

HiiROC, revolutionizing clean hydrogen production with world leading technology.



HiiROC Overview

HiiROC utilizes thermal plasma technology to break down hydrocarbons into hydrogen and solid carbon, offering a highly efficient process that requires only a fraction of the electricity of water electrolysis. This method, recognized under the UK's Low Carbon Hydrogen Standard, provides a 'low carbon' hydrogen pathway without producing any carbon dioxide. The captured carbon is transformed into Carbon Black, a versatile material with applications in various industries such as tires, inks, coatings, agriculture, and construction.

A single HiiROC unit produces approximately 600kg of clean hydrogen, **using only one fifth of the electrical energy needed by water electrolysis.**

This efficiency delivers an emissions profile to rival blue, giving our customers a low carbon pathway that is not only clean, but affordable.

Not just for hydrogen production, HiiROC's process is versatile across industries.

HiiROC offers a unique production process that not only decarbonizes the hydrogen industry but also produces pure carbon black as a valuable by-product. Replacing the traditional carbon black production with HiiROC significantly reduces CO₂ emissions across two industries at once. The process can also be used to mitigate flare gas and deliver permanent carbon dioxide removal by using biomethane as a feedstock.



Affordable, clean, scalable and award-winning hydrogen production:

- ✓ Modular, scalable solution for tailored production in a small footprint
- ✓ Leverages existing gas network infrastructure to deliver at point of use
- ✓ Complies with LCHS and CHPS, and is clean as green when using renewable electricity
- ✓ Keeps costs low by avoiding the need for hydrogen storage, pipelines, or complex CCUS solutions