# Is an air source heat pump right for me?

### Air Source Heat Pumps – Friend or Foe? : John Cantor

### Air Source heat pumps are sold as a renewable technology and sound very green, but buying one is a big investment, and some people have had bitterly disappointing experiences with them. In this detailed guide, heat pump expert John Cantor describes how heat pumps work, and explains what kind of set-up (including what kind of house, heating system, and pattern of operation) is needed for an air source heat pump to perform as advertised.  Armed with this information you should be in a better position to decide if this technology is a good choice in your situation, and also to ask the important questions of the would-be suppliers and installers, and understand their answers! If on the other hand you already own a heat pump, the guide will give invaluable pointers as how to get the best from it.

To download the full article visit <http://www.aecb.net/publications/air-source-heat-pumps-friend-or-foe/>

# Watch out for the dodgy green tech salesmen

### Who will protect householders from the dodgy ‘green tech’ salesmen? : Geoff Stow

### Home technology shows make for an enjoyable, if exhausting, day out for anyone wanting to upgrade their home – as well as for the lucky few planning to build one of their own – and are an obvious place to go for ideas and information about all the latest technologies. However former AECB Trustee Geoff Stow, who is a veteran of these events, is dismayed by the very poor – and frankly, misleading – advice offered to unsuspecting members of the public by some sales teams.

Heat pump suppliers seem to be particularly guilty of over-selling their technologies (see the Heat Pump article [www.aecb.net/publications/passivhaus-ventilation-its-not-a-lot-of-hot-air/](http://www.aecb.net/publications/passivhaus-ventilation-its-not-a-lot-of-hot-air/) for some reasons why they aren’t a good choice for everyone). However, Geoff has come across all sorts of technologies whose salespeople make implausible claims about the performance of this latest bit of “green” kit – though he notes there are examples of good practice too. What is missing, the author concludes, is a source of impartial advice at all these events. Failing that, perhaps would-be customers ought always to ask to see some real-life results, and to enquire “where would this technology *not* be suitable”?

To read more visit <http://www.aecb.net/who-will-protect-householders-from-the-dodgy-green-tech-salesmen/>

# Ventilation in a Passivhaus – don’t believe everything you hear!

### Passivhaus ventilation - It's not a lot of hot air: Mark Siddall

### Passivhaus is a well-established ultra low-energy approach to building design. In order to work as well as they do, Passivhaus buildings are built very carefully to exclude all draughts, then generally they bring in fresh ventilation air through a heat exchanger, pre-heating it by taking heat from the warm stale air as it leaves.

People who have lived with this system – airtightness plus mechanical ventilation with heat recovery – usually find it comfortable and pleasant. However, it is an unfamiliar approach to many of us in the UK, so naturally anyone considering a Passivhaus will want to know more about it. This article explains how Passivhaus ventilation works, and addresses some of the more common concerns. The author tackles some common myths – including whether or not you can open the windows (don’t worry, you can!) and ‘will it be noisy?’ - Passivhaus sets a standard for quietness (unlike non-Passivhaus buildings using mechanical ventilation) - so, no it won’t.

The author also explains why the drier air you get with properly commissioned heat recovery ventilation systems is usually a good thing. He also explains why we generally need high ventilation rates (to remove indoor pollutants) and how a properly-ventilated building may potentially have air that is too dry (in the coldest weather). In other words, this isn’t a Passivhaus issue, and it’s a pollution issue. Some suggestions are given for dealing with this risk.

To download the full article visit <http://www.aecb.net/publications/passivhaus-ventilation-its-not-a-lot-of-hot-air/>

# Is biomass really low carbon?

### Biomass – A Burning Issue: Nick Grant and Alan Clarke

### Biomass Heat – Facing the Carbon reality: Sophie Pelsmakers and Kate de Selincourt

Biomass fuel – in buildings, that is, usually logs, wood chip or wood pellets, is sometimes sold as “low” or “zero” carbon. The government portrays it this way. But these articles point out that in fact wood gives off a great deal of carbon dioxide when it is burned, that is only slowly taken up again if and when trees regrow. On top of this, harvesting, processing and transporting wood fuels also leads to further CO2 emissions and energy use.

The problem is, these authors argue, that if the energy use and emissions are assumed to be non-existent, people may end up designing buildings that waste energy and emit carbon unnecessarily, because they have little or no incentive to design this waste out. In fact, as the second article points out, some of the subsidies available (such as the Renewable Heat Incentive) can actually reward energy waste and make it uneconomic to include efficiency features such as superinsulation.

To read these papers in full visit:

(Grant and Clarke) <http://www.aecb.net/publications/biomass-a-burning-issue/>

(Pelsmakers and de Selincourt) <http://www.aecb.net/biomass-heat-facing-the-carbon-reality-2/>