

NEWS RELEASE

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A RENEWABLE FUTURE WITH BAXI

Renewable energy is no longer something we can put off for the future. The concerns about climate change mean that it is very much a current issue, and we can all play a part in tackling the problem.

As reserves of fossil fuels are depleted, and global concern about the greenhouse gasses they emit increases, attention is turning to the most abundant energy source we have – the sun. Already well known and widely used, solar thermal water heating devices make use of free solar energy and can reduce carbon emissions of a property by up to a tonne per year.

Solar collector panels or evacuated tubes, either fitted onto existing roofs or built into the roof structure of newbuild properties, absorb energy from the sun's rays and heats a mixture of water and glycol that is sealed into the system. This liquid is then circulated through a dedicated coil in a specially designed cylinder, heating the stored water, which is then available for use at the hot taps.

Ideally, roofs should be south facing, although panels can be installed on either side of an east-west facing roof to capture maximum energy throughout the day. In the summer, up to 100 per cent of domestic hot water requirements can be met using a solar thermal domestic hot water system. In the UK, even on the dullest winter's day, 100 W/m² can be produced, and the annual average is that about 50-60 per cent of demand can be satisfied. Any extra hot water that is needed can be produced using the conventional boiler and the second coil in the cylinder, or electric immersion heater.

Ground source heat pumps take the latent heat from the earth via heat collectors, called slinkies, which are buried in the ground. As the temperature of the ground

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below a certain depth remains constant all year round, this technology is particularly suitable for the UK's climate.

The working fluid in the slinky is drawn into an evaporator, and the resulting gas is pushed into the compressor, where its temperature rises to 80 degrees Centigrade. The vapour is then drawn into a condenser where it is circulated through underfloor heating where a temperature of 40 degrees Centigrade can be maintained. Now a liquid again, the pressure is reduced as the cycle is repeated.

Ground source heat pumps are capable of producing four times more energy than they produce during operation and can offer the largest carbon savings of all renewable products – around 30 per cent, or up to two tonnes a year – as well as significant reductions in fuel bills. Particularly suitable for areas without mains gas, they are easy to install and maintain, and work cleanly and efficiently with minimal impact on the environment.

Air source heat pumps work in a similar way. External air at ambient temperature is passed over a finned heat exchanger, which cools the air and extracts the heat into the evaporator of the heat pump. These heat pumps are easily installed on the roof, wall or can be floor standing and are particularly suitable where the ground space is limited. Ground and air source heat pumps are ideal for those living in areas where mains gas is not available.

Biomass boilers use carbon neutral fuel such as wood pellets, chips or logs from local, regenerated sources to provide a sustainable and environmentally friendly heat source. The carbon released during the combustion process is balanced by that absorbed during the fuel's production.

Baxi offers a comprehensive range of renewable energy sources: Baxi Solarflo, a solar thermal hot water package; Geoflo, a ground source heat pump package; and

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Baxi Biomass solid fuel heating. Baxi air source heat pumps and additions to its solar package will be available later this year and it is already working on the next generation of renewable and microgeneration technologies. New product development is mainly focussed around MicroCHP, combined heating and power (CHP), where the domestic boiler also produces electricity.

For further information please contact Baxi on 08706 060 623 or visit www.baxi.co.uk

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