

## **AECB - The sustainable building association**

### ***Network - The free AECB newsletter - September 2010***

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### **Biomass - Not A Green Fuel After All?**

Defining biomass as a low-carbon fuel is not only mistaken, it is also the cause of higher carbon dioxide emissions and lower building efficiency, according to a discussion paper published today by AECB.

The paper, commissioned by AECB from Nick Grant and Alan Clarke, argues that it is fundamentally wrong to define biomass burning as low-carbon, when burning biomass leads to similar carbon dioxide emissions per unit of heat as burning coal. As the UK prepares to scale up initiatives encouraging more and more biomass to be used as fuel, the AECB decided that it needed to think more rigorously about the issues arising. While it is true that trees do take up carbon dioxide when they grow, this does not mean that the best use for biomass is to burn it.

Instead, the paper argues, the timber can be left unburnt, and put to other uses - for example, as structural timber or other wood products like insulation. Meanwhile we could use other heat sources that emit a good deal less carbon dioxide than the trees have absorbed, to provide for the same heat requirements.

There is certainly not enough biomass available to both usefully sequester and burn. The paper does not argue that we can sequester our way out of climate change by planting trees and stimulating wood product industries alone. However it clearly makes the case that burning wood is one of the least sensible things to do.

In their paper, Nick Grant and Alan Clarke, both experienced building energy consultants, show how the low-carbon definition for biomass burning is used as a "get out of jail free" card in project design - a biomass boiler then becomes a substitute for good design and energy efficiency. By specifying a biomass boiler, design teams feel they have met their carbon targets, and investing time and budget into efficient, truly low-energy design and construction seems superfluous.

According to the authors, the consequences of current mainstream thinking on biomass as a fuel leads to a 'lose-lose-lose' situation:

- Once when the biomass is burnt, releasing twice as much carbon as burning gas for the same heat output
- Again when the building leaks energy, because insufficient attention was paid to energy efficient building fabric and plant design - i.e., the biomass boiler "did it all".

- And further, there is a risk that the timber price is pushed so high by the competition from a growing number of biomass burners, that concrete, bricks and steel have to be created, at very high energy and carbon costs, to make building components that could otherwise have been made from wood.

Explaining why he had written the paper, co-author Nick Grant commented: 'There is a lot of confusion around, with people mixing up the terms renewable, sustainable and low carbon. We need to take a step back from the seemingly endless arguments about the definition of zero carbon, and ask ourselves - what are we really trying to do here? I believe when you do this, it is clear that we need to go back to the simple principle of using less energy, in whatever form.'

The paper "Biomass - a burning issue" is available as a pdf download from the new releases area of the AECB website. Go to [www.aecb.net/new\\_releases/](http://www.aecb.net/new_releases/)

In order to gain valuable feedback from AECB members on the issues discussed in this paper, and to invite questions and challenges to the thinking, the AECB has set up a thread on its online discussion forum. Non members can watch the debate - members can post.

Please go to <http://www.aecb.net/forum/index.php?topic=2649.0>

## **Government To Water Down 2016 'Zero Carbon' Target For New Homes**

*Housebuilders to win reduced carbon target for homes*

The Homebuilders' Federation says buyers will not be prepared to pay the premium for a new home added on by the zero carbon ruling. Photograph: Frank Baron One of the UK's most radical environmental policies - requiring all new homes from 2016 to be "zero carbon" - is set to be scaled back amid pressure from the housebuilding industry.

Builders claim the proposals would be too expensive and impossible to implement for many flats, and would result in a slump in the rate of homes built. Now The Guardian has learned that the government is ready to water down the target, a move environmentalists have said would be a "travesty".

A "zero carbon home" requires a 150% reduction in carbon emissions, a target which includes emissions from household appliances, heating and lighting. The plan was to achieve these savings from improved energy efficiency and on-site renewables. Housebuilders argued this was too ambitious and agreed a compromise where only 70% of the reduction would be on-site. The rest would be achieved by housebuilders paying £4,500 a house into a community energy fund, to finance small renewable energy projects or energy-efficiency measures.

Now housebuilders say even this is too ambitious. The Home Builders' Federation says buyers would not be prepared to pay the 20% premium for a home. The Zero Carbon Hub, set up to co-ordinate policy, has begun final testing of the target and will make recommendations to ministers this year. But the Guardian has learned that policymakers and senior figures at Communities and Local Government accept the target is too high and more emissions will have to be "offset".

Simon McWhirter, homes spokesman from charity WWF, said: "David Cameron said this would be the greenest government ever but we are already seeing a potential

weakening of one of the most progressive environmental policies which would be a travesty."

Housing minister Grant Shapps said: "We need to set a realistic benchmark for carbon emissions in building regulations which also takes account of costs."

Source: [www.guardian.co.uk/](http://www.guardian.co.uk/), Sunday 29 August

### **Government Cuts Low-Carbon Programmes By £34 Million**

As the new Coalition Government continues to pledge its green intentions, the Department of Energy and Climate Change (DECC) has announced a £34 million cut to low-carbon programme. The cuts are part of the Government's £6.2 billion savings programme announced in the Budget 2010 in May.

All governmental departments will be making budget cuts, with DECC's contribution standing at £85 million. The major low-carbon losers are the Low Carbon Buildings Fund, which closed early to save £3 million. Efficiency savings and under spending on other DECC programmes will bring a further £6.1 million. The Carbon Trust will also see a £12.6 million cut in its grant for low-carbon technology and business support from DECC. The bio-energy capital grants and bio-energy infrastructure schemes are also casualties of the cuts. DECC says it will honour £5.3 million in grants for 2010/11, but will cancel the final funding rounds to save £4.7 million.

Savings will also come from reducing funding for deep geothermal energy generation by £1 million, scaling back the scope of the offshore wind capital grants scheme to the tune of £3 million and limiting the Central Government Low Carbon Technology Programme to provide a further £2.9 million. Finally, the Energy Saving Trust's technology trials will finish early, saving £700,000 on the £3 million programme. The cuts have unsurprisingly been condemned by environmental groups. However, DECC is keen to point out that it is still investing more than £150 million in low-carbon technologies this year.

Go to: [www.decc.gov.uk/](http://www.decc.gov.uk/)

### **Norway Tops League Of Green Building, With UK Third!**

Norway has topped a global league of green building for the second year in a row, followed by Brazil in second place and then the UK, which climbs to third place for the first time.

The 2009 Royal Institute of Chartered Surveyors (RICS) Global Zero Carbon Capacity Index is based on International Energy Agency (IEA) data and covers 34 countries looking at factors such as energy efficiency in households, offices and transport, as well as investment in renewable energy and policies to reduce carbon consumption from buildings. The building sector - both residential and commercial - currently accounts for around 40% of emissions, more than either the transport or industrial sectors.

The UK has climbed a place in the league since last year, mainly as a result of the new policies introduced by the previous government, including zero-carbon housing, the Code for Sustainable Homes and tightened building regulations. But index author Yvonne Rydin, co-director of the University College London Environment Institute, says the UK needs to take further action on residential energy efficiency and invest

more in renewables. The poor quality of existing housing stock, in particular, should be addressed to reduce energy consumption.

Other countries showing improvement include the Slovak Republic, France, Germany and the USA, although it is improving less than the other three. Perhaps surprisingly, China makes it into the top ten, joint fourth place with Australia, followed by New Zealand, India, Austria, Germany and Sweden.

Stephen Brown of RICS says that governments must provide incentives and implement programmes to create a zero-carbon built environment. In the UK, he says, the Government should cut VAT to 5% on building materials for repair and renovation work.

However, the UK Department of Energy and Climate Change ended to its Low Carbon Buildings Fund to save £3 million and Housing Minister Grant Shapps announced a 50% cut in eco-town funding for local authorities next year.

For further information go to [www.ucl.ac.uk](http://www.ucl.ac.uk)