



The Morris family of Tobias, Sam, James, Anne, Ben and Charles Morris with Global staff member Adam Wilson (centre)

RUNNING ON FRESH AIR

Hot news about a Lytham engineering company whose boilers are credited with slashing household fuel bills. Roger Borrell reports



Ben Morris and Adam Wilson install the electrical panel inside the air source heat pump cabinet

THE hot air expended on claims and counter-claims about the merits of different renewable energy sources could probably keep us all warm through the most severe of winters.

However, one remarkable family business in Lytham is doing much more than just talking about the subject. For the past 11 years, Global Energy Systems has been researching, developing and now making and selling Air Eco Boilers which they say can knock up to 65 per cent off your heating bills.

Importantly, they also cut the carbon emissions by up to 60 per cent compared to conventional oil, gas or electric heating systems and this extraordinary level of efficiency means owners can receive a government grant called the Renewable Heat Incentive.

The development is based on air source heat pumps, a complex piece of equipment which, put simply, operates like a refrigerator in reverse.

While a fridge extracts all the heat from the inside and disposes of it outside, the Eco Air Boiler extracts all the warmth from the outside air and uses this to heat anything from central heating radiators and hot water to swimming pools and under-floor heating.

The system uses a small amount of electricity and, in what seems to defy the laws of physics, for every kilowatt you put in, you get three or even four out.

Air is sucked in and drawn over an evaporator, turning a liquid refrigerant into a gas capturing low grade heat from the outside air. This gas is compressed by an electric motor to create high grade heat and this is transferred into your domestic heating and hot water system. Once the gas has given up its heat, it returns to its liquid state ready to be re-used.

In a recent new build in the Ribble Valley, a large four bedroom house completed to Sustainable Homes Code 3 level had an Eco Air Boiler installed to provide under-floor heating and hot water. It was expected to have an annual cost of £1680 - a potential saving of over £1300 compared to oil. In some cases the savings are greater, and the addition of solar panels can mean you don't have any cost at all.

There are data links that mean the householder can monitor fuel savings on a laptop or mobile phone and use the link remotely to switch heating on and off. The boiler can be fitted to existing central heating and hot water systems and they are designed to last for 25 years – much longer than most conventional domestic boilers.

The system has been designed specifically for the UK market and that means they continue to operate even when the outside temperature drops to -20C.

So what's the catch? Well, the domestic units are generally bigger than conventional boilers – comparable to a medium-sized bookcase. They are usually sited outside on an external wall; however there is an option to have these inside a property with the air being ducted in and out of a building.

Cost is another factor. The smallest boiler is around £9,000 to buy and have installed by one of Global's especially-trained engineers. However, the company says the system combined with the grants – guaranteed at least until March this year – will mean you have payback in four to five years. The longevity of the equipment also means you shouldn't be replacing it for at least two decades.

It's not just domestic systems that are using the new boilers. The Cartford Inn at Little Eccleston and Ribby Hall at Wrea Green are both customers, along with Singleton Village Hall and Leyland Cricket Club. Large factory units, warehouses, schools and leisure centres can see even more substantial reductions in fuel bills.

The boilers have been developed by the Morris



above New build homes can save as much as £1,300 a year
below Several farmhouses have installed the boilers



family, long established and innovative engineers spanning three generations. Their main business is Helical Technology, which produces springs and valves for some of the world's most advanced engine makers. They employ 250 people at sites in Dock Road, Lytham, and nearby Warton with business interests in China and India.

The production of boilers is a relatively new venture and a tiny part of the group but Ben Morris, who manages Global Energy Systems, believes it could one day turn into a major strand of the overall business which includes his father, Charles, and brothers, Sam and Tobias.

'This was a joint effort to find a product that was bespoke and quality-driven,' said Ben. 'Our sales have been growing steadily by word of mouth and after keeping it relatively low key we are ready to spread the word.'

His father Charles added: 'In 20 years time we won't even be discussing them as something new or out of the ordinary and if we can get the payback down to around three and a half years, the units will be walking out of the workshops. At the moment we are a little like a fish going against the current – but that will change.'

And that's an appropriate analogy considering one of their customers has been a fish farm in Yorkshire, which discovered they could heat their units breeding shrimps and sturgeon at a fraction of the cost. ♦

If you want to find out more about the Air Eco Boilers, go to www.globalenergysystems.co.uk.



RIBBY HALL SUCCESS

Ribby Hall Village chief executive Paul Harrison and his wife Janet (above) are committed to operating a sustainable business, and this was recognised in 2014 by Marketing Lancashire when they won the Lancashire Tourism Sustainability Award.

'An integral part of the Ribby Hall Village sustainability management programme is the careful use and monitoring of our energy resources, to ensure that our costs are controlled; our carbon emissions are reduced while still providing a comfortable environment for our guests and employees,' they said.

One of their initiatives was the installation of an air source heat pump in 2010 in The Villa Nova, a luxury bespoke holiday accommodation. This system was installed to provide domestic hot water and space heating for the holiday accommodation together with an outside hot tub and it costs less than £1,000 a year to run.

'The system was so efficient that in 2014 we asked Global Energy Systems to install an air source heat pump in our personal domestic residence, and this has delivered genuine cost savings whilst providing a very comfortable living environment,' they added.

'Global Energy Systems are in the process of commissioning a second unit at Ribby Hall Village; this will provide space heating for our sports hall, under-floor heating for our new studios, and the by-product of hot water will be used to pre-heat the water for the leisure pool. We will then be considering a third unit for the Spa Hotel.'