

PowerHouse Energy Group

First revenue-generating agreement

Contract award

Alternative energy

17 April 2019

Price 0.51p
Market cap £10m

Net cash (£m) at end June 2018 prior to placings raising £1.2m 0.3

Shares in issue 1.89bn

Free float 93.8%

Code PHE

Primary exchange AIM

Secondary exchange N/A

Share price performance



Business description

PowerHouse Energy has developed an innovative process that generates hydrogen and electricity for the distributed grid from non-recyclable plastic and used tyres. It benefits from rising demand globally for distributed hydrogen production as well as diverting material from landfill.

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PowerHouse Energy has signed an agreement with Waste2Tricity for the initial engineering phases of a project that will potentially lead to the first commercial waste-to-energy plant deploying PowerHouse's proprietary DMG technology. This will be based at Peel Environmental's £700m Protos energy hub in Ellesmere Port, Cheshire. Once operational, the plant will generate electricity and potentially hydrogen for fuel cell electric vehicles using unrecyclable plastic waste that would otherwise be sent to landfill.

Year end	Revenue (£m)	EBITDA (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)
12/15	0.0	(0.4)	(0.8)	(0.20)	0.0	N/A
12/16	0.0	(0.8)	(1.3)	(0.23)	0.0	N/A
12/17	0.0	(1.8)	(1.9)	(0.19)	0.0	N/A
06/18**	0.0	(1.1)	(1.1)	(0.08)	0.0	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. **Six months ended June 2018.

This initial contract, for £400k, covers tests on the feedstock that will be used to assess generation efficiency and cleanliness of exhaust gases and the preparation for Front End Engineering Design. These steps are essential precursors to securing planning and operating permits. In parallel, Waste2Tricity is working on completing the power purchase agreement required to secure financing for the plant and the feedstock supply agreement. When these steps are completed, PowerHouse will receive more substantial IP licence fees once construction and commissioning are complete. The agreement addresses the heads of terms for this phase as well. We note that this business model removes the need for PowerHouse to finance the construction of plants, eliminating a major dilution risk for shareholders.

Management estimates, which have been verified by a third party, note that a single DMG unit will be able to generate over one tonne of road fuel-quality hydrogen or more than 28MWh of exportable electricity each day, consuming 25 tonnes of contaminated plastic waste. This would incur costs of around £110/tonne if consigned to landfill, effectively subsidising production costs. Peel Environmental has already achieved planning consent for several waste-to-energy projects and has identified other sites where PowerHouse's DMG units could add value.

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