



Waste2Tricity

Waste2Tricity offers solution to plastic waste using DMG®-CORE

Waste2Tricity Ltd is to address the crisis of excess plastic waste following the clamp down by China on imports into the country, using a slimmed down version of the waste-to-hydrogen PowerHouse Energy Group DMG® system specifically designed to appeal to current waste fuel producers, plastic processors and energy-from-waste operators. The “CORE” version of the system developed by Powerhouse Energy will be able to handle the growing volume of high calorific value of plastic that cannot easily be processed in large concentrations by plastic processors, fuel preparers and more traditional energy from waste recovery plants. Most, if not all, current existing plants that burn waste to dispose of it and recover its energy are limited by the amount of heat in the waste fuel and the corrosion damage produced by the chemicals within the plastics. Using the DMG-CORE will have clear economic advantages, as well as attacking the severe environmental challenge facing the economies in Europe and the United States.

The PHE DMG®-CORE will operate on the unrecyclable plastics that are separately collected or easily removed from the mixed waste destined for current plants. By treating the plastic waste stream, the DMG-CORE will enable the massive volume of plastic waste that is now accumulating in the western countries to be recycled into energy for operator or local distribution; and help avoid an increase in the energy content of the waste streams being dealt with by existing facilities and allow them to maintain, and even increase, their throughput of the residual waste that they treat. Deployment of the DMG®-CORE will help existing fuel producers, plastics processors and waste processing facilities to generate electricity, stabilise and grow their gate-fee revenues in the future. It will also give them the opportunity to move towards using molecular conversion to produce more environmentally friendly alternative fuels over time.

The DMG®-CORE will be supplied by Waste2Tricity with a construction completion risk-wrap and process warranty from a major EPC company who are currently working with W2T and PHE to validate the phase 1 process.

The process will be capable of later expansion to hydrogen production if and when required.

The PowerHouse system, which will be supplied by PHE under the terms of their MOU and on a co-located basis where system ownership may vary from application to application but in most scenarios W2T consider that The system will be owned by a special purpose company, jointly funded by Waste2Tricity and the end user. The cost basis is expected to be circa £5 million and the basic system will process 8750 tonnes of feedstock per annum at an approximate £80 gate fee and have a generation capacity of 1.5MW. Based on 350 day operation this will produce a revenue of £700k of gate fee and £567k of electricity at £45 per MWh. Operating costs are reduced to below £350k pa as the DMG®-CORE can be managed by the co-located facility's existing labour structure. The net revenue to an SPC will be about £900k – from this PHE will receive a 20% licence fee plus its share of the SPV participation.



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The DMG[®]-CORE system is modular so it can double the revenue figures for an additional capex of circa £3.5 million and increase the net revenue accordingly.

Looking forward, Howard White, Executive Deputy Chairman of Waste2Tricity said “The pathway to a sustainable Hydrogen Economy is by developing a distributed network of profitable hydrogen generation systems able to retail hydrogen at a price comparable to hydrocarbons - £3 per kg. This announcement of the DMG[®]-CORE enables us to target 100 plus existing installations in the UK and several hundred in continental Europe where the scaled down model can be introduced to create a highly profitable, low risk opportunity that will both solve a problem and increase the efficiency of current facilities, giving them the possibility of upgrading to hydrogen extraction and retail at the target price. With an EPC system wrap only months away, we would expect to start making significant headway very soon.

Waste2tricity has initiated marketing the process to positive market responses and will deliver the PowerHouse DMG[®]-CORE under a process wrap from the EPC provider.

Notes to Editors:

About Waste2tricity, Ltd

Established in 2008, Waste2Tricity is a structured solutions provider to the energy-from-waste (EfW) sector, an industry supplying increasing amounts of electricity using feedstock diverted from landfill. Waste2Tricity works with clients and partners to develop, fund and support EfW deployment projects that use proven technology, are profitable and progressive; projects that currently use high temperature gasification and either steam cycle or internal combustion engines/gas turbines (ICEs/GTs) to efficiently convert waste to energy and in the future can produce hydrogen to support the growth of the hydrogen economy.

About PowerHouse Energy

PowerHouse Energy Group plc is the developer of the G3-UHt Ultra High Temperature Gasification unit, and the creator of DMG[®], the Distributed Modular, Gasification System which allows for the distributed eradication of waste, the generation of distributed electricity, and the production of distributed hydrogen with the world’s first hydrogen from waste process (HfW).

The Company is focused on technologies to enable projects for 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 synthesis gas (syngas) for power generation, or high-quality hydrogen as a fuel for transport. DMG[®] allows for easy, economical, deployment and scaling of an environmentally sound solution to the growing challenges of waste eradication, landfill diversion, electrical demand, and distributed hydrogen production.



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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

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