biggest source of greenhouse gas emissions after aircraft operations. 2G's hydrogen-ready

**CHP technology is the backbone technology for a 100% renewable energy supply of the future**

Also from a headquarters point of view, the project is of high importance to show the key role of CHP technology to ensure a resilient, affordable and sustainable supply of energy in the future: "When wind or sun are available, the need for electricity and heat is not always there. Conversely, the sun does not always shine or the wind does not blow when the need is actually there. Hence, an energy storage system and an efficient usage of this storage is of utmost importance to bridge the time lag between production of energy and use of energy - and this is where hydrogen CHP come into play," says group CEO Christian Grotholt.

Kirkwall Airport 



**Kirkwall Airport**

[kirkwall-airport.hial.co.uk](http://kirkwall-airport.hial.co.uk)

agenitor 404 H<sub>2</sub>

Hydrogen

115 kW electrical

129kW thermal

Container installation

