

A Ground Source Heat Pump System for Domestic Property, Leominster

This large domestic property in the tiny hamlet of Bircher was dependent upon oil for its heating and costs were rising year after year.

The owners decided to investigate the options for reducing the costs of keeping their house warm especially after a particularly cold, and expensive, winter period.

The Problem:

This early 19th Century house with large grounds was difficult to heat. Having previously worked with WDS Green Energy on the installation of a **3.12kW Solar photovoltaic panel system** the Owners contacted WDS Green Energy again to see if anything could be done to reduce this, hard to heat, house's dependence upon its oil boiler for heating. Whilst heat pumps combine ideally with under floor heating thanks to the low grade heat they supply they are still very effective when coupled with radiators.

The Solution:

As this substantial property has a large grounds with plenty of space for a ground collector system WDS Green energy installed **3 No Dimplex SIH 11 ME ground source heat pumps** coupled to a ground loop array situated in a field south of the house.

One of the heat pumps is dedicated to the hot water system which takes priority. When the hot water reaches the required temperature this heat pump then provides support to the other two pumps which meet the heating demands of this large property.

Although best suited to under floor heating, heat pump systems are compatible with traditional radiators and new 'smart rads'. In this case WDS Green Energy were able to utilise the original radiators for heat distribution minimising the install time for this large complex system.

The Benefits:

This large house in the small township of Bircher is now entirely heated via the **heat pump system** WDS Green Energy installed thus eliminating the need for oil for heating. This has reduced the costs significantly. The **Solar Photovoltaic system** upon the roof generates electricity which is used on site in part for the heat pump system further offsetting the running cost of the heating system.

Both the **solar photovoltaic panels** and the **ground source heat pump system** are/will be eligible for the generous Government backed incentives for green technologies such as the feed-in-tariff for solar PV and the Renewable Heat incentive for heat pump systems, due to begin in early 2014.

