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PRESS RELEASE



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Green Energy Solutions

CLARKE CHOSEN FOR UK'S LARGEST LANDFILL SITE

In what is believed to be the largest landfill gas power generation scheme in the UK, Clarke Energy has supplied 18 Jenbacher containerised gas engine generators to 3C Waste, part of Waste Recycling Group plc and operators of the Arpley Landfill site in Warrington.

The 1MW engines have been specified by 3C Waste and the Gengas division of CPL Industries, which manages the power generation plant on behalf of 3C Waste as part of a major partnership between the companies.

Following competitive tender involving a number of gas engine suppliers, Clarke Energy generators were purchased by 3C Waste to enable the generation of 16MW of electricity under the NFFO 4 contracts. CPL also intends to use Jenbacher equipment on at least five other new UK landfill gas schemes, a potential total of some 40 engines.

The purpose-designed Jenbacher engines have consistently proved themselves in this type of constant duty base load operation. CPL's Chief Engineer, Atholl Donaldson stated, "Our experience of Clarke and Jenbacher has always been very good. The engines provide a very reliable system to operate and Clarke offers excellent service coverage and technical support."

Covering a plan area of some 1km by 2km, the Arpley landfill site currently takes over one million tonnes of waste each year. At full capacity the plant extracts some 9,000 cubic metres per hour of landfill gas at 50% methane, via a network of wells and extraction pipes. The Jenbacher generators currently give an availability of 95%.

Despite the overall size of the site, the actual space for the power generation plant is very confined and the standard Jenbacher engine package was specially designed specifically for this project to make it more compact. As a result, the 18 containers are installed very close together, with the transformers and switch gear which connect to the grid, built on top of the containerised units.

In order to comply with planning requirements concerning noise attenuation levels, the engine cooling system is located off to one side of the engines, on the ground, and the site is screened with a large

wall. However, the quiet running of the Jenbacher engines means they can still be supplied as containerised sets rather than installed within a separate building.

Another distinctive feature of the Arpley plant is its 25m high stack, which has been designed to meet the requirements of ground level concentrations of combustion gases from 18 engines.

The NFFO contracts at Arpley run for 15 years but 3C Waste and CPL believe the site could potentially continue to generate power for up to 30 years and the generating plant, including the Jenbacher engines, has been designed and planned on that basis.

Note:-

Clarke Energy Limited is a leading worldwide Energy Systems Company offering a wide range of green power generation solutions with offices in Australia, France, India, Nigeria, New Zealand and UK. Clarke Energy employs over 150 people worldwide and operates as part of the Clarke Group.

Further information about Clarke Energy and its activities is available by contacting the Public Relations and Marketing Department on 0151 546 4446 or via email at: pr@clarke-energy.co.uk