

Powergen announcement good news for Earth Energy Engineering

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Earth Energy Engineering Ltd (EEE) was given a tremendous boost earlier this year when Powergen plc announced that it is to offer a new renewable energy heating system to suitable 'low-energy' homes around the UK.

Based on geothermal technology and badged 'HeatPlant', Powergen intend to support the installation of at least 1,000 units into the social housing sector as part of their Energy Efficiency Commitment.

This is good news for EEE, which developed the design of the special ground source heat pump at the heart of the Powergen system.

Ground source heat pumps are electrically driven devices which use a refrigeration cycle to cool water passing through coils of pipe, inserted into the ground in close proximity to the building to be heated. This water is warmed by the surrounding earth, thus collecting both natural geothermal and solar energy stored in the subsoil at the earth's surface.

The heat pump 'concentrates' this energy, raising its temperature, and then transfers it into the normal heating and hot water system within the building. For space heating, the highest efficiencies are realised when the heat pump is connected to underfloor systems but conventional radiator circuits can also be used. Domestic hot water is delivered at 60°C from a high efficiency storage cylinder carefully matched to the characteristics of the heat pump.

Although installation costs are at present marginally higher than those of, say, an oil fired boiler, the system does provide full heating and hot water at considerably lower running cost and carbon dioxide emissions.

Other advantages of the system include the fact that there is no visible external equipment, thus reducing the potential of vandalism or theft. Nor are there flue gases or unsightly steam plumes that pollute the local environment.

The system can be used in virtually any location but is particularly appropriate for rural areas, off the gas distribution network.

John Parker, Managing Director of Earth Energy Engineering, said: "Ground source heat pumps are opening the door to a previously untapped source of renewable energy in the UK. They can provide uninterrupted supplies of warmth to the home, at any time of the day, without regard to prevailing weather conditions. They are cheap to run and yet also dramatically reduce heating related greenhouse gas emissions. They could be a major advance in our fight to beat fuel poverty in the UK."

