

20 January 2025



Powerhouse Energy Group Plc
("Powerhouse", "PHE" or the "Company")

Proposed collaboration agreement with Avioxx for the production of SAF

Powerhouse (AIM:PHE), a company pioneering integrated technology that converts non-recyclable waste into low carbon energy together with a revenue generating engineering consulting division (Engsolve), is pleased to announce that the Company has agreed to collaborate with Avioxx Ltd (www.avioxx.com) to integrate PHE's technology for its pilot scale facility to produce 200 tonnes per annum of Sustainable Aviation Fuel ("SAF"). Avioxx, based in London and Cheshire, has developed a patented process to produce SAF from non-recyclable wastes.

Under the proposed collaboration, PHE will work with Avioxx on its pilot scale facility, Project Eden, which is expected to produce 200 tonnes per annum of SAF. The companies are currently investigating the potential of PHE providing two 2.5 tonne per day gasification trains to supply the raw syngas to feed the facility. The 2.5 tonne per day units are based upon the Powerhouse's Feedstock Testing Unit at the Company's Technical Centre in Bridgend. These units will be sold to Avioxx, with a potential service agreement going forward between PHE and Avioxx. The integration of the two companies' patented technologies is illustrated in the 3D rendering shown in the figure below.



PHE sees this as an important route to a lower carbon future and the Company's patented DMG (Distributed Modular Generation) is ideal for the smaller scale facilities and will allow its viability as a supplier of Syngas to large scale SAF facilities to be assessed.

Project Eden is still in the development phase and more information about the project and Avioxx can be found at <https://www.avioxx.co.uk/project-eden-200-TPA-modular-plant.html>

Details of the Powerhouse Energy Group DMG can be found at www.phegroup.com

Paul Emmitt, Chief Executive Officer of Powerhouse, commented:

"We are delighted to be collaborating with Avioxx. This is a highly significant development for the Company as it further shows the potential of our technology and its adaptability to be able to service a wide number of industries. SAF has huge potential for us and is a sector that undoubtedly can benefit from using our technology to provide cleaner fuels for the aviation industry."

"We look forward to working with the Avioxx team in progressing Project Eden and providing further updates in due course."

Chris Hancock, Chief Executive Officer of Avioxx, commented:

"Effectively harnessing the valuable molecules from waste is key to achieving a genuine circular economy and delivering economical, sustainable fuel for the aviation sector. We hope the Powerhouse technology will be the first, and most important stage of the process to transform waste to highly valuable fuel. Integration of electrochemistry allows us to dramatically improve the production efficiency of the Jet A1 kerosine. It's great to be working with Paul and the team."

For more information, contact:

Powerhouse Energy Group Plc

Paul Emmitt, CEO +44 (0) 203 368 6399

Strand Hanson Limited (Nominated & Financial Adviser)

Ritchie Balmer / James Harris / Rob Patrick +44 (0) 207 409 3494

SP Angel Corporate Finance LLP (Broker)

Stuart Gledhill / Adam Cowl +44 (0) 20 3470 0470

Tavistock (Financial PR)

Simon Hudson / Nick Elwes / Saskia Sizen +44 (0) 207 920 3150

powerhouse@tavistock.co.uk

About Powerhouse Energy Group Plc

Powerhouse has developed a process technology which can utilise waste plastic, end-of-life-tyres, and other waste streams to convert them efficiently and economically into syngas from which valuable products such as chemical precursors, hydrogen, electricity, heat and other industrial products may be derived. PHE's process produces low levels of safe residues and requires a small operating footprint, making it suitable for deployment at enterprise and community level.

PHE also incorporates Engsolve Ltd, which is a revenue generating business offering Engineering Services across all sectors, with speciality services in the development of new technologies and clean energy.

For more information, see www.phegroup.com

About Avioxx

Avioxx is a UK-based clean energy company pioneering next-generation sustainable aviation fuel production. With a patented solid oxide fuel cell technology, Avioxx is committed to making SAF cost-competitive with traditional jet fuel, reducing aviation emissions, and securing Britain's energy independence.

For more information, see www.avioxx.com

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