

RECENT DEVELOPMENTS OF BIOENERGY IN AUSTRIA

Heating with bio-energy:

In Austria almost 50 % of energy is used as heat. Heat is also the most important market for biomass. There are 3 new developments in the field of “heat from biomass”, namely

- a) district heating with biomass
- b) heat contracting with biomass
- c) modern single house systems

a) *District heating*

Biomass fired district heating networks have been developed and built in rural areas since the mid eighties; this market has seen a considerable upturn.

In many cases the heating plants are built and operated by small cooperatives founded by farmers. The construction of the plants is subsidized, mainly by funds of the department of agriculture and the regional governments. In the last 15 years 501 district heating plants and networks with a total capacity of 650 MW have been built. The size varies between 0,5 MW to 20 MW. They sell their heat to about 25.000 costumers.

b) *Heat Contracting*

Under the scheme of heat contracting a private company or a group of farmers build the heating system of a big building or a group of buildings. They normally rent a cellar and install the heating central in the cellar of the building, operate the installations and sell the heat to the user of the building. This installation varies in size between 100 and 300 kW. The operators normally use wood chips to produce heat and also get a financial support of 30 to 40 % for the construction of the heating central.

c) *Single house systems*

Yet, single house systems without access to a heat network are by far the biggest market for heating with biomass. Usually the houses have a water pipe heat distributing system and a central furnace to produce the heat. Different types of boilers are in operation.

New log-wood boilers

In the last years new logwood burners have been developed with less emissions and more convenience. These new burners play an increasing role in some rural areas of Austria but this regional development does not offset the general decline in the use of logwood.

Normally they are installed in combination with a 1.000 or 2.000 litre hot water boiler

Wood chip boilers

In the last 20 years the use of wood chips was developed as new wood burning system. The main advantage is the higher comfort and the possibility to automate the whole procedure. Single house wood chip systems mainly prevail in small wood processing firms or farms. They did not succeed in being accepted as heating system in typical family houses in suburban regions, because the investment costs are rather high, the storage space have to be big and therefore the convenience is not as good as in the case of oil or gas.

Pellets systems

In Austria the use of pellets heating systems is relatively new.

In 1997 the first pellets boilers were installed. In the last years the pellets industry was rapidly growing. The pellets are generally manufactured from wood waste by the wood processing industry. They have the advantage - compared with wood chips – of very low water content and high density easing the problems of storage and transportation frequently associated with biomass fuel. The production capacity for wood pellets in Austria is about 120.000 tons per year, actually there are 7 producers of pellets and 25 producers of pellet burners.

In Austria pellets are mostly used by private house owners, not for district heating as in Sweden. They are transported by bulk truck in a closed system. Pellets are delivered to an airtight storeroom and blown in by means of compressed air.

In the last year the growth rate of pellets installations was more than 50 % per year. At present about 8.000 systems are being in operation.

All together in the year 2000 about 4.000 pellets systems, 2.000 wood chip systems and 6.000 logwood systems have been installed.

Beside the central heating systems also tiled stoves are very common in Austria. About 400.000 stoves are being installed, they use log wood. They are mainly used as second energy system as a supplement to central heating.

Biomass for electricity

In the year 2000 Austria got a modern legislation (EIWOG) to foster the development of electricity production from wind, biomass, PV and small hydro, which has now to be transferred by the regional governments into their legislation. According to this new legislation in the year 2007 4 % of the electricity produced will have to come from biomass, wind or photovoltaic. To reach these targets feed in tariffs exists that have to be paid to the independent producer of electricity. We expect a rapid development of electricity from biomass in the next years. So far in Austria exist about 100 biogas installations, 10 large installations in the paper industry using black liquor, 2 cofiring plants at existing coal power stations and several wood-gasification-units and other new technologies.