

SUPPORTED PROFILE

Affordable heating for the future – Ground Source Heat Pumps in Social Housing

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THE daily press, TV and radio are full of reports and comments on the cost and availability of energy, with utility companies announcing inflation busting price increases in the run up to this year's heating season.

The government will not meet its own pledge to end fuel poverty by 2010, advisers have suggested. According to the Fuel Poverty Advisory Group, which is working with the government on its heating project, more than one million households will still be suffering from the problem by the deadline.

A report from charity Save the Children UK has found that already 20% of British families cannot afford to heat their homes properly.

Now is the time for the professionals in the H&V industry to seriously consider the running costs of heating systems being specified today that will be in use for the next 20 to 50 years.

Ground source heat pumps can play a very important role in the UK's energy future as one of the only truly affordable means of providing heating and domestic hot water to housing.

It's always difficult to undertake meaningful cost comparisons because of the number of different tariffs from the utilities, but this winter it's undeniable that the cost of heating a home with a ground source heat pump incorporated into an EarthEnergy system is going to be far cheaper than any other fuel type.

	Cost – Pence/useful kWh	CO2 – kg/kWh
Electricity	12.28	0.250
Coal	5.58	0.400
LPG	7.13	0.246
Oil	6.76	0.299
Gas	4.59	0.218
GSHP	3.72	0.080

These figures assume an average 40% rise in gas prices and a 20% increase in other fuels. Carbon dioxide savings assume grid de-carbonisation in line with government policy.

This shows clearly that in any home without a mains gas supply, GSHPs can offer an immediate benefit but where no mains gas is available this could mean the difference between a cold house or warm home.

Social housing professionals are encountering tenants with real difficulty in affording heating bills and now is the time to develop a retrofit programme of ground source heat pumps in existing housing stock with no gas availability.



EarthEnergy systems have already been installed in nearly 1,000 social housing properties with proven cost effectiveness from in-situ data gathered over 5 years of monitoring. This has demonstrated that properly installed ground source heat pump systems can provide all the heating and hot water requirements of a household, be cheaper to run than condensing gas boilers and save carbon dioxide emissions.

Housing Associations and Local Authorities are able to access government Low Carbon Buildings Programme grants of 50% on installation costs or can obtain funding from Utilities under their Carbon Emissions Reduction Target (CERT) commitment, which can be very significant when displacing electric or solid fuel heating. This latter can bring the cost of an EarthEnergy installation (including the bore hole) close to that of an oil boiler installation. A further and not minor saving is that GSHPs require no routine servicing or safety inspections.

Ground source heat pumps can be readily installed in high density housing through the use of a single borehole per property, linked to a compact heat pump either installed in a cupboard within the house or outside in a dedicated kiosk. The social housing sector is in an ideal position to benefit from economies of scale, since multiple installations can be undertaken in one visit.

Engaging a professional design and installation company that is a member of the Ground Source Heat Pump Association and



accredited under the Microgeneration Certification Scheme gives clients confidence that the installation will be appropriately designed and the work undertaken in a competent manner. All reputable installers should be able to offer a fixed lump sum price per house for the installation providing cost certainty for the client.



Ground Source Heat Pumps are no longer restricted to the wealthy self-builder, EarthEnergy has proved that this technology is practical for the housing stock owned by social landlords with their performance now well established in the UK. This coming year scores of social housing providers will be installing heat pumps in several thousand homes. For them it is a proven solution that gives them and their tenants immediate savings with the comfort that they are protected from a volatile energy future and its uncertain costs.

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