

Strategic partnerships to accelerate industrial decarbonisation

PeroCycle announces global ambitions, with strategic partnerships in UK and China.

BIRMINGHAM, WEST MIDLANDS, UNITED KINGDOM, July 28, 2026 /EINPresswire.com/ -- [PeroCycle](#), a pioneer in closed-loop carbon recycling, has announced strategic partnerships that will accelerate development and global commercialisation for a technology that addresses the urgent need to decarbonise foundation industries such as steel, cement, and chemicals.

The agreements with gas separation and purification company Beijing Peking University Pioneer Technology Corporation Ltd (PKU Pioneer), and international engineering consultancy io consulting will enable rapid progress for PeroCycle.

PeroCycle's patented technology was invented at the [University of Birmingham](#) and achieves the 'decarbonisation trinity' of reduced emissions, reduced energy demand, and reduced cost. It uses a perovskite catalyst to split Carbon Dioxide (CO₂) into Carbon Monoxide (CO) at significantly lower temperatures than traditional methods. CO₂ emissions are then captured and converted back into CO for reuse on site, creating a localised, sustainable circular carbon economy.

By recycling gas byproducts off gas back into the production process as a feedstock, the technology could reduce carbon emissions in sectors like steelmaking by up to 90%, and drastically lower reliance on fossil-based reducing agents like coal and coke. The technology can be integrated into new plants or retrofitted into existing facilities, so avoiding stranded assets and the high capital expenditure of new-build "green" plants.

The landmark strategic partnership with PKU Pioneer is a staged, multi-year agreement that provides a clear roadmap for design, construction, and commissioning of PeroCycle's first commercial-scale facility.

The partnership combines PeroCycle's catalyst technology with PKU Pioneer's engineering expertise in gas separation and gas purification. The alignment of a UK-based innovator with a Chinese engineering giant uniquely positions the partnership to address the decarbonisation needs of the world's largest steel-producing regions.

The partnership will allow PeroCycle to scale its reactor technology rapidly and reliably. Grant

Budge, CEO of PeroCycle, said: "Partnering with PKU Pioneer is a transformative milestone for PeroCycle. Their experience in delivering large-scale industrial gas plants provides the engineering 'support for our balance of plant' we need to move from the lab to commercialisation. This collaboration ensures that our FOAK plant is built with a foundation of proven industrial excellence, providing the technical certainty our investors and steel-industry partners demand."

Io, which has deep expertise in complex energy projects and systems integration, will provide comprehensive technical support to PeroCycle through pilot plant development.

Following the pilot, io will undertake Front End Engineering Design and Owner's Engineer duties for the delivery of a proposed 20ktpa (CO2 treated) demonstration plant, followed by a 2mtpa (CO2 treated) First-of-a-Kind (FOAK) commercial facility.

Grant Budge commented: "Partnering with io consulting marks a pivotal milestone in our journey from the laboratory to industrial scale. Our technology is designed to be a 'plug-and-play' solution for the world's most carbon-intensive industries, and io's world-class engineering pedigree provides the certainty required to deploy at pace. Together, we are proving that heavy industry can achieve net-zero goals while actually improving operational efficiency and reducing long-term costs."

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