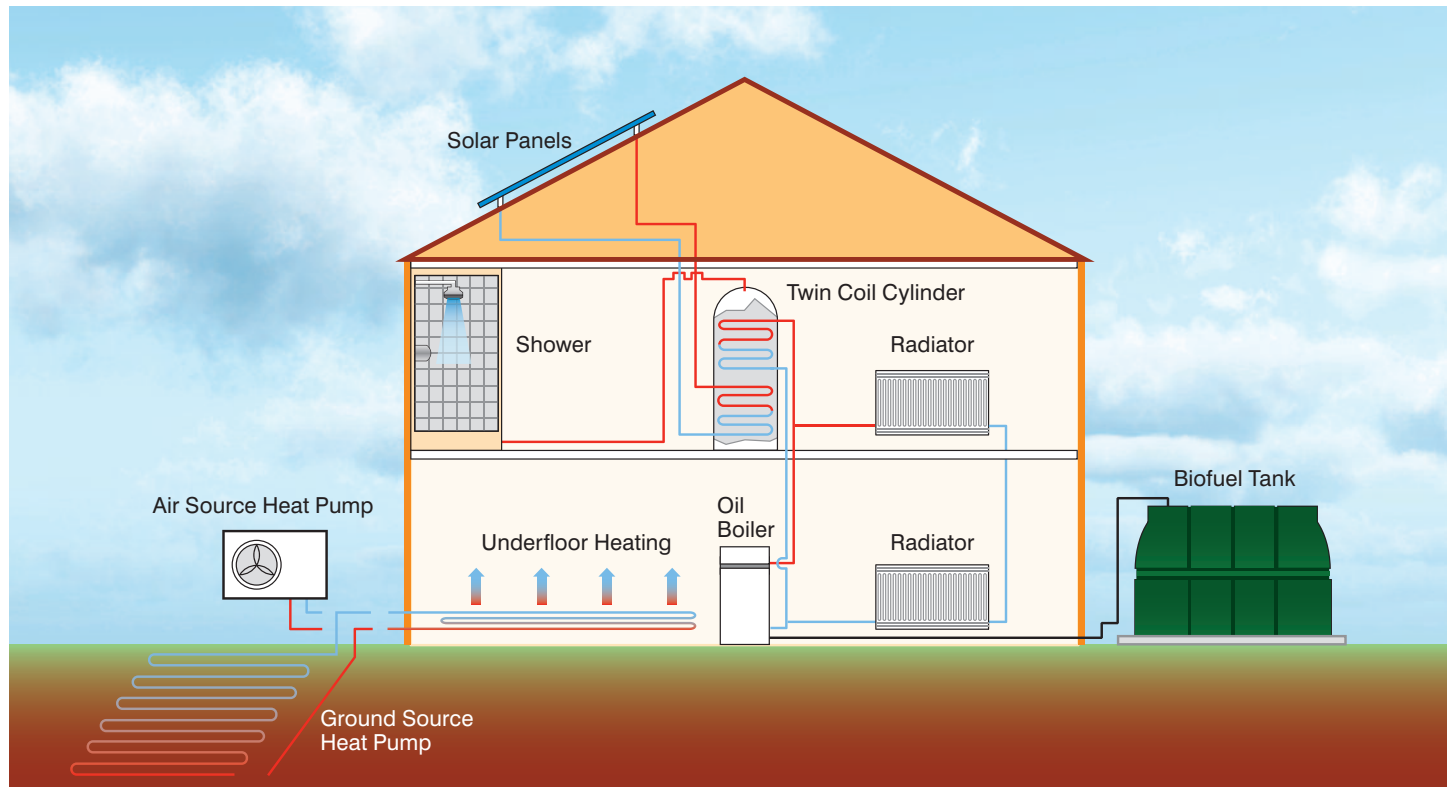


# renewable energy

The diagram below shows how the home of the future might be heating using an oil based bio-fuel and renewable technologies



## Integrating your heating system

By integrating your current oil heating system with a renewable technology you can help to bring down the cost of your fuel bill. There are several alternatives, some are listed below:

### Solar heating

The UK climate enables a solar thermal panel to pick up heat from the sun for a large part of the year, but it is mostly

low grade heat, i.e. well below necessary the flow temperature of a central heating system about 82°C or the storage temperature of a domestic hot water system at 60°C. For household purposes, solar heating can be used to raise the temperature of cold water supplied to the domestic hot water storage cylinder. The advantage being that the main heating system then uses far less fuel to raise the temperature of the water in the cylinder up to its required storage level.

Regional grant schemes may be available to assist toward the cost of installing solar systems.





## Ground and air source pumps

Ground source heat pumps work by taking energy from the ground by using a buried ground loop, or a deep single bore, which transfers heat from the ground into a building to provide heating and hot water. This allows temperatures taken from the earth to be boosted to a useful level for the provision of home heating and hot water. Again this technology reduces significantly oil consumption.

Sometimes it is not possible install a Ground Source Pump and so an air source heat pump can be considered. The only space requirement is an outside wall. Air source heat pumps work by converting the energy of the outside air into heat, creating a comfortable temperature inside the house as well as supplying energy for the hot water system.

## Heat recovery systems

There is normally a considerable amount of heat loss in the air that is exhausted from a building. It has risen in temperature as a result of being passed through heated rooms, being breathed into by the occupants, because of

heat loss from the use of hot water, from cooking operations and from the lighting system. Apart from the heat from the heating system, all these sources are uncontrolled by thermostats and can be a significant source of waste. If this heat could be recovered, the heating system could be run for a shorter period of time and fuel would be saved.

Heat recovery systems work by taking air from the rooms by the use of an extraction system of ductwork and fans, instead of letting it be lost to the outside through open windows or leaks in the structure.

## Bio-fuel to replace heating oil

OFTEC is working with others to specify a new fuel which will blend kerosene (UK and Ireland's heating oil) with bio-fuel. The new fuel will have a much lower greenhouse gas emission than 100% fossil fuels and will be available from 2010. It is anticipated that many new homes will be heated by this new bio-fuel blend.



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