

**20 September 2017**

**PowerHouse Energy Group plc  
("PowerHouse" or "the Company")**

**MOU for waste-to-hydrogen facilities in state of Qatar**

PowerHouse Energy Group plc (AIM: PHE), the company focused on ultra high temperature gasification waste to energy and waste to hydrogen systems and the creator of Distributed Modular Gasification (DMG<sup>®</sup>), is pleased to announce it has entered into a Memorandum of Understanding (MOU) with Energy & Environment Holding (EEH), an independent consulting firm specialising in energy, environment, privatisation, and sustainable development based in Doha, Qatar.

This MOU has been established to jointly investigate the opportunity of enabling Qatar to establish a network of DMG<sup>®</sup> systems for the conversion of waste to hydrogen and distribute this low-cost, low-carbon hydrogen through a network of FCV (fuel cell vehicle) filling stations in advance of, and in preparation for, the 2022 FIFA World Cup. Whilst this MOU is not fully binding and there is no certainty it will result in a firm agreement, the Company sees this as a promising step and looks forward to updating the market of its progress.

The objective of the project is to install a number of low-cost, low-carbon, hydrogen refueling stations in support of potential fleets of hydrogen powered buses, taxis, and other vehicles, thereby enabling Qatar to become a leading promoter of the burgeoning hydrogen economy. The project is expected to be led by the CEO of EEH, Roudi Baroudi, also a member of the PowerHouse Advisory Panel

The development of the hydrogen economy, in which DMG<sup>®</sup> has the potential to play a significant role, will expedite the ultimate replacement of hydrocarbon fuels with carbon neutral, sustainable hydrogen as an economical alternative for commercial and consumer transport.

An early review of the project suggests that approximately 20 DMG<sup>®</sup> systems in Doha and surrounding areas will provide sufficient hydrogen to supply several thousand cars and buses leading up to, and in support of, the 2022 FIFA World cup.

PowerHouse and EEH anticipate the set up of a JV company in which EEH (or a wholly owned subsidiary or other appropriate Qatari partner) will hold 51% of the equity and be responsible for the acquisition of suitable land, obtaining relevant permits, licenses or approvals from Qatari public bodies and identifying and supplying appropriate waste streams. EEH will also be responsible for procuring third party financing for the project.

PowerHouse will grant the JV company an exclusive licence for the use of its G3-UHt DMG<sup>®</sup> technology in Qatar, within the scope of operation of the project.

Both parties will collaborate to procure the relevant financing and other stakeholder support for the project from, for example, local energy companies, global automobile companies present in Qatar and/or other supra-national organisations.

This project was conceived, and is being coordinated, by Waste2tricity Ltd in conjunction with PowerHouse.

Roudi Baroudi will oversee the development of the JV company in the initial stages of the project.

**Roudi Baroudi said:**

“This is an exciting and ground-breaking project. Qatar has significant waste difficulties, and PowerHouse’s technology provides a safe, clean, and sustainable solution for dealing with some of this waste, at the same time providing state-wide availability of low-cost vehicular hydrogen. Qatar will become the first country globally to enjoy this level of coverage, so in environmental terms, this is not just, a significant step forward for the country, but also a compelling example for the entire international community.

Qatar, the world’s leading producer and exporter of liquefied natural gas (LNG), also has proved a hotbed for alternative fuel research and development, with both private and public local companies undertaking a variety of ventures, often with major international partners. These include the Pearl gas-to-liquids plant in Ras Laffan, a joint venture headed by Shell and Qatar Petroleum that is the largest facility of its kind.”

**Keith Allaun, Executive Chairman of PowerHouse Energy, said:**

“This represents a very significant step forward for the progress of PowerHouse and its technology. The recent successful testing of our reconfigured G3-UHt facility was a necessary and vital step in providing proof of concept of our technology and this MOU, with EEH, whilst currently non-binding, provides third-party validation. ,

“While this is only in its early stages, this concept is precisely the vision we’ve held for the commercial roll-out of DMG<sup>©</sup> – both in the UK and elsewhere. ”.

The Company’s Qatar H2 Concept presentation will shortly be available to view at [www.powerhouseenergy.net](http://www.powerhouseenergy.net).

**For more information, contact:**

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### **About PowerHouse Energy**

PowerHouse is the holding company of the G3-UHt Ultra High Temperature Gasification Waste-to-Energy system, and the creator of Distributed Modular Gasification<sup>®</sup> (“DMG<sup>®</sup>”).

The Company is focused on technologies to enable energy recovery from municipal and industrial waste streams that would otherwise be directed to landfills and incinerators; or from renewable and alternative fuels such as biomass, tyres, and plastics to create syngas for power generation and high-quality hydrogen for transportation. DMG<sup>®</sup> allows for easy, economical, deployment and scaling of an environmentally sound solution to the growing challenges of waste elimination, electricity demand, and distributed hydrogen production.

PowerHouse is quoted on the London Stock Exchange's AIM Market. The Company is incorporated in the United Kingdom.

For more information see [www.powerhouseenergy.net](http://www.powerhouseenergy.net)

### **Background on waste in Qatar**

Qatar produces around 7,000 tons of waste each day. Some 30 percent of that (2,100 tons) is generated by households with the remainder comprised of construction and demolition materials. Qatar’s waste generation is among one of the highest figures per capita in the world, at around 1.6kg to 1.8kg per day.

There are three landfills in Qatar which are all running out of space and a high percentage of non-organic waste is otherwise incinerated. In addition, an estimate in 2014 put the number of used tyres at some 11 million, with many exported for disposal or re-use, an expensive and inefficient solution.

(Source: [www.DohaNews.co](http://www.DohaNews.co))