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Green Energy Solutions

PRESS RELEASE

'THE BIG ISSUE' A FEATURE ON CLARKE ENERGY PUBLISHED IN CONSTRUCTION MAGAZINE. SEPTEMBER 2001

The world of technology has never been an easy one for non-technologists to explore. It surrounds itself with an almost impenetrable array of acronyms and speaks in a techno-tongue that few outsiders understand. But what everyone does understand, however, is that our lifestyles are storing up a potential environmental disaster. We are polluting both the air and the sea, destroying the ozone layer, and wasting our precious reserves of energy at a rate that has already seen California plunge into darkness on more than one occasion. The time has come to stop talking and act, and at Clarke Energy that's exactly what they're doing, providing green energy solutions by developing new technology for the 21st century.

Clarke Energy is at the forefront of the 'generation revolution': with the rise of embedded generation set to continue at a rapid pace as we confront the biggest issue on the planet today - the environment.

Embedded Generation sometimes known as Distributed Generation is about providing local power solutions as a complement to grid distributed electricity. The ongoing construction of two 10MW power stations at Chippenham, Wiltshire: and Wheldale, Yorkshire, are excellent cases-in-point. These are the first power generation projects being built under an agreement between Scottish and Southern Energy and Clarke Energy.

The plants will provide flexible solutions to the changes in the electricity market following the introduction of the New Electricity Trading Arrangements in March 2001. The unique attraction of these plants revolve around their small size and flexibility, dictating that they can be controlled to meet local electricity demand and support the local electricity network, which also has economic advantages. What's more, with a typical the construction time of only six months from the date of order to completion, these embedded generation schemes can be up and running in very little time.

The Chippenham Power Generation Project, running on natural gas, is typical of the new trend towards embedded generation. It is located within an existing substation, and only minor modifications were needed to accommodate the compact nature of the site. One of the conditions of the contract was to keep within the very strict noise levels; for with housing nearby, it cannot rise above 45dBA at 50 metres. Inside the building itself, the layout conforms to Clarke Energy's standard layout, with four

Jenbacher gas powered reciprocating engines producing almost 10MW of power. The output from the three JMS 620's gensets and one JMS 616 is stepped up to 33 kV via an 11/33kV transformer, before being delivered into the local electricity network for homes and businesses in the surrounding area.

The project at Wheldale, near Castleford, is the same but different! For although it also incorporates a 10MW embedded generation site, the primary source of power is not natural gas but coal mine methane, also known as mines gas. The Wheldale Green Energy Park, built by Clarke Energy and Alkane Energy in partnership with Scottish and Southern Energy, is located next to the disused mine shafts of the former Wheldale Colliery. The shafts have been capped by Alkane to avoid further releases of methane into the surrounding area and allow them to deploy their unique extraction concept.

Alkane is responsible for extracting the mines gas using their custom-built pump house and have an agreement for the sale of the mines gas with Scottish and Southern Energy. In addition, and to ensure full output for the estimated 15-year lifespan of the energy park, natural gas has been piped in as a back-up supply. This has been easily achieved through the flexibility of the Jenbacher engines and the remote monitoring and control system that automatically informs the service team at Clarke Energy's offices in Liverpool when there are any problems.

Talking about the new developments, John Munnery, Group Communications Director at Clarke Energy said:

"We are delighted to be further involved in these important and economic embedded generation schemes with Scottish and Southern Energy and look forward to building on their success. They clearly demonstrate the importance of the new developing marketplace for power generation, and the benefit it extends to the environment and the community."

The two sites are on schedule to be finished and commissioned by the end of 2001.

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

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