

Peel Plastics-to-Hydrogen

Invest Net Zero Cheshire

IKIGAI



CATAPULT
Energy Systems



Project reference number: 019

Project type: The development and construction of an unrecyclable mixed plastics conversion facility at Protos Park, producing high purity syngas which is then converted into hydrogen, electricity and heat.

Project maturity: Late stage development (full planning permission obtained, close to 'shovel ready'). Peel is now seeking co-investors to construct the project.

Key strategic drivers:

Valorisation and monetisation of locally sourced unrecyclable mixed plastics
Serving local demand for industrial and transport decarbonisation

Location: Plot 10b, Protos, Grinsome Road, Cheshire, CH2 4LB.

Proposed phases: DMG technology installation (Financial close: Q2 2021; construction: Q3 2021; commissioning: Q1 2022)

Total estimated 'turquoise' hydrogen production p.a.: Circa. 2000 kg/day

Estimated project costs: Circa. £26m

Feedstock: c.11,667 tonnes p.a. of mixed residual plastic waste from municipal solid waste and commercial and industrial sources.

Technology, construction and operation:

Technology: PowerHouse Energy Plc are supplying their proprietary DMG® Technology.

Construction: A robust design package has allowed a tender process to be carried out and a suitably qualified and experienced contractor will be appointed to facilitate the design development, cost accuracy and procurement. The intention is that these works will be procured via an NEC4 EPC Contract, such as Option A Priced Contract with an Activity Schedule.

O&M: Peel are engaged with a potential O&M contractor in a competitive selection process. Prior to financial close, signed contracts will be secured with a reputable organisation to deliver the O&M contract.

Revenue streams:

Hydrogen sales: with an assumed flat hydrogen price across life of the model.

Power sales: The model assumes 100% of electricity sales to the grid but the future potential exists for 50:50 on site/ off site power sales when Protos establishes its local private electricity network (as part of the virtual power network being considered as part of Invest Net Zero Cheshire).

Gate fees: The project will receive gate fees from feedstock brought to the site for treatment.

Initial stakeholders: Peel NRE (Developer/landlord of Protos Park), PowerHouse Energy plc (technology provider).

Professional advisors to date: Gowling (Legal) and Kings Associates (Design & Development Management).

Opportunity: Seeking private sector project/portfolio level investors.

Invest Net Zero Cheshire

www.investnzcheshire.co.uk