



11 November 2024

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

**Japanese Patent Grant Confirmed**

Powerhouse Energy Group Plc (AIM: PHE) a company pioneering integrated technology that converts non-recyclable waste into low carbon energy with a revenue generating engineering consulting division (Engslove), is pleased to announce that it has been notified by the Japanese Patent Office that the Company's Japanese Patent 7577260, "Method and Apparatus for the Treatment of Waste Material", was granted on 8 November 2024.

The patent is in relation to protection around the control of the heating of the waste within the Thermal Conversion Chamber ("TCC") over several zones to allow the optimum synthesis gas (syngas) to be produced. This allows the temperature profile in the TCC to be adjusted to give the optimal syngas composition. The TCC is the main thermal chamber or kiln where the conversion of the waste feedstock to a syngas takes place.

This Japanese patent is the first PHE patent to be granted outside of the UK/Europe and is an important step for the Company. PHE continues discussions with several potential clients, from a diverse range of industries and sectors as well as geographies, each of which requires a solution for their waste and are seeking to reduce reliance on virgin fossil fuels.

PHE looks forward to progressing its other patent applications within the UK, Europe and the rest of the world.

**Paul Emmitt, Chief Executive Officer of PHE, commented:**

*"I am delighted that this patent has been granted. This is the third patent we have been granted and provides significant protection for the technology that differentiates PHE from others in the waste-to-energy sector; whilst also being the first patent granted to us outside of the UK / Europe. I look forward to providing further updates in due course."*

The information contained within this announcement is deemed to constitute inside information as stipulated under the retained EU law version of the Market Abuse Regulation (EU) No. 596/2014 (the "UK MAR") which is part of UK law by virtue of the European Union (Withdrawal) Act 2018, as amended. The information is disclosed in accordance with the Company's obligations under Article 17 of the UK MAR. Upon the publication of this announcement, this inside information is now considered to be in the public domain.

**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](mailto:powerhouse@tavistock.co.uk)

Powerhouse Energy 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](http://www.phegroup.com)

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