



Waste2Tricity

**POWERHOUSE**  
ENERGY GROUP

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## **PRESS RELEASE**

For immediate release

6th January 2019

### **WASTE2TRICITY AWARDED GRANT FOR PIONEERING WASTE PLASTIC TO HYDROGEN TECHNOLOGY**

Waste2Tricity, the UK technology company developing pioneering hydrogen production from waste plastic, has been offered a conditional £1.25m grant for its planned Plastics to Hydrogen Facility at Protos, near Ellesmere Port.

The grant award follows a successful application to the £4.1m Energy Fund competition, run by Cheshire and Warrington Local Enterprise Partnership (LEP) as part of the Local Growth Fund (LGF), awarding capital grants for projects that can support the objectives of the LEP's Energy and Clean Growth Strategy, and is offered subject to meeting the terms and conditions of the fund.

The Strategy sets out longer term aspirations to support Cheshire and Warrington's position as a leading European centre for Low Carbon and Energy Technologies, with an ambition to create the country's first smart, connected net zero-carbon industrial cluster, harnessing expertise and opportunity within the hydrogen, nuclear and other low carbon economies.

Waste2Tricity (W2T) has recently signed (22nd December 2019) an Agreement to be acquired by partner company PowerHouse Energy Group PLC. The acquisition is subject to the approval regulators and both sets of shareholders. The grant has been awarded to purchase the thermal conversion chamber a core part of the Protos Plastics to Hydrogen Facility to be built at Protos Energy Park. The planning permission application is currently in progress but it is expected the facility will be commissioning by the end of the year.

Together with Peel Environmental, Waste2Tricity have recently made significant progress towards the first commercial operation of the DMG® Technology in the UK. The plant will use 'UK first' advanced thermal treatment technology developed by PowerHouse Energy Group plc (AIM: PHE), at Thornton Science Park, next door to Protos, And will produce up to two tonnes of hydrogen each day and export up to 82MWh of electricity to the local grid.

**Tim Yeo, Chairman of Waste2Tricity said:** "This grant offer recognises the importance of the PHE DMG technology and the impact it may have on assisting Cheshire and Warrington and potentially the country to the target of net zero emissions – through the creation of hydrogen fuel from waste plastic. Cheshire and Warrington's Energy and Clean Growth Strategy shows leadership in this area, one that the rest of the country should look to".

**Dave Ryan, CEO of PowerHouse Energy said:**

"We congratulate W2T and Peel on securing this award from Cheshire and Warrington Local Enterprise Partnership, representing confidence in our DMG process as an important technology to deliver clean energy from unrecyclable waste plastic. Furthermore we are delighted and encouraged to be recognised as a component in the North West Region's strategy to provide Clean Growth."

**Robert Mee DL, LEP Board Member and Chair of the Strategy Board said:**

"The LEP is clear in its ambition to be a leader in clean growth and developed the Energy Fund to support the sector in accelerating the pace and scale of innovation in energy technology and distribution. W2T's application to the fund clearly made the case for the benefits of plastics recycling in the creation of hydrogen fuel, with their proposed £20m plant in Ellesmere Port set to be a UK leader in this field."

## **SIGNIFICANT PROGRESS**

There has been significant progress towards the first commercial operation of DMG® Technology in the UK.

PowerHouse Energy is in collaboration with Peel Environmental, who have completed their review of the completed engineering work and moved to commitment to the next stage of development and engineering for the Protos Energy Park.

The design has progressed such that the DMG<sup>®</sup> facilities at Protos would have the capacity to process 35 tonnes per day of waste plastics, targeting to produce 3.8MWe on site and exporting 3.4MWe electricity and up to 2 tonnes of hydrogen per day from the site.

The collaboration agreement signed in August 2019 with Peel Environmental and Waste2tricity has an aim to develop a minimum of 11 sites in the UK for DMG<sup>®</sup> facilities. Peel have a strategy to develop “Plastic Parks” where waste plastics are recycled and regenerated. Peel’s plans are to bring together potential counterparties for waste, power and hydrogen with a nett negative CO2 contribution for each site. PHE’s DMG<sup>®</sup> process will be an enabling technology to ensure no plastic is sent to landfill from these sites by regenerating the waste plastic into power and hydrogen.

These Plastic Parks will ultimately create a countrywide plastic circular economy with each site creating a local source of hydrogen which could be used as a clean and low-cost fuel for buses, Heavy Goods Vehicles (HGVs) and cars, helping to reduce air pollution and improve air quality on local roads. The parks will also provide a solution to the UK’s problem with waste plastic.

## **Notes to Editors**

### **About Powerhouse Energy Group (AIM:PHE)**

PowerHouse Energy Group (AIM:PHE) has developed a proprietary process technology - DMG<sup>®</sup> - which can utilise waste plastic, end-of-life-tyres, and other waste streams to efficiently and economically convert them into syngas from which valuable products such as chemical precursors, hydrogen, electricity and other industrial products may be derived. The PowerHouse technology is one of the world’s first proven, modular, hydrogen from waste (HfW) process.

The PowerHouse DMG<sup>®</sup> process can generate in excess of 2 tonne of road-fuel quality H2, and more than 58MW/h of exportable electricity per day. The PowerHouse process produces low levels of safe residues and requires a small operating footprint, making it suitable for deployment at enterprise and community level.

PowerHouse Energy Group (AIM:PHE) is quoted on the London Stock Exchange's AIM Market under the ticker: PHE and is incorporated in the United Kingdom.

[www.powerhouseenergy.net](http://www.powerhouseenergy.net)

### **About Waste2Tricity**

Established in 2008, Waste2Tricity (W2T) is a project developer and operator in the energy-from-waste sector. Its mission is to treat plastic waste as a fuel, preventing further contamination of the world's oceans and environment whilst at the same time creating clean energy and hydrogen.

W2T has an exclusive geographic license with PowerHouse Energy Group (AIM PHE), an AIM listed business that has developed a Distributed Modular Generation system that is able to convert unrecyclable plastic into high-grade hydrogen for use as a transport fuel whilst also generating power for export by private wire or to the grid.

The Protos development is W2T's first commercial project, with the company looking at a pipeline of future projects across the UK. The next stage of development will focus on switching the technology to allow it to produce hydrogen for use in a distributed hydrogen network as well as syngas production for generating electricity.

[www.waste2tricity.com](http://www.waste2tricity.com) / twitter: @Waste2t

#### **About Peel Environmental and Protos**

Peel Environmental, part of Peel L&P, owns and develops waste infrastructure projects. It has achieved consent for a range of energy infrastructure schemes including a 49MW Energy from Waste plant at Protos in Cheshire, 21MW Energy from Waste plant and 250,000tpa AD and MRF in Glasgow; and a 20MW Energy Centre at Houghton Main, Barnsley. Peel works with investors, waste management companies, technology providers and contractors to secure a deliverable business model for each project. [www.peelenvironmental.co.uk](http://www.peelenvironmental.co.uk)

Peel Environmental brought forward and consented the Protos development, previously known as Ince Resource Recovery Park. The 54ha (134 acres) development site has full outline planning consent and part detailed planning consent for general manufacturing and distribution uses (B1, B2 & B8), as well as a biomass facility and an Energy from Waste facility.

[www.protos.co.uk](http://www.protos.co.uk) [@ThisIsProtos](https://twitter.com/ThisIsProtos)

Protos sits within the Energy Innovation District (EID) which brings together energy users, network owners, innovators and partners working alongside Cheshire & Warrington LEP, Cheshire West and Chester Council and the University of Chester. With the objective of driving down the cost of clean energy the EID is an opportunity to deliver a new decarbonised energy system for the North West of England, meeting the Government's Clean Growth agenda while boosting economic growth and investment.

[www.energyinnovationdistrict.com](http://www.energyinnovationdistrict.com)

## **About Peel L&P – realising possibility.**

We are an ambitious regeneration business with generations of history, heritage and expertise in our DNA. First established in 1971, Peel L&P is now responsible for some of the most transformational development projects in the UK today.

Owning and managing 12 million sq ft of property and 20,000 acres of land and water, our holdings are concentrated in the north west of England but we also own and manage significant assets throughout the UK with a total portfolio value of £2.6 billion.

As a part of the Peel Group; we are integral to a business that strives to make a positive impact on people's lives. Our legacy matters. We take great pride in the outcomes we achieve, the people we work with, the way we go about our business and the transformational projects we deliver.

Our specialist teams have a proven track record in delivering high-quality, legacy projects across land, property, water and airspace. This includes airports, hotels, waterways, media hubs, event spaces, leisure facilities, retail, workspaces, residential development, industrial & logistical space, public realm, historic gardens and the renewable energy sector.

Peel L&P is an agile and ambitious business with a legacy of success for a long-term, sustainable future. We see possibility. We deliver transformation.

More information at [www.peellandp.co.uk](http://www.peellandp.co.uk) or follow @PeelLandP on Twitter.

## **Local Growth Fund**

Local Enterprise Partnerships are playing a vital role in driving forward economic growth across the country, helping to build a country that works for everyone.

That's why by 2021 Government will have invested over £12bn through the Local Growth Fund, allowing LEPs to use their local knowledge to get all areas of the country firing on all cylinders.

- There are 38 LEPs covering the whole of England
- The government has awarded £9.1bn in three rounds of Growth Deals to local areas to drive economic growth.
- LEPs are investing in a wide range of projects including transport, skills, business support, broadband, innovation and flood defences.

- More information on the projects supported by Cheshire and Warrington LEP can be found at [www.871candwep.co.uk](http://www.871candwep.co.uk)

### **Northern Powerhouse**

- The Northern Powerhouse is a key aspect of this Government's approach to addressing the productivity gap in the North and ensuring a stronger, more sustainable economy for all parts of the UK.
- The government has awarded £3.4bn in three rounds of Growth Deals across the Northern Powerhouse.



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