Highland Energy Review 6

April 07

Image: Sustainable Scotland Network

Highland Council commits to tackle climate change

The Highland Council has demonstrated its commitment to tackling climate change by joining forces with other local authorities across Scotland and signing Scotland's Climate Change Declaration. Scottish Local Authorities are at the forefront of this significant new commitment to mitigate against and adapt to climate change. Each Council will produce and publicly declare a plan to achieve a significant reduction in greenhouse gas emissions from their own operations, assess the risks and opportunities for services and communities of predicted climate change impacts, and take action to adapt accordingly. The SCCD was signed on the 17th January by the Convenor Alison Magee and Chief Executive Arthur McCourt.

Awareness and acceptance of the impact of global climate change is steadily increasing in the political, media and public arenas. A recent statement from the Intergovernmental Panel on Climate Change (IPCC) stated that climate change is "very likely" to have a human cause and that the panel was at least 90% certain that human emissions of greenhouse gases rather than natural variations are warming the planet's surface. Research shows important climatic changes ahead for Scotland. There is a trend of warmer, wetter, cloudier winters, and warmer, drier summers combined with an increase in the frequency of extreme weather events. Evidence of climate change in the UK includes a doubling in the number of winter storms over the past 50 years and the occurrence, since 1990, of the ten warmest years since records began.

Scotland's Climate Change Declaration complements the Council's existing commitments to tackling climate change. In 2006 the Council adopted ambitious plans to limit CO2 emissions in Council buildings, vehicle fleets, street lighting and landfill sites, in collaboration with the Carbon Trust, a Government backed independent company helping business and the public sector move towards a low carbon economy. All fossil fuels (including oil, gas, coal, petrol and diesel) produce carbon emissions, which are understood to trap heat in the earth's atmosphere leading to an increase in global warming and ultimately, contribute to climate change. The Council is aiming to reduce CO2 emissions through the promotion of renewable energy and improved standards of energy efficiency.

Climate Change Strategy

The Council has begun to develop a Highland Climate Change Strategy, recognising the immediate need to develop climate change adaptation measures based on an assessment of risks and opportunities for services and communities. Adaptation measures include maintenance regimes and infrastructure upgrades to protect against extreme weather events, flood prevention and control, promoting resilient construction practice and the strategic use of Sustainable Urban Drainage Systems.

By signing Scotland's Climate Change Declaration the Council is leading by example in helping to ensure greener, more efficient delivery of public services in the Highlands. Further information on the Declaration can be found at www.sustainable-scotland.net/climatechange.

Also in this issue…

Sustainable energy

Building a sustainable home

The word sustainable has come to take on several and often contradictory meanings in the building industry recently. It is applied loosely to materials with low-embodied energy, materials from a sustainable source, locally produced materials, heating systems using renewable technologies and low cost housing built to sustain a community. Sometimes these meanings are incompatible. For example, generally, the greener the insulation material the more expensive it is.

However I would argue that a desire to preserve the planet and conserve energy must be embodied in the design process from the very first site visit, that sustainable design should be integral to the approach, that there is little point in using the available renewable technologies without insulating correctly, using good quality glazing and orientating the house correctly. Care must be taken to maximise on the psychological as well as thermal benefits of the sun.

Before developing a design or embarking on a build project a thorough analysis of the site and brief is required.

The Site

A careful analysis of the site should include:

- a study of the topography in order to maximise the sheltering benefits of natural or man made slopes
- the geology in order to consider the site clearance and foundation design as well as the potential for various renewable technologies
- the aspect in order to maximise the benefits of solar gain (note shading of the south facing glazing from the strong summer sun)
- access and servicing in order to minimise ground works and connection costs.

In addition a thorough analysis should consider domestic and agricultural built precedents in terms of form, proportion and scale and materials.

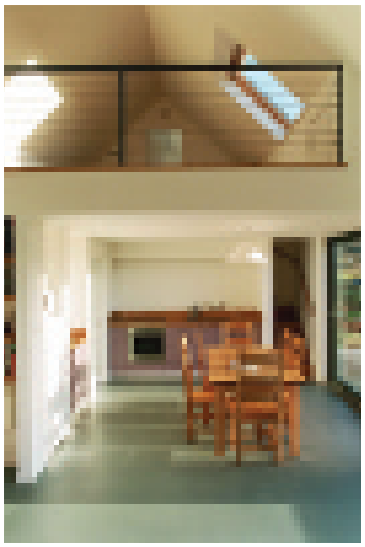
The Brief

In addition to a brief describing the spaces and rooms it is worth analysing how the occupiers use or intend to use the house. Would they prefer an open plan or conventional house? When do they use the house – all year, in the morning and evenings only or all day? Also, they should ask themselves why they want to consider renewable technologies. Is it simply as a means of saving on heating bills or a desire to preserve the environment? For most it seems it is a bit of both. They should also consider how they see their future – expanding or downsizing.

The Solution

Only with a clear brief and understanding of the site can the design process begin. To maximise efficiency the house should be simple in form and plan, avoiding unnecessarily awkward large spaces, corridors or hallways. The house should be tucked in where possible to shelter from the prevailing winds and correctly orientated to make efficient use of the sun. The building should be insulated beyond Building Regulations where possible, all windows and doors well sealed but with controlled ventilation. Low E glass with argon filled cavities are advised and a simple palette of materials, hardwearing and from local, sustainable or renewable sources where possible. Renewable technologies such as ground or air source heat pumps, solar panels or photovoltaics, hydro or wind turbines and biomass boilers should be considered where appropriate and early on in the process.

This article was kindly provided by Mary Arnold-Forster who is a principal architect with Dualchas Building Design practice based in Skye. (www.dualchas.com)



Highland Council Energy Champions and Local Authority Energy Day

The Highland Council has established a network of 'energy champions' across all Council Services. The key role of these champions is to encourage their colleagues to develop good energy management habits and to enthuse them to come up with ideas for making Council buildings more energy efficient. An innovation fund will be available to help implement energy saving schemes. This initiative will help enable staff to save energy and therefore contribute to reducing CO2 emissions from Council buildings by 15% by 2010.

The Council renewed its commitment to reducing greenhouse gas emissions by launching a high profile campaign for UK Local Authority Energy Day on the 25th October. The campaign emphasised that collectively, small changes by individuals can have a big impact in reducing emissions. Over a period of a week, staff and Councillors were asked to 'switch on to switching off' in a bid to reduce electricity use by 10% during working hours. The outcome highlighted the rewards of promoting energy saving activity as staff at Council HQ achieved an 8% decrease in electricity use compared with average consumption over the previous three weeks.

Also, as part of Local Authority Energy Day, staff conducted "walk rounds" to encourage colleagues to save energy by switching off lights and computer monitors when not in use and making sure that printers and photocopiers were switched off overnight. A new corporate screensaver was launched, ensuring that PC users are provided with regular energy saving tips. The day was supported by the Highland Energy Efficiency Advice Centre who were on hand at Council HQ to offer advice on saving energy and reducing household bills.

A campaign poster

Helping to reduce your fuel bills

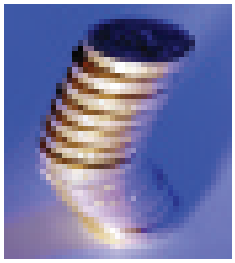
Switching your energy supplier

The recent announcements from some fuel companies that they will be reducing their prices this spring is great news for anyone who has to pay a fuel bill. One of the main reasons for this has been the fall in wholesale gas prices which have been dropping since last summer. Although this is very welcome news, the cost of energy has still risen way above the rate of inflation over the last three years even if taking these forthcoming price cuts into account.

One way in which you can possibly reduce your energy bills further is to compare the tariffs of different suppliers. Competition in the gas and electricity markets now means that you can usually choose from a range of companies who are competing for the opportunity to supply your gas and electricity. Energy suppliers offer a range of incentives, discounts and different energy packages, including different methods of payment, which will determine how much you will pay. Ofgem reported that in 2006 more than four million people switched their electricity or gas supplier, an increase of 750,000 on the previous year.

Some suppliers are now purely internet only based tariffs i.e. paperless billing, and savings can be made if you sign up with one of these suppliers. It is also important to remember that you must give your current supplier at least 28 days notice that you are changing to a new supplier.

Often customers are hesitant to change suppliers afraid that it will turn into an administrative nightmare. However there is guidance available from Energywatch the independent gas and electricity watchdog. Their web site provides contact details for a range of companies who provide free price comparison information by telephone, post or on the internet. All of these companies have signed up to the Energywatch code of practice for providing this service.



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You can also get further advice on switching suppliers, including details on the various price comparison organisations, by contacting the Highland Energy Efficiency Advice Centre on Freephone 0800 512 012. Alternatively, log onto the HEEAC web pages at www.highland.gov.uk/energy-advice for this and further advice on saving energy in the home.

The Energywatch web site can be found at www.energywatch.org.uk

Important points to consider

- Check if prices quoted for gas and electricity include VAT
- Keep a look out for extra costs such as standing charges or deposits
- Make sure the options for paying bills include the payment method that suits you
- Consider the discounts offered for using different payment methods or for how much fuel you use
- See if you can buy both your gas and electricity from the same supplier and if there is a discount for doing this
- Compare special services being offered to elderly, disabled and chronically sick consumers
- Note any charges for servicing appliances and whether you can cancel any contracts you already have

Grant funding for energy efficiency improvements from the Highland Energy Partnership

If you're considering making improvements to your home to help reduce your fuel bills, then help is at hand. There are a range of grants and offers available to help you implement energy saving measures. One of the main sources is the energy suppliers who are obliged to help achieve national targets for saving energy. They provide a range of offers which significantly reduce the cost of installing energy efficiency measures for your home. What's more, you can take up offers from any of the energy companies, regardless of who supplies your gas and electricity.

A key way to combat increases on your energy bill is to make sure that your home is properly insulated. This means having at least 250mm of insulation in your loft; cavity fill insulation in your walls (if your house type allows it); lagging on all your heating pipes; and draught excluders on the doors and windows etc. This gives warmer, more comfortable homes and also helps save money. Once installed, insulation can help a householder save, on average, up to £250 per year on fuel bills, year after year.*

The Highland Council is working in partnership with ScottishPower and Everwarm North to provide cavity wall and loft insulation in all of its council houses. The good news is that the partnership is now offering help to private homeowners and privately renting tenants, giving them the opportunity to apply for FREE cavity wall and loft insulation. To qualify to have a home insulated free of charge the homeowner or private tenant must be receiving one of the qualifying benefits shown opposite and for free loft insulation of up to 250mm, they must have no existing insulation in their loft.

Qualifying Benefits

- Attendance allowance • Housing benefit
- Disability living allowance • Income support
- Income based job seeker's allowance • Working tax credit[1]
- Child tax credit[1] • Pension credit
- Industrial injuries disablement benefit [2] • Council Tax benefit[3]
- War disablement pension[4]

If the private tenant or householder does not receive any of these benefits, they may still qualify for a grant from ScottishPower to help with the costs. Private tenants need the permission of their landlord before any work is carried out.

If you think that you may qualify and wish to take advantage of this opportunity you need to contact ScottishPower on 0845 601 7836 quoting HIGH (Local call rates will apply).

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This is a limited offer and funding is allocated on a first-come, first-served basis. The partnership is one of the measures The Highland Council are taking to deliver its Fuel Poverty Strategy 2005 -2008.

For information and advice on other grants available phone the Highland Energy Efficiency Advice Centre on 0800 512012. You can also log onto the Energy Saving Trust web site which maintains a UK wide Grants Information Database. (www.est.org.uk/myhome/gid)

[1] Household income must be less than £14,600. Households with Child Tax Credit and Working Tax Credit will have a Tax Credit Awards notice showing income.
[2] Must also have Constant Attendance Allowance alongside Industrial Injuries Disablement Benefit.
[3] Does not include discount for single occupancy.
[4] Must also have Constant Attendance Allowance or mobility supplement alongside War Disablement Pension.

** Source: Energy Saving Trust (based on a 3 bed-roomed, gas heated semi-detached house having cavity wall and full loft insulation installed).*

Energy efficiency

Fortrose Academy Energy Day

In November the Highland Energy Efficiency Advice Centre organised an Energy Day at Fortrose Academy. The day's activities included presentations on why it is important that we save energy and reduce carbon emissions, renewable energy along with highlighting measures to save energy in both the home and at school. There were also workshops sessions where pupils took on the role of energy inspectors and had to recommend energy efficiency measures within a budget in order to meet a savings target.

Renewable technologies were practically demonstrated by the temporary erection of a small wind turbine and photovoltaic solar panel in the school car park enabling pupils and staff to see a renewable energy technology in action. Also participating in the event were CSV Action for Sustainability which is a one-stop shop for all highland schools to integrate sustainable development.

Pupils were encouraged to take the energy saving message home by getting their household to complete an energy advice enquiry form. As an encouragement the HEEAC and Action for Sustainability pledged to each donate a wind up radio each for every 100 forms returned by the pupils. This resulted in ten radios being presented to the academy which they will be sending out to Mulanje Mission Day Secondary School in Malawi as part of a link project. The objectives of the project are for the two schools to learn together and from each other. Fortrose Academy is also looking at how the learning environment in Mulanje can be improved and the radios will be doing this by increasing communications.

Renewable technologies being demonstrated to pupils

Looking for energy advice?

The Highland Council provides free and impartial energy advice and information from their Highland Energy Efficiency Advice Centre. They can give advice on:

- Cutting your heating costs and fuel bills.
- Dealing with dampness and condensation.
- Getting up to 20% off fuel costs if you are considered to be in 'fuel poverty'.
- Making improvements to your home so that it is more energy efficient.
- Information on the different types of heating system
- Grants funding to help with energy efficiency improvements.
- How to select fuel suppliers and switching to the best payment method.
- Using renewable technology for heating and hot water systems.

Our next newsletter will be published in September 2007. If you have any comments or ideas for future articles please contact:

Highland Energy Efficiency Advice Centre, FREEPOST IV 163, The Highland Council, Glenurquhart Road, INVERNESS, IV3 5BR, Tel: FREEPHONE 0800 512 012.
e-mail: energy-advice@highland.gov.uk
web: www.highland.gov.uk/energy-advice

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