

## Review of Operation

- The district heating plant in Aviemore North has been operational since October 2006.
- 71 homes now connected to boiler and 62 remaining to be completed.
- Heat units produced: 1m kWhrs since start-up; (1,089,500kWhrs).
- 450 tonnes of Woodfuel consumed.
- 350 tonnes CO<sub>2</sub> (based on 40% moisture content fuel) saved.
- The billing is done on the basis of Domestic Credit Modules and meters in each house, credited by means of a smart card.

## Benefits of the Project

- A Heat contract allowing inflation-only rises. This means that the cost of heating a home will not become increasing more difficult to meet.
- Sold to 30 existing households previously heated by oil.
- Ecohomes accreditation. The use of a biomass heating plant has been one of the major contributors to Aviemore North becoming Ecohomes accredited.
- Renewed interest from wood chip suppliers. The local economy has received a boost from the increased demand for wood chips. This in turn could provide a use for much of the wood by-product which previously would have been considered waste.
- Profile of bio-mass has been raised. The success of this project can be used as a platform for the creation of yet more biomass fuelled district heating schemes. Perhaps in the future we can not only look at our European counterparts for exemplar district heating schemes, but also within Scotland.



### Boilers and Chips

The larger of the two wood burning boilers (450kW Kohblach boiler) is a 'Step Grate System'. This means that it is able to burn larger wood chips with a higher moisture content; up to 60% moisture in some cases (in these cases the calorific value of the chips is reduced by 1/3rd). This boiler is used for the majority of heating and hot water needs.

The smaller of the two wood burning boilers (120kW Thermia boiler) operates with an underfed grate, and as such it requires a higher grade of wood chip. These chips must be smaller and must not have a moisture content greater than 30%. The chips are mainly produced from a combination of bark and sawmill by-product.



# Aviemore North

## Biomass District Heating Scheme



### About The Project

Albyn Housing Society Ltd last year completed the installation of a woodfuel district heating scheme which will provide heating and hot water for 130 homes in Aviemore.

- The plant is Albyn owned and controlled with the heat contract negotiated with Buccleuch Bio-energy Ltd.
- Financially sustainable business plan.
- 130 homes can be heated by the bio-mass district heating.
- The 130 homes heated by the scheme include 30 existing homes previously heated by oil.
- There are 3 boilers in place at the district heating plant. They are: 2 woodchip @ 400KW and 120KW respectively, and 1 oil backup at 540KW.
- The total cost of the project came to £1million.
- It is estimated that when the plant is utilised to its full potential it will use 1200 tonnes per annum woodchip (estimated).
- The Aviemore area has significant amounts of forest locally as well as large sawmills producing huge quantities of wood co-product.
- The designers of the system were Architect Colin Armstrong Associates Inverness and Engineers Elders Consulting Engineers Edinburgh

### Why Biomass?

- Push for innovation and the increased use of more local resources- policy and organisationally for Albyn, Communities Scotland and Cairngorms National Park Authority (CNPA).
- It is predicted that 700 tonnes CO<sub>2</sub> will be saved per annum through the use of biomass.
- Provides an alternative fuel choice which may be more economical; helping to combat 'Fuel Poverty'.
- Aviemore well placed for woodchip supply.
- The use of biomass in this project will contribute to the renewables effort in the CNPA and the Highlands as a whole.
- Unique opportunity at Aviemore North to prove that biomass can be a viable option.
- The use of biomass contributes significantly to Albyn's 'Eco-Homes' objectives for this project.