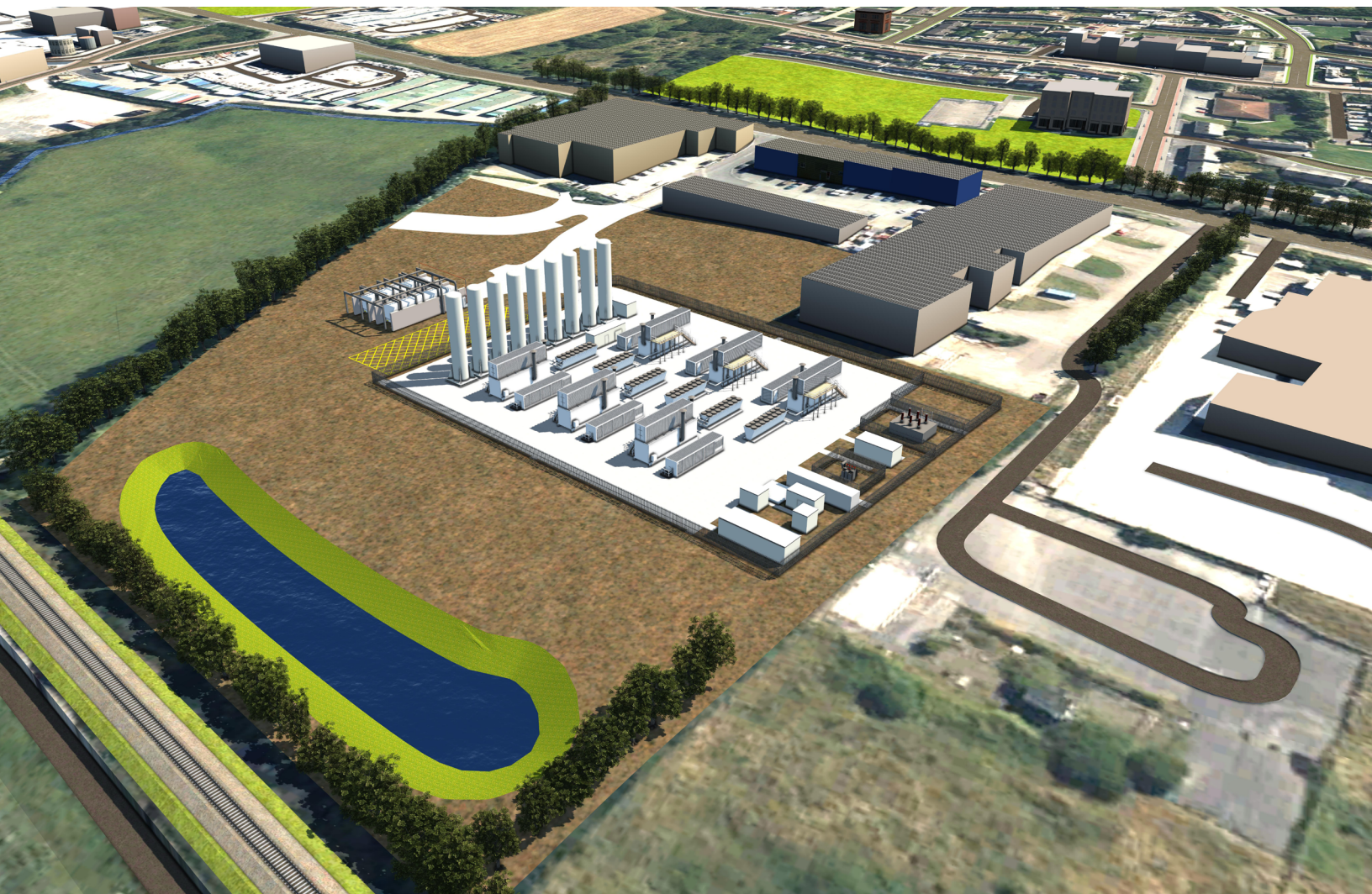




Case Study: Barrow Green Hydrogen Project

How Plug Power's Proven GenEco Electrolyzer Technology Helped Advance One of the United Kingdom's Most Significant Industrial Hydrogen Projects from Concept to Execution



Executive Summary

Field	Value
Project	Barrow Green Hydrogen Project
Location	Barrow-in-Furness, Cumbria, UK
Electrolyzer Capacity	30 MW
Technology	Plug GenEco™ PEM Electrolyzers
Configuration	Six 5 MW GenEco™ electrolyzer units
Developer	Green Hydrogen Energy Company (GHECO)
Joint Venture Partners	Schroders Greencoat + Carlton Power
End Customer	Kimberly-Clark
Energy Source	Renewable electricity via long-term PPA
Strategic Goal	Industrial decarbonization and energy security
Status	Final Investment Decision achieved

The Barrow Green Hydrogen Project represents more than just another hydrogen infrastructure announcement. It demonstrates how industrial hydrogen projects are beginning to move from policy ambition into commercially executable infrastructure supported by long-term customer demand, renewable electricity, institutional investment, and proven electrolyzer technology.

Located in Barrow-in-Furness, Cumbria, the 30 MW project reached Final Investment Decision (FID) in 2026 and became the first of three UK hydrogen projects within the Green Hydrogen Energy Company (GHECO) portfolio to advance into execution.

The project is expected to supply approximately 100 GWh of green hydrogen annually to Kimberly-Clark's manufacturing facility, helping reduce dependence on natural gas while supporting the company's broader decarbonization strategy.

At the center of the project are six 5 MW Plug GenEco Proton Exchange Membrane (PEM) electrolyzers powered by renewable electricity supplied under a long-term power purchase agreement.

The Challenge

Heavy industrial sectors remain among the most difficult industries to decarbonize. While electrification continues expanding across transportation and buildings, many industrial processes still require reliable, high-volume energy inputs historically supported by natural gas or other fossil fuels.

At the same time, energy market volatility, geopolitical instability, and increasing regulatory pressure across Europe have accelerated demand for lower-carbon industrial energy solutions that also strengthen energy security and operational resilience.

For projects like Barrow to move forward commercially, developers needed to align several critical elements simultaneously: industrial customer demand, renewable power sourcing, financing confidence, government support, technology reliability, lifecycle economics, and long-term scalability.

Building the Barrow Platform

The Barrow project became possible through the coordinated development of a fully integrated commercial ecosystem.

Green Hydrogen Energy Company (GHECO), the joint venture between Schrodgers Greencoat and Carlton Power, was established to accelerate deployment of industrial-scale hydrogen infrastructure across the United Kingdom.

The project structure combined several foundational components required to support commercial execution, including long-term industrial hydrogen demand from Kimberly-Clark, renewable electricity supply through SEFE, government support under the UK Hydrogen Allocation Round 1 (HAR1), infrastructure financing through Schrodgers Greencoat, hydrogen development expertise from Carlton Power, and proven electrolyzer technology from Plug Power.

This structure transformed Barrow from an early-stage hydrogen concept into a commercially supported industrial energy infrastructure project.

Why Plug Power Was Selected

Industry Perspective

"Plug Power's electrolyzer technology and proven execution capabilities make them a strong partner as we and Schrodgers Greencoat together advance our hydrogen ambitions in the UK."

-Eric Adams, Hydrogen Director at Carlton Power

The selection of Plug Power was not based on future potential alone. It reflected confidence in technology already operating at industrial scale.

Plug brought operational experience few hydrogen companies can match. The company operates one of the largest electrolytic liquid hydrogen plants in the United States in Georgia and continues to strengthen its broader hydrogen production and supply network across Georgia, Tennessee, and Louisiana.

Unlike many hydrogen providers focused solely on equipment manufacturing, Plug operates across the hydrogen value chain, including production, liquefaction, storage, delivery, fueling infrastructure, and fuel cell power systems.

That vertically integrated experience helped reinforce confidence that Plug could support not only electrolyzer deployment, but also long-term operational performance and project execution. Plug's GenEco PEM electrolyzer platform was selected for its scalability, operational reliability, efficiency, and ability to integrate dynamically with renewable electricity systems.

The Barrow deployment also reinforced growing market confidence in Plug's GenEco product line as the company continues advancing electrolyzer deployments across Europe and other global markets.

From Award to Final Investment Decision

Reaching Final Investment Decision represented a major commercial milestone, signaling that the project had successfully aligned technology, financing, policy support, renewable power, and industrial demand into a bankable infrastructure platform.

For Plug Power, the FID marked the transition of its largest UK electrolyzer project from award into execution.

The project also became the first of GHECO's three hydrogen projects to advance into construction, creating a blueprint for future industrial hydrogen deployment across the United Kingdom.

For the broader hydrogen market, Barrow provides a replicable model that combines industrial demand, renewable power, infrastructure capital, government support, and proven technology into a commercially executable platform.

Conclusion

The Barrow Green Hydrogen Project demonstrates that industrial hydrogen is entering a new phase of commercial maturity.

By combining proven technology, long-term customer demand, renewable electricity integration, and institutional infrastructure investment, the project establishes a blueprint for how large-scale hydrogen deployment can support industrial decarbonization while strengthening energy resilience.

For Plug Power, Barrow represents more than a project award. It reinforces the company's position as a proven hydrogen solutions provider capable of delivering integrated hydrogen infrastructure at industrial scale.

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