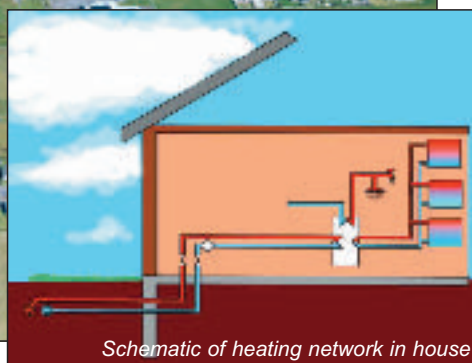


Highland Energy Review

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Pulteneytown and the distillery shown centre (Photo: Alan Moar)



Schematic of heating network in house



Wick District Heating Scheme

The Pulteneytown area of Wick has been identified as an ideal location for a district heating scheme. The primary objective of the first phase of the project is to bring out of fuel poverty some 500 homes and to significantly reduce the cost of heating for the householders.

District heating is a system using underground pipes that delivers heat to many houses from a single boiler plant. Houses will have a hot water cylinder and radiators just like any normal system but instead of a boiler they will have a heat exchanger which does the same job.

The scheme involves utilising a wood fuel boiler which was chosen due to the local availability of the sustainable forest fuel which is also constantly available. Use of this fuel type reduces dependence on natural gas or fuel oils, develops the local economy and has less environmental impact being carbon neutral. The scheme will be using proven technology for the generation and distribution of heat to the homes, however, probably the most innovative aspect is using waste heat from the Wick distillery located amongst the houses in Pulteneytown which will benefit from the scheme. The distillery has a significant heat surplus for recovery into the scheme which is estimated to provide 60% of the heat needed for 500 houses. The distillery benefits from being a partner as they stand to reduce their energy costs by around 50%.

The project has been developed by Elizabeth Marshall, the Highland Council Development Manager for the Caithness area. Her key role is to identify and structure projects such as the community heating scheme for financing. The key

partners in the scheme are Inverhouse Distillers, Pulteneytown Peoples Project, and The Highland Council.

The heating scheme will be owned and operated by a community owned, not-for-profit Company limited by guarantee. The Highland Council agreed to utilise Warm and Dry Programme funding for the new heating networks and housing internals if it could get match funding from the Energy Savings Trust (EST) to allow district heating for 500 houses adjacent to the distillery to proceed. This was obtained giving initial funding for the scheme amounting to £3.4m, of which 1.54m has been obtained via a Community Energy Programme grant from the EST and the remainder from The Highland Council. The heat network installation costs are in the region of £2m. Although a consultation and consent process with tenants has to be completed it is intended that heating and power charges will be combined with the rent bills. It is hoped that the first homes will be connected to the scheme by the end of 2005.

It is intended that transportation of the wood fuel will be by rail freight where possible, using innovative container handling systems which will prevent adding further heavy vehicles to the traffic levels on local roads. This also makes the scheme eligible for further grant funding from the EU Northern Periphery Programme and Scottish Executive. Future plans for the scheme involve connecting the hospital and other public buildings, the technical challenge of combined heat and power generation and obtaining heat from the anaerobic digestion of the potale, a by-product of the distillation process.

Energy Efficiency in the Home

Although lighting uses less energy than heating and cooking, it is still worth making savings because, per unit consumed, electricity is your most expensive fuel. The main way of doing this is by fitting fluorescent lights or using energy saving bulbs instead of ordinary filament light bulbs.



One 20-watt 'electronic' compact fluorescent bulb is equivalent to a 100-watt ordinary bulb. It therefore uses only 20% of the energy. It can also last eight times longer than ordinary bulb.



Where you don't need much light, use lower wattage bulbs. Directional lights are good for reading and sewing.

Light Bulb Amnesties proving a great success

Over the second half of this year the Highland Energy Efficiency Advice Centre (HEEAC) has been continuing with its programme of light bulb amnesties. These events give households the opportunity to exchange up to four of their old inefficient bulbs for the new energy efficient types which use about 80% less power. They also enable the HEEAC to provide information to the community under the Council's Home Energy Conservation Act strategy. Since July amnesties have been held in Gairloch, Kinlochleven, Kingussie, Grantown, Kyle, Mallaig and Invergordon. These events have been attended by representatives from more than 1200 households who have exchanged bulbs and also completed Home Energy Checks (HEC) – see Alphabet Soup below.

Future amnesties are programmed to take place in Thurso (26th Jan) and Tain (8th March). Please contact the HEEAC on FREEPHONE 0800 512 012 for venues.



Energy efficient light bulbs (Source: The Energy Saving Trust)

Lochaber Energy Champions

A pilot project is being run in the Lochaber area using people who are active within the community to provide energy efficiency advice to local people and community groups. The key objectives are to achieve warmer homes, particularly for vulnerable people and those experiencing fuel poverty, and communicating a consistent energy efficiency message within the community, statutory agencies and voluntary organisations. Additional benefits include increasing uptake of Scottish Executive grants for energy efficiency measures such as loft insulation and developing new skills within the community.

Voluntary Action Lochaber (VAL), whose key role is to support the voluntary sector, are the managing agents for the pilot project and based in Fort William. VAL liaise directly with the Energy Champions, all of which have completed City and Guild training, supporting them in their energy efficiency activities.

Since May this year results have been achieved with many people in the community completing Home Energy Checks. Equally important though is the increased awareness of energy efficiency and how it can save money. This is being achieved through the efforts of the Energy Champions such as presentations to groups within the community and the workplace.

The pilot project is being monitored by the HEEAC and depending upon its success it is hoped to start similar schemes in other areas of the Highlands in the future.

Alphabet Soup – The Sequel

Continuing on from the previous issue of HER we continue our look at the language of acronyms which are so widely used by people involved in the world of energy efficiency. Here are some more examples:

TRV – thermostatic radiator valve. These are fitted onto radiators and are designed so that different rooms can be kept at individual temperatures. They are fitted in the place of the ordinary radiator valves.

CHP – Combined Heating and Power. This involves generating electricity locally to where it is needed and using the waste heat to contribute to heating the dwellings.

HEC – No this is not a mild exclamation of surprise but a Home Energy Check. This simple questionnaire enables a home owner to provide details of their dwelling, such as basic construction, heating type and insulation measures, to the energy efficiency advice centre. This information is entered into an energy database and an energy report is then produced and issued to the client. The report can suggest further energy efficiency measures and what grants the home owner may be eligible for.

Hopefully these examples have thrown a little more light on the subject and you will be more prepared next time you are involved in an energy efficiency discussion!

Renewables, sustainable buildings and the community

Renewable energy development guidance for communities

The Highland Council and Highlands and Islands Enterprise have produced a Community Renewables Toolkit that highlights opportunities for Highland communities to benefit from the production and use of renewable energy, which is energy generated from any source that can be continually replaced, such as wind, water, timber and even waste.

Entitled "Can Your Community Benefit from Renewable Energy Development?" the toolkit has been circulated to Community Councils and placed on the Council's website.

Government incentives to increase renewable energy production have created an unprecedented level of interest in commercial renewable energy development in the Highlands but there are also significant opportunities for communities and even households to develop their own small-scale renewable energy projects.

It is hoped that the toolkit will increase knowledge and capacity within communities to respond to renewable energy opportunities. The toolkit demonstrates how communities can develop their own schemes, illustrating recent community projects and providing information on grant aid and support.

It also presents options for securing and distributing community benefit funding from commercial development, including a community benefit "roadmap" for use by Community councils and community groups, which signposts sources of help backed up by a series of guidance notes or "Tools".

As renewable energy is a fast evolving industry and changes in energy trading arrangements and options for communities are likely, the internet version of the toolkit will be updated with current information as the community renewables sector develops. Many communities are already involved in renewable energy initiatives and are invited to contribute additional information to the toolkit, via the Council's web site at www.highland.gov.uk/cx/community-benefit/community_benefit.htm

Commenting on the response to the Toolkit, Una Lee, Sustainable Development Officer, for The Highland Council said "Through the implementation of its policy on Community Benefit, and in particular the production of the Toolkit, the Council is receiving national recognition as the front-runner in the campaign to secure community benefit from renewable energy development in Scotland. The Council has received requests for copies of the toolkit from council areas across Scotland and Wales, and also from Ireland and the US. In addition, since its publication, Council representatives have been invited to speak at three information-sharing events in the south of Scotland. "



Using your washing machine sensibly can mean real savings. For example, choosing a wash cycle at 40°C – fine for most fabrics – will cost you a quarter of the amount of the hottest cycle.

Energise Your Community

The Highland Environment Network and Network 21 are holding a joint communities event that will focus on the development of community renewables projects. The conference will take place on Saturday 19 March 2005 at the Highland Council Headquarters, Glenurquhart Road, Inverness.

The aim of the conference is to highlight opportunities for Highland communities to develop their own renewable energy projects. The event will consist of talks and workshops that demonstrate the benefits of community-owned schemes, showcase appropriate technologies and signpost relevant sources of funding.

The event will be funded by The Highland Council, Highlands and Islands Enterprise and Network 21.

Sustainable Building Guidance

Network 21 will shortly be producing a sustainable building guidance note for community groups. The guidance provides an overview for groups that wish to incorporate sustainability practice within their plans for a new or renovated community building.

The guide outlines the main sustainability issues and choices that a group would come across and also outlines the groups responsibilities involved when working with architects and other professionals. The guide begins with an overview of the purpose and principles of sustainable construction practice in the Highlands, then subsequent sections go on to illustrate how these can be applied in the three main stages of creating a community building:

- 1 – Getting Started: the Building Feasibility Study
- 2 – Developing Your Proposal: the Scheme Design Study
- 3 – Construction and Completion

The final section provides a series of Guides – these are tools to help make decisions, including checklists, practical action points and quick digests. These can be copied for reference by the group as their project progresses.

Network 21 is a partnership of the Highland Wellbeing Alliance involving public bodies, the voluntary sector and local communities. Through co-operation and development of a mutual support network the partnership builds community based awareness and action for sustainable development.

For further information on any of the above please contact Una Lee, Sustainable Development Officer, The Highland Council, Glenurquhart Road, Inverness, Tel: 01463 702543.

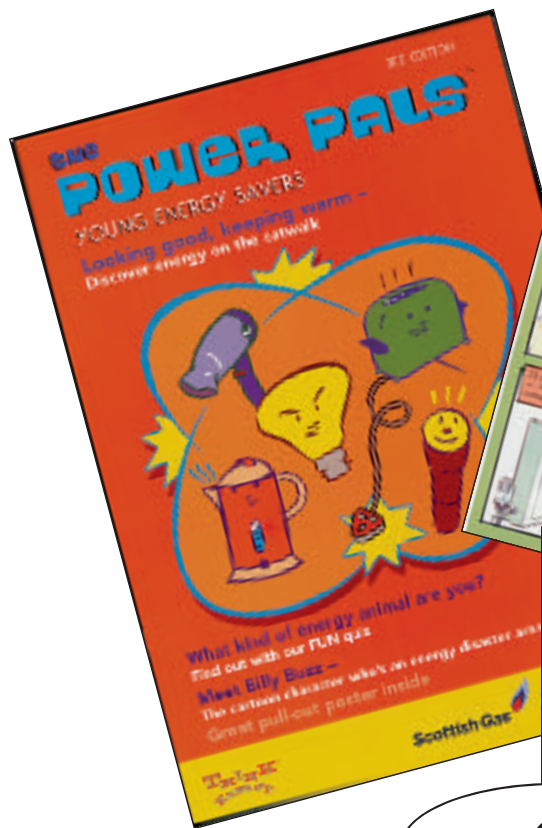
Global Warming Awareness in Schools



If you have security lights, make sure they use low energy bulbs and are directed properly to minimise light pollution.



Halogen spotlights, fashionable in modern kitchens and bathrooms, are not energy efficient, they are merely low voltage.



The Highland Energy Efficiency Advice Centre (HEEAC) invited primary schools to take part in a caption competition as part of an initiative to raise pupil awareness of global warming and how they can help limit its impact on the environment. As well as receiving information and activity packs on energy efficiency the pupils were being asked to think up a suitable caption to an image of 'Nessie' against the backdrop of a dried-up Loch Ness. This thought provoking picture was featured on the front cover of the previous issue of HER.

There was a very enthusiastic response from the primary schools with 37 taking part representing over 1500 children. Prizes will include educational trips for the winning schools. This project is just one example of how the HEEAC works within the community to spread the word on energy efficiency.

Our next newsletter will be published in May 2005. Please send any comments, contributions or suggestions for articles to: **Highland Energy Efficiency Advice Centre, FREEPOST IV 163, The Highland Council, Glenurquhart Road, INVERNESS, IV3 5BR.**

Image credits go to Alan Moar (view of Pulteneytown), Shetland Heat, Energy and Power (house schematic), Scottish Gas and Scottish Hydro Electric (school energy efficiency material). Many thanks.

The Highland Energy Review is funded by the (Energy Saving Trust) **Local Authority Support Programme** which provides resources to councils to achieve their targets under the Home Energy Conservation Act obligations.