

Scottish Woodfuel News

No. 2 May 2007



Coille Beithe na Gàidhealtachd
**HIGHLAND
BIRCHWOODS**



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Welcome to Issue 2 of Scottish Woodfuel News. We intend SWFN to become a regular newsletter, with issue 3 planned for late 2007. Please send contributions to woodfuel@reforestingscotland.org.uk.

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Woodfuel update

Scotland has experienced a tremendous growth in the use of woodfuel over the last few years. The majority of wood fibre used for energy is in large-scale projects, such as co-firing in power stations but there is an ever-increasing number of smaller-scale heat only plants. There are now over 50 projects with an installed capacity of nearly 12 MW of heat. Five woodfuelled district heating schemes are providing heat for homes across Scotland and more are in the pipeline.

The Scottish Executive has now brought together the wealth of activities being undertaken on biomass in the Biomass Action Plan for Scotland (see www.scotland.gov.uk/Publications/2007/03/12095912/0). This sets out a coordinated programme for the development of the biomass sector in Scotland. One of the Executive's key initiatives is the £10.5 million Scottish Biomass Support Scheme. The response to the

Scheme has been tremendous and out of 130 applications, 74 projects have been awarded funding. A full list of recipients is available at www.scotland.gov.uk/Topics/Business-Industry/infrastructure/19185/BioSupport/SBSSAnnouncement. These projects should result in carbon savings of 37,000 tonnes per annum and support up to 50MW of green energy production.

In what is a very encouraging sign, the Biomass Action Plan for Scotland reflects the greater





diversity of biomass technologies being adopted by the market. A good example is John Rennie's 700kW biogas anaerobic digester in Aberdeenshire. Farmers are also installing a number of grain and straw burning systems. Further expansion of the market is also taking place, and we are seeing rapid development of the pellet manufacturing sector, with Scottish pellets from local timber soon to be available.

An interesting development has been the rising awareness of carbon impact by the public. Many commercial users and higher education establishments are adopting biomass as it can deliver significant carbon savings at a relatively low cost, and can help stimulate green jobs and local economic development. The planning system is also now supporting the development of biomass – for example new legislation under SPP6 will require 15% of onsite generation for new developments over 500m² to come from renewables. Developers are choosing biomass as the most cost-effective way to achieve the target.

If you would like help and advice to develop a biomass project, Forestry Commission Scotland has a network of woodfuel advisors who can help. We have recently appointed a new South Scotland officer, David Rogers, who will be based at Dumfries. For further information and contact details see www.usewoodfuel.co.uk

Dan Gates

Northern WoodHeat - Developing small and medium scale woodfuel supply chains

Northern WoodHeat is a Northern Periphery Programme funded project managed by Highland Birchwoods. Its aim is to encourage the development of sustainable woodfuel supply chains at the small and medium scale in peripheral areas of Northern Europe. It has 16 partners in Scotland, Finland and Iceland which represent a comprehensive range of interests in the woodfuel industry, including private enterprises, local authorities, community woodlands, educational institutes and government forestry organisations. The project is now in the last of its three years and has been involved in a variety of activities aimed at raising awareness of the benefits of woodfuel use. In Scotland, this has included trialling and demonstrating woodfuel production techniques at several sites across the Highlands. It has also been involved in delivering woodfuel training, disseminating information to improve woodfuel expertise, and holding seminars and events to

raise awareness about opportunities that woodfuel markets can bring to users, producers, the wider community and the environment.

Supply chain stability has been identified as a key issue for the development of a viable woodfuel industry, thus the project's outputs will make a valuable contribution to ensuring biomass's place in future renewable energy production.

Northern WoodHeat will continue to host open days and seminars and produce publications on different aspects of sustainable woodfuel supply during 2007, and will hold its closing conference in Strathpeffer on September 4th -6th.

For more information about the project's forthcoming activities and events in 2007 go to www.northernwoodheat.net or contact the Project Manager at Highland Birchwoods on 01463 811 606; E:fiona.mcphie@highlandbirchwoods.co.uk

Fiona McPhie

Contributors

Dan Gates is Forestry Commission Scotland's East of Scotland Woodfuel Adviser

Fiona McPhie is Manager of Highland Birchwoods' Northern Woodheat Project.

Lauri Sikanen and Dominik Röser are experts in wood energy from the Finnish Forest Research Institute (METLA). They have been closely involved in the Northern WoodHeat project and have carried out woodfuel case studies at several locations in the Highlands.

Edit/Layout: Nick Marshall **Photos:** Dan Gates, Nick Marshall

Scotland's Woodfuel Industry: The Finnish Perspective

From the Finnish point of view, the Scottish Highlands have many strengths when considering the extended use of forest fuels. The ecologically sustainable harvesting volumes are already remarkable and they will be multiplied in the future. The competitive use of forest biomass is limited, contrary to the situation in Finland, where almost all timber above 7 cm diameter is used for papermaking and sawmilling. The existing foresters can already run efficient operations which provides a good basis for establishing the supply chain, and heat is definitely needed in the harsh climate of the Highlands. Scotland's geography also strongly supports the local use of forest energy. Economics can easily be ruined by long transportation distances. Windy, single track roads and the small load volumes of timber lorries limit transportation distances to about 70 miles, so it is essential that woodfuel use is locally centred.

Furthermore, forest fuels can offer business possibilities for local forest contractors as well as for farmers and other landowners. Additionally, state owned forests already offer a well managed raw material basis, which could be used to ensure reliable supply. We Finns have already seen promising cases across the Scottish Highlands and the strong faith of Scottish professionals and the increasing interest of the public in forest fuels are positive signs for future development. No matter where you are in Scotland, old oil or gas boilers will need to be replaced.

Furthermore, there is a large amount of new development - new suburban residential areas are planned, as are new community centres, schools or other larger public premises. In these cases wood based heating relying on local raw material and entrepreneurship should be seriously considered. Of course, it is not the best option everywhere but in many cases it is likely to be the cheapest and most sustainable form of energy both from an ecological and social perspective. Finnish professionals have evaluated most of European countries from the increased forest energy utilisation point of view, and Scotland is definitely one of the most promising areas in this context. It won't be easy, but surely you can make it happen!

Lauri Sikanen and Dominik Röser



Aviemore North District Heating Scheme

Albyn Homes have installed a wood fuel district heating scheme to provide heating and hot water for 133 homes in Aviemore. Environmental concerns and a desire to take advantage of the natural wood resources in the Aviemore area had led them to woodfuel. It also helped with the planning process and, although the development is not finished, it is likely to achieve 'Eco Homes excellent' rating. The carbon dioxide saving is estimated at 1400 tonnes per year compared to a conventional heating system.

The scheme is interesting in that the boiler house is situated on an adjacent industrial estate. When the scheme was devised, there was a perception that residents might otherwise have been

disturbed by fuel deliveries. Although there was considerable extra cost involved in placing the boilers further away (over £100,000), as additional pipe had to be laid under the main railway line, this was offset by the fact that extra houses could be built on the land that would have otherwise housed the outbuilding.





The district heating system consists of three boilers. The largest 450kW boiler (pictured), to be used for the majority of the heating and hot water needs, is a step grate system and as such is capable of burning larger wood chips of up to 50% moisture content. There is also a smaller 120kW wood boiler, which has an underfed grate and so requires a higher grade of fuel (smaller chip of up to 30% moisture content). There is also a back up oil boiler and large accumulator tanks which can hold heat for around 3-4 hours without

top up - enough time in unlikely case of treble boiler failure for the engineer to come from Edinburgh.

The estimated all-in additional project cost for the biomass district heating was £1m. The sizing of the scheme was originally for 200 homes, however, due to difficulties with the grant system, the private housing (by Robertsons) was not eligible to be connected. Also the high degree of redundancy in the system has increased the capital cost.

Installing a biomass system is never easy, but in this case some of the challenges were considerable. All the partners are to be commended but in particular the housing society's development director Donald Lockhart has been a keystone in ensuring the success of the scheme. However the reward is high - reducing environmental impact, supporting local business and most importantly keeping the fuel bills down for the tenants. All things considered, this is an exemplar project and a truly excellent development in Scotland's pathway to a renewable future.

Dan Gates

Resources Section

Grants

The Scottish Executive's Scottish Biomass Support Scheme, supporting the development of biomass fuel, is now closed to applications. The Low Carbon Building programme provides grants for micro-generation of heat, as will the Executive's SCHRI for domestic users or community groups. Both of these grants are administered by the Energy Saving Trust. Also many of the major power companies administer their own 'green' funds to assist community renewable projects. On the supply side new grants are being developed to support the growing of energy crops and are likely to be delivered through the new Land Management Contracts. This is as yet unclear and more information will be provided when available.

Low Carbon Buildings Programme (LCBP)
www.lowcarbonbuildings.org.uk/home/ This scheme has just had a 50% funding boost and further details will be available shortly.

1. Private householders
 - (a) Room Heater/Stoves automated wood pellet feed - Maximum £600 regardless of size subject to an overall 20% limit (exclusive of VAT)
 - (b) Wood fuelled boiler systems - Maximum £1,500 regardless of size subject to an overall 30% limit (exclusive of VAT)



2. Businesses, public sector and charitable bodies
Large commercial organisations including developers can apply for up to 40% of the total installation costs (excl. VAT). Small to medium sized enterprises (SMEs) can apply for up to 50% of the total installation costs (excl. VAT). Maximum grant £1m. See: www.lowcarbonbuildings.org.uk/home/

3. There is also a Phase 2 of the LCBP, for systems with a rated output over 50kW. with similar grant rates and requirements as for 2. Business etc (see above). At time of writing this was closed to applications.

SCHRI

Technical assistance funding is available to support non-capital projects, such as feasibility or scoping studies and capacity building within a community. The maximum grant is £10,000. Capital grants contribute to the capital costs of a project. The maximum grant is £100,000. See: www.est.org.uk/schri/community/grant.cfm

Enhanced Capital Allowances

Enhanced Capital Allowances allow businesses to claim 100% first-year capital allowances on their spending on qualifying plant and machinery. Businesses can write off the whole of the capital cost of their investment in these technologies against their taxable profits of the period during which they make the investment. This can deliver a helpful cash flow boost and a shortened payback period. See www.eca.gov.uk for details.

Loan Action Scotland

Loan Action Scotland provides loans from £5,000 to £100,000 at 0% fixed interest to help finance energy saving measures. It is aimed at Scottish companies that fall within the EC definition of Small & Medium sized Enterprises (SMEs). Registered charities can also apply. It can advance loans against a wide range of energy saving measures. For details, call 0800 092 9002. or visit www.energysavingtrust.org.uk/housingbuildings/funding/scottishbusiness/financialassistance/

The Highlands & Islands Community Energy Company

HICEC provides free advice, grant funding and finance for renewable energy projects developed by community groups to benefit their community. This extends to non-profit distributing organisations such as social enterprises and housing associations. See the HICEC website for your local

contact in the Highlands & Islands.

See: www.hie.co.uk/community-energy.html

Forward Scotland

Forward Scotland administers the Community Environmental Renewal Scheme (with £1.75 million) and the Environmental Justice Fund (with £2 million available for communities) for the Scottish Executive. Both schemes will run for one year to the end of March 2008 and will support projects that help communities enjoy their local environment and become more involved in the amenities and activities it provides, as well as the issues and decision-making that surrounds it.

The Sustainable Action Fund (SAF) provides core funding or project funding for research, demonstration projects and other relevant activities in support of sustainable development in Scotland. For details, see: www.scotland.gov.uk/Topics/SustainableDevelopment/7388

PRIVATE SECTOR GRANTS

Scottish Power Green Energy Trust

The Trust can provide up to 50% of the project costs up to a maximum of £25,000. SPGET does not support applications that will benefit only private companies, individuals or government bodies. It does not fund feasibility studies.

For details, see: www.scottishpower.co.uk/green
T: 0141 568 3492

Email: greenenergytrust@scottishpower.com

npower

Applications are welcomed by charities from the education, health and environment sectors, in line with RWE npower's community strategy. The maximum donation given to any charity in one year will be £20,000. Funds will be given to support tangible projects.

For more information see: www.npower.com/about_npover/in_the_community/fundraising.html

E.ON

Up to £30,000 towards costs of capital equipment and other costs, for renewable energy projects run or led by local community groups and not for profit organisations. For details, see www.eon-uk.com/2060.aspx or email source@eon-uk.com.

Other companies, especially energy companies, may have funds available for woodfuel projects.

Forthcoming Events

Date	Event	More info
May 23-24	All-Energy Exhibition and Conference Aberdeen	www.all-energy.co.uk/H207.html
June 1-2	Scottish WOODfair Dingwall	www.touchwood2007.org.uk
June 8-10	Introduction to Renewable Energy CAT, Wales	www.cat.org.uk/courses
June 12-14	Ignite Wood Fuel Training Lairg	www.ruraldevelopment.org.uk
June 24-29	Heating with Wood Fuel: Installers (BPEC Registered training) CAT, Wales	www.cat.org.uk/courses
July 17-19	Ignite Wood Fuel Training Newton Stewart	www.ruraldevelopment.org.uk
Sept 4-6	Northern WoodHeat closing conference Strathpeffer Pavillion	www.northernwoodheat.net
Oct 16-18	Ignite Wood Fuel Training Ullapool	www.ruraldevelopment.org.uk
Nov 12-14	Ignite Wood Fuel Training Dundee	www.ruraldevelopment.org.uk
Nov 26-30	Renewable Energy Heating (training) CAT, Wales	www.cat.org.uk/courses
Dec 11-13	Ignite Wood Fuel Training Fort William	www.ruraldevelopment.org.uk

Contacts - Information and Advice

Organisation	Contact	Tel	Email
SCHRI Regional Network		(Hotline - 0800 138 8858)	
North and West Highlands	Jon Priddy	01408 635 102	Jon.Priddy@hient.co.uk
Western Isles	Rona Womersley	01870 604932	rona.womersley@hient.co.uk
Shetland	Patrick Smith	01595 830206	Patrick@hicec.shetland.co.uk
Orkney	Sam Marcus & Colin Risbridger	01857 677 790	sam.harcus@orkney.com
Lochaber, Skye and Lochalsh	Robert Lees	01397 708266	robert.lees@hient.co.uk
Aberdeen and North East	Allan Beedie	01224 253914	abeedie@scarf.org.uk
Tayside	Elaine Morrison	01382 833490	emorrison@scarf.org.uk
Argyll and the Islands	Paul Phare & Mark Jennison	01546 870266	paul@real-alternatives.co.uk
Strathclyde and Central Scotland	Neil Philips	0141 552 0799	Neil_Phillips@thewisegroup.co.uk
Lothian, Edinburgh, Fife, Borders	Jason Leon	0131 555 4008	JLeon@Changeworks.org.uk
South West Scotland	Joe Fergusson	01292 521896	JoeFergusson@energyagency.org.uk
Alienergy (Argyll)	Steven Watson	01631 562125	steven@alienergy.org.uk
FC Woodfuel Advisers			
Highland & Islands	Rebecca Carr	01349 866004	rebecca.carr@forestry.gsi.gov.uk
East of Scotland	Dan Gates	01738 450793	dan.gates@forestry.gsi.gov.uk
West of Scotland	Trevor Blackburn	01698 368530	trevor.blackburn@forestry.gsi.gov.uk
South Scotland	David Rogers	01698 222 470	david.rogers@forestry.gsi.gov.uk

Websites and organisations

Highland Birchwoods -

www.highlandbirchwoods.co.uk - Partnership initiative to promote the development of a woodland economy in the Highlands. Web pages and downloadable documents on woodfuel. Also - **www.northernwoodheat.net** - links to websites and documents from Northern Europe. And North Sea Bioenergy - **www.bioenergy-info.com** - Useful links about bioenergy in Northern European countries.

Reforesting Scotland -

www.reforestingscotland.org.uk - Journal articles, information sheets and seminar proceedings on wood fuelled heating, equipment and fuel suppliers.

Forest Research Woodfuel Information - **www.forestresearch.gov.uk/fr/infd-66shag** - technical information about woodfuel from growing to burning.

Forestry Commission woodfuel website - **www.usewoodfuel.co.uk** - information about woodfuel, including lists of equipment and fuel suppliers in Scotland.

Biomass Energy Centre -

www.biomassenergycentre.org.uk - website and an information enquiry service, set up by Forestry commission, covering all aspects of biomass derived fuels and associated conversion technologies

Scottish Renewables -

www.scottishrenewables.com - The forum for Scotland's Renewable Energy Industry

Scottish Community and Householder Renewables Initiative (SCHRI). Hosted by the Energy Savings Trust - **www.est.org.uk/schri** - Grants, advice and support to assist the development of renewable energy schemes in Scotland.

North Highland Forest Trust - **www.nhft.co.uk** - NGO giving advice and assistance on sustainable forest management in the North Highlands. Downloadable document on woodchip supply chain.

Renewable Energy Association (includes former British Biogen) - **www.r-p-a.org.uk** - The trade association for the renewable energy industry in the UK. Website has information on all aspects of heating with wood as well as equipment suppliers.

Centre for Alternative Technology(CAT) - **www.cat.org.uk** - Wales-based NGO provides advice, training and practical demonstrations of all aspects of renewable energy. Mail order books and publications on all aspects of renewable energy including wood fuel.

Highlands and Islands Community Energy Company - **www.hie.co.uk/community-energy.html** - Information about support available in the Highlands and Islands.

Publications

A layperson's guide to efficient, modern production & use of small-scale woodfuel systems
From: www.ecodyfi.org.uk/energy/DyfiEcoWdFfinl.htm

Small-Scale Biomass (December 2005) Energy Savings Trust Factsheet
From <http://www.est.org.uk/schri/resources/factsheets.cfm> or Tel: 0800 512 012

Small-scale Systems for Harvesting Woodfuel Products (Oct 2005) Forestry Commission Technical Note 9 From: www.forestry.gov.uk/publications or Contact Forestry Commission Publications Tel: 0870 121 4180 Fax: 0870 121 4181 Email: forestry@twoten.press.net

Clean Green Heat - Leaflet on 'Wood Energy Partnerships in North and West Scotland' www.northernwoodheat.net/html/cleangreenheat.pdf

Northern WoodHeat Infocards (from www.northernwoodheat.net):

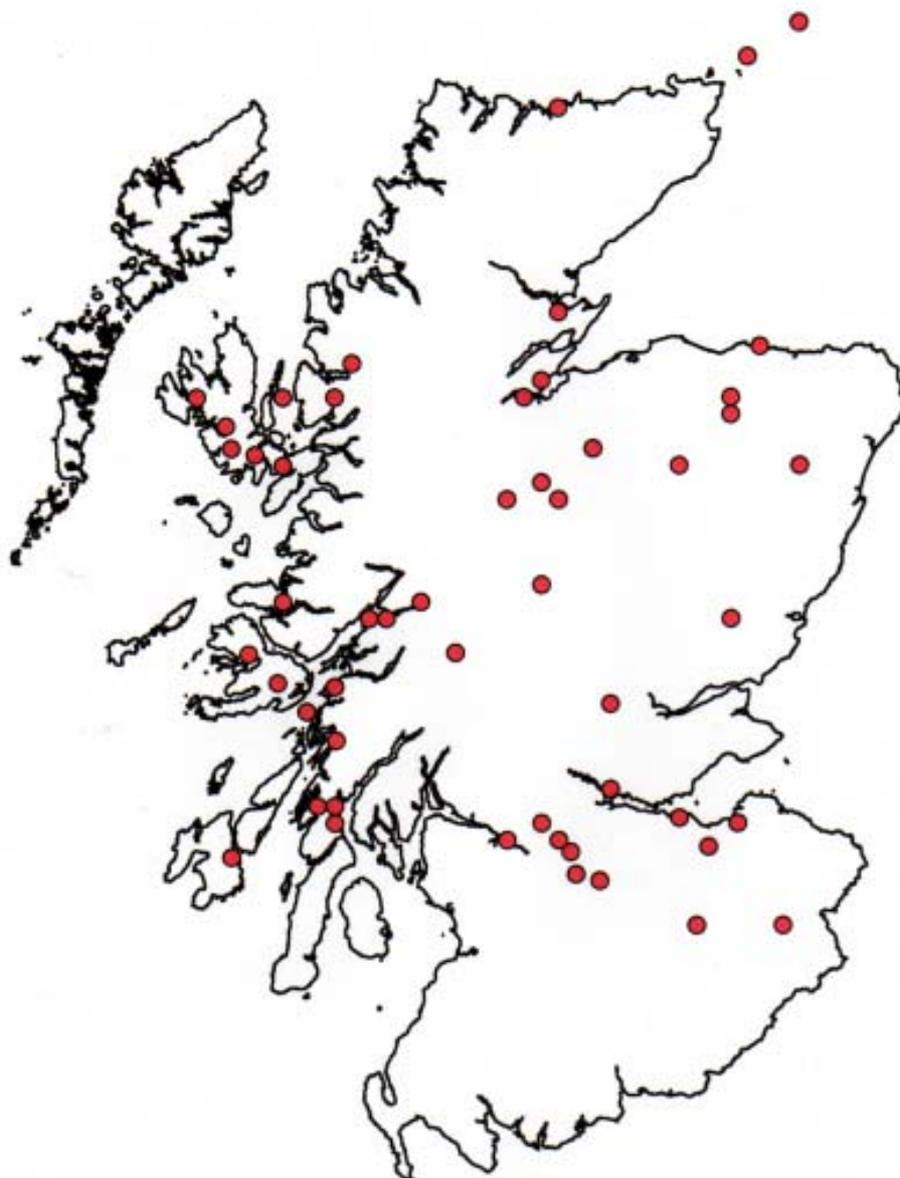
- MottiNetti web-based woodfuel sales service. Finland Infocard 3

- Woodchip production and delivery by an entrepreneur in North Karelia Infocard 4

- Tuupovaara - heats two schools, a day care centre, a sports hall and a teachers' dormitory.

- Eno - three district heating plants which have provided jobs for more than 20 people.

Small Scale Woodfuel Schemes in Scotland



Crannich Farm, Mull	Calderhead School	Edinbane Hotel, Skye
Tobermory, Mull	Central Scotland CountryTrust	Greshornish Hotel, Skye
Orkney Housing Assoc.	Crown Est Glenlivet, Tomintoul	Kyle of Lochalsh Pool
Forest Enterprise Huntly	Dorbreck, Nethybridge	Sligachan Hotel, Skye
Critchiebank, Inverurie	Vogrie Park, Gorebridge	Duror & Kentallen Hall
Winton House, Pencaitland	ILM Alness	NTS Visitor Centre, Glencoe
Edinburgh Council Russell Rd	Nursery School, Angus	Monteith Care Home Carstairs
Tarry Blake Huntly	Kinlochleven Comm. Centre	Buccleuch Estate Selkirk
Jamie Reith, Methven, Perth	Torren Cottages, Glencoe	Emmaus Hostel, Glasgow
Blair Atholl Estates	Raddery Sawmill Rosemarkie	N Lanarks Co Colzium House
Aqualibrium, Campbeltown	Highland Birchwoods	N Lanarks Co Drumpellier Pk
Scotwoods Dunfermline	Aviemore North	N Lanarks Co Palacerigg Pk
Glenshellach DH, Oban	Acharacle Post Office	N Lanarks Co Taylor H School
Dunlossit Estate, Islay	Bettyhill Pool	Whitegates DH Lochgilphead
SNH Offices Aviemore	Averon Leisure Centre Alness	Mid Argyll Pool, Lochgilphead
Mains Care Home N'tonmore	Russwood Sawmill N'tonmore	Harbour View, Campbeltown
Scottish Woods, Dunfermline		

List and map by Dan Gates