GREEN HOSPITAL INSTALLS ENER-G SUSTAINABLE TECHNOLOGIES

(ENER-G STAND S30)

The new-build Malvern Community Hospital, scheduled to open in autumn 2010, will use advanced renewable and energy efficient technologies to make it one of the greenest hospitals in the country.

The 24-bed hospital will utilise renewable geothermal energy for heating, cooling and hot water, using ground source heat pumps to harness solar energy absorbed by the earth. It will also generate low carbon electricity using highly efficient combined heat and power (CHP) that will meet a significant proportion of the building's needs.

Both technologies will work in tandem to improve overall energy efficiency, and are being supplied by Greater-Manchester-based ENER-G (www.energ.co.uk) as part of the eco-friendly design brief set by Interserve, which is contracted by Worcestershire Primary Care Trust to build the £17.7 million new hospital. Capita Symonds is providing building services engineering and BREEAM consultancy

By generating its own green power, the hospital is projected to save on its energy bills, and reduce its carbon emissions by 15 tonnes per annum, equating to the environmental benefit of 1,500 trees.

The new hospital, at Seaford Court, Malvern Link, will include in-patient and out-patient facilities, x-ray and ultrasound, day rehabilitation and therapies, palliative care and visiting mammography and MRI scans. A minor injuries unit will transfer from the existing hospital, offering increased capacity.

The ground source system involves 25 boreholes and two heat pumps with combined capacities of 125kW for both heating and cooling. The combined heat and power (CHP) system is a reciprocating gas engine rated at 33kW of electrical output that will generate 55kW of useful thermal output for the building and the ground loop for the heat pump.

The NHS is responsible for approximately 3% of England's total carbon dioxide emissions and has an annual energy bill of over £500 million. To raise both environmental and cost performance, there is a powerful need to implement effective carbon reduction strategies such as CHP and ground source heat pumps.

CHP reduces greenhouse emissions drastically by capturing the heat output that is wasted in conventional power generation. CHP electricity is around one third of the price charged by conventional UK suppliers and cuts carbon by around 20%.

ENER-G's durable ground ground loops have a life-span of some 50 years. Turnkey delivery of individual heat pump projects hinges on ENER-G's unique in-house resources including its own specialist designers, drilling rigs, drilling technicians, mechanical installers and project managers.

ENER-G has won official certification for its expertise in renewable heat pump technology. The Approved Contractor certificate recognises the quality of ENER-G's design, supply, and installation of ground source heat pumps, in line with exacting technical standards set out by the Microgeneration Certification Scheme (MCS).

Paul Bates, Chief Executive of Worcestershire Primary Care Trust, said: “We are very proud that our state-of-the-art hospital will be so eco friendly. Reducing our carbon emissions will also save us money in the long term, which means we can spend our money where it matters, on patient care.”

Alan Barlow, Managing Director, ENER-G Combined Power Ltd, said: “It is very satisfying to combine these two sustainable technologies to help the hospital provide a secure and reliable source of energy that will reduce both costs and carbon emissions. We are very proud that our technologies will be at the heart of this flagship new community hospital.”

Peter Grove, Director of Building Services Engineering at Capita Symonds said: “From the outset of this project the stringent client brief in terms of energy and CO_2 reduction would require maximising the use of current technology. A combination of CHP and ground source heat pumps were implemented to achieve this. This scheme is expected to obtain BREEAM rating `Excellent`.”

Rob McGregor, Project Manager for Interserve Project Services, added: “ENER-G is a global leader in sustainable energy technologies with a wealth of experience in the healthcare sector. They bring valuable expertise to this exciting project which will be a centrepiece for the local community.”

For further information visit ENER-G - stand S30 or log on to www.energ.co.uk

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