

Aviemore District Heating Scheme

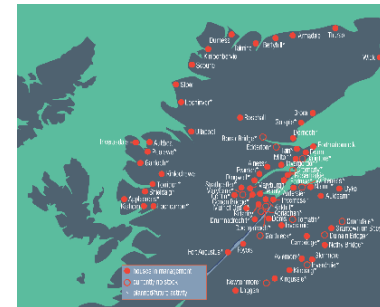
Donald N Lockhart, Development Director

ALBYN HOUSING SOCIETY LTD

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Not for profit, charitable housing association operating in over 60 different communities with stock of 2500 houses. Largest affordable developer in Highlands. 245 new homes in 2008/09. Role is to add to the supply of affordable housing for people in need but do so in a way which:

- Builds homes and supports communities
- Meets regeneration aims
- Adds value in economic activity eg training and local jobs
- Responds to the quality and sustainability agenda
- Encourages innovation



Why biomass?

Push for innovation - policy and organisationally for Albyn, Scottish Govt and CNPA

700 tonnes predicted CO2 savings per annum

Fuel Poverty issues and energy prices together with lack of fuel choice and universal loathing of Electric 'Total Control'

Aviemore well placed for **woodchip supply**
Contribute to the Renewables effort in CNPA area and Highlands generally

Unique opportunity at Aviemore North to prove that **bio-mass was a viable option**

Contributes significantly to our "Eco-homes" objectives as part of an exemplar sustainable housing project

Feel-good factor of trying to built on the lifestyle we were attempting to create



The Project..

Biomass Boiler House + Eco Homes 'Excellent' Rated Housing, Aviemore North

The Unplugged House Case Study 05



BIOMASS BOILER HOUSE
Photographs | Left to right
Boiler House, adjacent to housing scheme, but accessed via Dalflour Industrial Estate. Back up oil tank, feeding oil fired boiler, in view | External storage yard, with wetter wood chip for large boiler. All material delivered to site by a transporter, then moved around site by a Manitou | Dry wood store feeding boiler by walking floor action | Large 400 kW Kohlbach boiler for winter use, over 7 to 8 months of the year | Smaller 120kW Thermia boiler for use over summer months, approximately 4 to 5 months of the year. In addition an oil fired boiler serves as a backup to both | Two accumulator tanks storing hot water for distribution through district heating scheme | Temperature gauges to heating system, measuring output and return temperatures

130 homes heated by district heating with woodchip boilers
Includes 30 existing homes previously heated by oil
3 boilers (2 woodchip @ 400KW and 120KW respectively, 1 oil backup @ 540KW)
3km of distribution pipework
Total cost £1million
Woodchip sourced locally
Metered system with heat paid in advance at Council office
Albyn owned and controlled with heat contract negotiated with Buccleuch Bio-energy Ltd

Biomass Operation review

Operational since October 2006
Total Energy output Jan 08 to Dec
08 = 2,001,200 kW hours
Jan to Dec 2008 - 43 loads of fuel
911 tonnes of Woodfuel consumed
500+ tonnes CO₂ (based on 40%
moisture content fuel) saved
Downtime minimal but not problem
free particularly in the network and
domestic credit modules
On the positive side we've been
producing heat for more than 2 years



Key messages..

Funding regime

Housing Association as Utility provider

Financial model and financial risk

Many district heating projects share these problems –
what are we doing wrong?

Administering the project and dealing with debt

Persuading the private sector to participate

What do our customers want?

What would help?

Independent advice

A 'Which' Guide to Renewable technology or a
knowledge database

Model business plans

Review of current policy at Govt level

Acceptance that Housing Associations/Community
Groups are not Utilities providers and they need to
be supported in their endeavours.

Bio-mass Users Group or Chat Room would help
even if only to share the pain!

Contact Details

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