



## Domestic RHI Case study – Fast facts

Technology type: Ground source  
heat pump

Equipment manufacturer: Neura

Equipment model: Neura DCX

Capacity: 6kW

Installer: ICE energy



## Social housing gets green heat

### Ground source heat pumps installed in nine properties in Devon

#### Scenario

When the heating systems in nine rural properties in Devon needed replacing at the end of 2013, Hastoe Housing Association got busy sourcing new renewable heating systems. Located in Bull Bridge Mead, the one, two and three bedroom homes had been built in the early 1990s and were heated by electric storage heaters and open fires.

Hastoe, which owns and manages over 5,000 homes across the south of England, prides itself on its eco-credentials. With many of its homes located in rural areas and off the gas grid, the housing association has made a strong push to install renewable heating instead of systems that rely on fossil fuel.

It chose to fit each of the nine Devon properties with a Neura 6kW ground source heat pump (GSHP). GSHPs are energy efficient, reliable and durable. They take the heat from the ground outside, increase the temperature and then transfer it to radiators or under-floor heating systems. Installers lay a network of pipes underground, either horizontally or in deep bore holes, and these pipes then lead back to a heat pump located either inside a house or a shelter outside.

“We feel strongly about improving the energy efficiency of our homes to eliminate or reduce fuel poverty,” says Darren Cruice, Investment Manager at Hastoe Housing Association. “More importantly, we knew that residents were under-heating their properties because of the costs involved and needed a more economical heating solution. Over the past few years, we have installed hundreds of ground source heat pumps and have found them to be the most efficient and cost effective heating solution on the market.”

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### Quick installation

ICE Energy started the installation of the GSHPs in January 2014. With too little land to lay horizontal pipes, ICE drilled boreholes that were between 90 and 130 metres deep. A u-shaped pipe was then inserted into the hole. Next, the installers ran connector pipes in shallow underground trenches to the heat pump unit.

Inside each home, the existing electric storage heaters were removed and replaced with radiators, programmable central heating, a hot water timer and thermostat. New hot water cylinders were also installed. It took ICE several days to complete the external work and another week to install the indoor systems.

“Our residents are thrilled with the new systems,” says Darren. “The radiators run on a lower temperature and are controlled by a thermostat, which is a much more even and comfortable way of heating than the old electric heaters. Residents can’t believe how much warmer it is inside their homes and they’re relieved that they don’t have to worry as much about their electricity bill.”

### Cost savings for everyone

Darren estimates that residents were paying as much as £1,500 a year to heat their homes on the old heating system. Now, the average bill has gone down to around £720 a year.

The installation of each GSHP cost £20,000. However, Hastoe was eligible for the Government’s Renewable Heat Premium Payment and received £7,000 towards the cost of the GSHP. It will also qualify to receive payments under the Government’s domestic Renewable Heat Incentive (RHI) scheme, which launched spring 2014. It provides homeowners with long-term financial support for installing renewable heating instead of a fossil fuel system. As part of the application process, homeowners (except self-builders) must have a Green Deal Assessment carried out to measure its energy efficiency. Based on initial RHI assessments, Hastoe estimates that it could receive a further £6,500 per property, split and paid out over seven years.

“We know that renewable heat is the future,” says Darren. “Installing an efficient system that also offers cost savings to our residents just makes sense. After several hundred installations, we have enough experience to judge how well the systems are working and how satisfied our residents are. The fact that we keep installing GSHPs is a testament to their value and we would recommend that other organisations like ours strongly consider renewable heating systems.”

To find out more and apply for the Domestic Renewable Heat Incentive or to book a Green Deal Assessment:

- Call the Energy Saving Advice Service on **0300 123 1234** (England and Wales) or Home Energy Scotland on **0808 808 2282** for free and impartial advice
- For further information and guidance documents visit: [www.ofgem.gov.uk/domestic-rhi](http://www.ofgem.gov.uk/domestic-rhi)