



Network

News

October 2009

AECB Website Changes

We are making some changes to the AECB website www.aecb.net which we hope will make things easier to find.

- The "Find" button has been renamed "Find a Member" - as that is its main function.
- The AECB energy and water standards, and the step-by-step guidance and sample details that support them, are now collected under a new heading, "Standards and Guidance". This replaces the old heading "Technical" where some but not all of these downloads were found.
- The energy standards (AECB Silver, Passivhaus and Gold) and associated guidance are also available as before through the CarbonLite site, www.carbonlite.org.uk. Please note that two of the downloads, the Silver and Passivhaus/Gold design guidance (CarbonLite vols 4&5), are only available to AECB members.
- "Training" has been renamed "Conference and Courses" and includes information about the annual AECB conferences, and training courses including those run through CarbonLite.
- AECB members can now post items of interest on a new forum board called "noticeboard" in the Announcements area. This is the place to share interesting snippets, links or publications, and news about your sustainable building activities.
- National and International events that would be of interest to AECB members can be flagged up as before in the shared calendar at www.aecb.net/forum/index.php?action=calendar, and from there in the events board on the Forum.
- Regional AECB groups continue to form and keep in touch via the networking/local groups board, under AECB business and discussion.

There will be other changes over the next few months. If you have any comments please email Kate de Selincourt, the web manager, on kate@aecb.net

Be Part Of An AECB Zone At Ecobuild!

Ecobuild 2010 2-4 March 2010, Earls Court, London

The AECB has been invited to set up an "AECB Zone" at Ecobuild 2010, with members' stands clustered around a central AECB display and networking area. The AECB stand always has a great buzz -- AECB members exhibiting alongside will benefit from this, and at the same time make the area even livelier.

If you would like the chance to be part of the AECB Zone, you will need to book your slot at Ecobuild within the next few weeks (at the early bird rate), so the organisers can allocate the space. Contact Rachael Thacker at Ecobuild on rthacker@ibeld.com by 23rd October clearly stating your wish to book your stand within the AECB zone.

Ecobuild have also generously offered the AECB the use of a seminar room for our programme of talks and discussions. Last year's AECB talks were standing-room-only, and this year's events should be as popular, and will be well-promoted by both the AECB and Ecobuild. The shared branding between the seminars and the AECB zone will add to the profile for exhibiting members.

Once you have booked your space, please let Sally Hall (sally@aecb.net) at the AECB know, so we can include your name in the AECB information running up to the event.

AECB Banners.

Some of the AECB promotional banners have gone missing. If you have any which you have forgotten to return, please could you email sally@aecb.net and she will be able to arrange collection.

New Carbonlite Documents Now Available.

Two new Carbonlite documents are now available at www.carbonlite.net. Both of these are in the form of folded A5 leaflets. I'd be interested to hear if people would like to receive these printed for distribution more widely.

AECB is a member of the Zero Carbon Hub Energy Efficiency Standard Task Group reporting to ministers by Christmas on a proposed minimum energy efficiency standard for homes.

AECB provided technical support to the Technology Strategy Board's Retrofit for the Future competition, assisting with the definition of the 80% CO2 reduction target and how competition participants should model their schemes to establish least cost options on a common basis.

Please contact Liz Reason at liz.reason@r2bc.co.uk.

Renewables Expert David Mackay Appointed To Government

In a surprise move, the Department for Energy and Climate Change (DECC) has appointed Cambridge Professor David Mackay as its Chief Scientific Adviser

Mackay, author of the highly influential book *Sustainable Energy: Without the Hot Air*, has won plaudits from both environmentalists and policymakers alike for his no-nonsense, science-based approach to dealing with renewable energy technologies.

Environmentalists will hope that Mackay's appointment heralds a new phase of thinking at DECC on coal power, particularly because Mackay is adamant in his book that avoiding dangerous climate change will require the end of unabated coal burning:

Full story and discussion at www.theecologist.org/News/

Passivhaus Project Reveals Flaws In Code

Research just published on the current Denby Dale Passivhaus project in West Yorkshire has illustrated some serious flaws in the energy calculations used for Code for Sustainable Homes (CSH). The academic report, undertaken by Jim Parker, CSH Assessor and consultant at 1st Base Projects, includes an energy CSH assessment of the Denby Dale Passivhaus house and has concluded that "a Passivhaus dwelling's energy savings are not realistically represented by its Code for Sustainable Homes ratings".

The research found that the Denby Dale Passivhaus, currently being constructed by Green Building Store's construction division, would only meet CSH level 3 criteria for Ene 1: Dwelling Emission Rate, the mandatory aspect of the Code's Energy Category despite its being projected to be one of the most energy-efficient buildings in the UK1. As the rating achieved in Ene 1 puts a constraint on the overall score, the building could not achieve higher than a level 3 rating regardless of its performance in other areas.

All buildings meeting the strict Passivhaus standards have to have space heating requirements of less than 15 kWh/m²/year, and use up to 90% less energy to heat than standard UK homes, often requiring minimal or no heating. In addition, airtightness for Passivhaus buildings, such as that at Denby Dale, is required to be no more than 0.6 air changes at 50 Pascals. The report points out that many buildings receiving higher CSH ratings actually perform worse than the Denby Dale Passivhaus in terms of space heating requirements and airtightness, but gain points in other areas, and sometimes through the use of inefficient and expensive bolt-on renewable technologies. The report notes that the Kingspan Lighthouse project, which gained CSH Level 6, is reported to have a higher heating demand and is less airtight than the Denby Dale Passivhaus design².

The report suggests that the disparities between the Code's approach and the Passivhaus standard in relation to energy are based on a number of factors, most notably limitations in the methodology of the current Standard Assessment Procedure (SAP). Parker concluded that "The analysis of the SAP 2005 results show that Passivhaus dwellings could perform even better than this if SAP 2005 accurately estimated the carbon dioxide emissions of low energy housing."³ This is partly due to the inaccurate CO₂ emission factors attributed to fuels in SAP 2005. This is particularly significant when using electric heating. The low emission factor used for electricity means that higher Code ratings can be achieved by specifying systems with much higher actual emissions than their gas equivalents.

The results also support the findings of earlier research commissioned by the AECB into the differences between the Passivhaus Planning Package PHPP and the Standard Assessment Procedure (SAP 2005)⁴. This study found that SAP made many assumptions that resulted in a less accurate model for low energy buildings and that inefficient practices are assumed in terms of internal gains, ultimately resulting in an under estimation of heating requirement. Findings indicate that SAP does not allow for detailed analysis of solar and incidental gains, the effects of thermal mass and efficient electrical use.

US Building Sector Leaders Call for Steep Energy and Emissions Cuts

Twenty-four of the largest and most influential architecture, engineering, and development firms based in the U.S., which are responsible for a combined \$100 billion in building construction annually, have joined forces with Architecture 2030, a leading non-profit research organization, to call on Congress to update national building code standards to meet steep and achievable energy reduction targets.

Specifically, this group is pressing the Senate to pass the building energy reduction targets in Section 241 of the American Clean Energy Leadership Act of 2009 (S. 1462) and incorporate timelines to reach carbon-neutral buildings by 2030. Firm leaders point out that buildings and their energy use account for approximately half of the energy and greenhouse gas emissions and 75 percent of electricity consumption in the United States, and that if the U.S. is to have any hope of getting its energy consumption and greenhouse gas emissions under control, it must begin seriously addressing its Building Sector.

According to these firms, including HKS Architects, Perkins+Will, ARUP, and HOK the building energy code targets in Section 241 are both readily achievable and cost effective, and passage will give the architecture, engineering, and building community the support they need to begin transforming the built environment. These firms are speaking from

experience. They are all adopters and implementers of the 2030 Challenge, which was issued to the architecture and planning community by Architecture 2030 in January 2006.

The energy reduction targets of the widely adopted 2030 Challenge are the basis for the targets in the Senate bill and the targets and timelines of the Waxman-Markey bill passed in the House (HR 2454, Section 201). The Challenge calls for a 50% energy reduction in all new and renovated buildings today, incrementally increasing to carbon-neutral in 2030. The Challenge enjoys widespread national bi-partisan support and has been adopted by the American Institute of Architects, U.S. Conference of Mayors, National Association of Counties, National Governors Association, and numerous professional and industry organizations, design firms, and cities, counties, and states.

These 24 firms are part of a powerful and burgeoning movement within the business community to push hard for changes that address energy consumption and climate change while opening new markets. On September 22, 2009, five hundred corporate executives from firms in about 50 countries issued the "Copenhagen Communique", calling for climate negotiators to finalize a new international climate treaty by the end of the year.

Source: www.architecture2030.org

France To Introduce Carbon Tax

France has stolen a march in the fight against climate change by announcing a new carbon tax on the use of oil, gas and coal. The new tax will be introduced gradually from 2010 and will charge householders and businesses the equivalent of £15 per tonne of emitted CO₂. Most electricity in France is excluded from the carbon tax because it is nuclear generated, but the new tax is expected to generate billions of Euros in revenue nonetheless. In response to critics who say the tax is simply a prop for the country's damaged finances, French President Nicolas Sarkozy insists the new tax is all about changing consumer habits and cutting energy consumption.

At the moment producing electricity from coal costs around 3p a kilowatt per hour (3p/kW/h). This is cheaper than burning natural gas or oil and that is why most power stations still use coal to generate electricity. Renewables cannot produce electricity this cheaply as electricity from wind turbines costs 4p/kW/h and the latest solar technology also costs 4p/kW/h.

However, once a Carbon Tax Commission set its rate for a carbon tax, the cost of producing electricity from coal fired power stations would cost more than renewables. From that moment almost all new "power stations" in this country would be wind or solar based (being Britain more wind than solar). The nature of the national grid would change from the current 'hub and spokes' system to a peer-to-peer network system. This would radically reduce the cost of power supply and in turn enable cars to run on electricity (currently if all cars ran on electricity the national grid would struggle to cope).

This could allow cities (should they have wish to do so) to ban all vehicles that were not zero emission from all or part of their cities. The first bans could be on days and in places where local pollution is above World Health Organisation limits. This will encourage the motor industry to build cars that can perform 100-mile round trips without refuelling, and filling stations to offer rapid electrical charging.

This could all happen extraordinarily quickly – faster than past changes in informatics – from computers to telephones and high-definition televisions. The reason is this. The informatics industry is big – a few hundred billion pounds a year, but the energy industry is huge – around three trillion pounds a year and demand for energy is growing rapidly. So the opportunity for renewables is mind boggling – as soon as the price is right.

Source: www.eta.co.uk/2009/09/11/france-introduce-carbon-tax

Old Phone Boxes Answer Call For Electric Car Charging Points

As mobile phones become widespread so the need for telephone boxes dwindles, but resourceful town planners in Madrid have found a new use for them as re-charging points for electric vehicles. Phone box sites relatively easy to adapt as recharging points because they tend to be located close to the roadside and already have their own electricity supply. A trial will see 30 telephone boxes around the city transformed into charging points as part of a network of 546 state-subsidised recharging points, which will also cover Seville and Barcelona.

The Spanish government plans to spend the equivalent of £8.7m on encouraging the use of at least 2,000 electric cars in the three cities over the next two years

Source: www.eta.co.uk/2009/09/09/old-phone-boxes-answer-call-electric-car-charging-points

10-10 Campaign Launched

The 10-10 campaign was recently started by Franny Armstrong (director of the film "The Age of Stupid") in conjunction with the Guardian newspaper. It is clever because it gives people easy, achievable and measurable steps to reduce their own carbon footprint.

You can find out more and sign up at www.guardian.co.uk/environment/10-10

London Mayor Announces Low-Carbon Neighbourhoods

The Mayor of London Boris Johnson today announced the ten London boroughs that will receive funding to become 'low-carbon zones'. Barking, Muswell Hill, Archway, Brixton, Lewisham, Wandle Valley, Ham and Petersham, Peckham, Hackbridge, and Queen's Park will be awarded at least £200,000 from the London Development Agency to invest in green projects.

The funding will support initiatives such as 'energy' doctors to advise on improving efficiency and reducing usage and loans for microgeneration technology like solar panels. Other boroughs will undertake more ambitious projects. Ham and Petersham, for example, will be working with the University of Oxford on a smart metering scheme and heating systems on estates in Queen's Park will be upgraded to combined heat and power (CHP).

The funds will also support the establishment of electric car recharging points in Barking and Queen's Park. The low-carbon zones will have a target of reducing their carbon emissions by 20.12% by 2012 through the implementation of energy efficiency measures across residents and businesses.

For further information go to www.london.gov.uk/lowcarbonzones

Carbon Trust Launches Programme To Help UK Smes Cut Energy Bills

The Carbon Trust is launching a programme aimed at helping small and medium sized businesses reduce their energy bills by up to £40 million. The Big Business Refit, which will formally launch in September, will offer SMEs advice and financial support to improve their energy efficiency by replacing old equipment with newer models. The Carbon Trust says it has seen a surge in demand over the first six months of 2009 for its interest-free loans to help businesses invest in energy-saving technologies.

The Big Business Refit has a total of £100 million available for loans of between £3000 and £400,000 to replace old, inefficient equipment. The Carbon Trust estimates that the initiative could help around 3000 SMEs save up to £40 million in energy costs. The most popular options for energy-saving investments are efficient lighting, modern air compressors, which are used to power pneumatic tools, and mechanised handling equipment like cranes.

For further information go to www.carbontrust.co.uk/loans

Npower Launches Energy Forecasting Tool For Businesses

UK energy company npower has launched a new tool for businesses that will allow better forecasting and management of energy consumption. The monitoring tool, 'encompass professional', analyses a company's energy use and combines this with historical data on production. When 20-year weather patterns are added into the mix, the tool estimates future energy use. The information provided by encompass professional can be used to improve energy management and devise strategies to reduce consumption, costs and carbon emissions.

The tool will be particularly helpful for UK companies participating in the Carbon Reduction Commitment (CRC), which comes into force next year. "encompass professional" is the latest addition to npower's m3 energy management service, which includes energy monitoring and advice on improving energy efficiency to reduce energy usage and carbon emissions.

For further information go to www.npower.com/web/encompass

Wales Removes Planning Permission For Microgeneration

The Welsh Assembly Government has removed the need for planning permission for some types of microgeneration technologies in a boost to help households and communities reduce their carbon footprint and fuel bills. Installing small-scale solar panels, ground source heat pumps and biomass flues will no longer require planning permission or incur planning fees.

For further information go to <http://wales.gov.uk>

China And Eu To Create 'Smart Cities'

Both China and the EU are planning to develop so-called 'smart cities' to serve as models of environmental protection and development. In China, IBM is joining forces with the country's Northeastern University to transform the city of Shenyang, which has a concentration of heavy industry manufacturing. The partners have established the Shenyang Eco-City Research Institute where IBM researchers will work with local university and government employees to develop technologies that conserve energy, reduce carbon emissions, manage water efficiently, improve transportation and allow a proactive approach to environmental responsibility.

Meanwhile, the EU is considering plans that would see 25-30 cities trial smart electricity grids, advanced insulation materials and renewable energy, according to media reports. The plan envisages 'smart cities' that would generate energy from waste, solar and wind resources to power electric cars and buses. Buildings would be thoroughly insulated with advanced materials to minimise energy use. However, the inclusion of coal-fired power stations with carbon capture and storage and next generation nuclear reactors has drawn criticism from environmental groups.

For further information go to www.ibm.com/smartercities

Events

Defining A National Energy Efficiency Standard For Homes Have Your Say.

20 October, Manchester, 21 October Bristol, 22 October London.

On behalf of the government, the Zero Carbon Hub has been working with the industry to develop proposals for a national energy efficiency standard for homes. To stimulate wider debate and feedback on these proposals, the Zero Carbon Hub is running a series of free interactive events in late October.

This summer, and after consideration of feedback from the consultation on the definition of zero carbon, Housing Minister John Healey called for the urgent establishment of a challenging but practical national standard for energy efficiency. The development of such a standard is a key part of the strategy for delivering zero carbon homes, with energy efficiency potentially taking us about 40% of the way to the Government's proposed carbon compliance target.

However there are major financial, technical and consumer-related issues associated with achieving higher levels of energy efficiency.

These events are a unique and once only opportunity for you to contribute to the final recommendations on energy efficiency that will be presented to ministers before the end of the year. Don't miss out on joining the debate and helping to ensure that the final proposals are as well-informed as possible.

More information is at www.zerocarbonhub.org, ring 0845 888 7620 or email info@zerocarbonhub.org

Big Green Home Show, 23rd – 25th October.

Save Yourself A Lot Of Energy!

With so many industry experts, product manufacturers, eco-associations, seminars and live demos in one place, why would you waste your energy going anywhere else? For budding self-builders, renovators or home improvers it brings every thing green together under one roof, enabling you to learn more about making homes more sustainable – both in construction and day-to-day running. We'll also cut through the jargon so you can easily weigh up the pros and cons and make the right green decisions for your project.

For more information and FREE entry pre-register now at www.buildstore.co.uk/green or call 01506 409 616

Llani Solar Green Awareness Day, October 24th.

Llani Solar Ltd has moved into new premises and as a celebration is holding an open day on the 24th October from 10.00 to 4.00. Llani Solar are specialists in renewable energy heating systems. The buildings were developed by WAG and featured in the BREEAM Awards for Wales 2008.

The event will be formally opened by Mick Bates AM and will feature the latest technologies with working demonstrations of solar thermal, biomass, as well as heat pumps. There will be other displays such as the well known bicycle repair man and information about other local green initiatives and businesses; Llanidloes is a town leading the way for sustainable living in Wales and many local groups will be on hand. There will also be a bar serving refreshments and fair-trade beverages, along with locally produced food.

There will be experts available to demonstrate and explain how these technologies work and to answer questions. The event is designed to help people understand how renewable energy can provide heating and to reduce their carbon foot print, along with the promotion of the benefits of energy conservation and efficiency. It is open to all from the mildly curious to those wishing to heat their buildings in a low carbon way.

For more information email jo@llanisolar.co.uk or ring 01686 412552.

Sustainable Innovation 09, 26th - 27th October 2009

Towards a Low Carbon Innovation Revolution, 14th International Conference, part of the 'Towards Sustainable Product Design' series of conferences, Farnham Castle, Farnham, Surrey

Sustainable Innovation 09 will provide a platform to discuss the future opportunities and challenges related to the design, development and commercialisation of low carbon innovation, technologies, products and services. Sustainable Innovation 09 will include invited and refereed papers from academics, consultants, entrepreneurs, investors, technology providers, designers, sustainability, environment and Corporate Social Responsibility (CSR) managers as well as other business functions. The event will be a unique learning experience, networking space and an opportunity to think. Delegates will come globally from large companies, entrepreneurs, as well as academia, government and non-governmental organisations (NGOs).

Full details are at www.cfsd.org.uk/events/tspd14/index.html

Low Carbon Heat In Action: A Guided Tour, London, 10th November.

Join a guided tour of refurbished flats using a condensing gas CHP system at Roupell Road in South London, 12.30-15.30, 10 November 2009. There is no charge for the visit but places are limited and delegates need to sign up now with sally@aecb.net to secure a place.

Further information is available via the AECB website, www.aecb.net.

National Energy Services Conference 2009, Nov 10th and 12th.

The last 12 months have seen yet more development and challenges in our industry. Our annual national conference has always been one of the main opportunities where members of our NHER and SAVA

schemes can keep up to date with the latest policy, technical and market developments. It has also been the forum for us to explain our plans and act on feedback from members.

This year we have decided to run two one day conferences for our members. We have two identical conferences in different locations to help reduce travelling time and costs.

- Tuesday 10th November, Croydon
- Thursday 12th November, Birmingham

Full details are at www.nher.co.uk/conference2009/

Courses

Using PHPP In A Building Certification Process

At the time of going to press there are still a few places remaining on the London course 8-9 October 2009. Contact sally@aecb.net for details.

New Dates Announced

- Birmingham: 30 November – 1 December 2009
- London: 15-16 December 2009

Part of the CarbonLite Training Programme, this practical hands-on course will provide energy consultants, technical building designers and architects with the skills necessary to design low energy and CO2 buildings to AECB standards using the PassivHaus Planning Package (PHPP).

There is limited availability on the Birmingham course and delegates are advised to book early for this venue.

Book online at: www.carbonlite.org.uk/carbonlite/training

New course dates for your diary

- Introduction to Passivhaus - London: 14 December 2009
- Calculating psi Values for Thermal Bridging – London: 17 December 2009

Please contact sally@aecb.net to be added to the list for further information about these courses.

Vacancies

AECB Business Development Officer

AECB – the sustainable building association - is a network of over 1500 green building professionals and is the UK's leading green building organisation. As such, it is taking an increasingly prominent role in developing strategies to mitigate the climate change impact of our built environment. Among its many activities, the AECB lobbies for improved building regulations and monitoring, has developed comprehensive energy performance standards for buildings, and disseminates information on best practice through publications, training and conferences.

To support the increased demands this entails, we are looking to increase the capacity and resources of the AECB. As part of a wider development programme, we are currently looking to recruit a dynamic Business Development Officer to improve services to the growing membership, implement a strategy to continue this growth, and identify new funding streams.

The post is 22.5 hours per week for an initial three year period at a salary of £16k. The post entails working from home, although some UK travel will be required. The closing date for applications is 12.00pm (noon) on 16 October 2009. Interviews will be held on 26 October 2009 in Birmingham.

This is an opportunity to contribute to the growth and success of an exciting, transformational organisation. For a full description of the post and details of how to apply, please visit: www.aecb.net/jobs

If you have any news, events or courses you would like to publicise in Network then please email details to network@aecb.net, or post to Chris Lord-Smith, y Graig, Llidiart-y-Waen, Llanidloes, SY18 6JT.