

Experience in the demo region of North Karelia (Finland)

Forestry and forest-based energy production and use are one of key sectors in North Karelia. This is not surprising, given that 81% of North Karelia's land area is forested. Renewable energy constitutes approx. 63% of the primary energy consumption in North Karelia, and 81% of this is generated from wood biomass. North Karelia Climate and Energy programme went into effect in 2011. Programme targets are very ambitious (e.g. double the use of wood chips by 2020).

Since North Karelia is the most advanced region in Finland with regard to the use and production of bioenergy, it made a good demo region. It is especially famous for its so-called heat entrepreneurs. Heat entrepreneurs produce heat for local district heating systems or large buildings, like schools. They mainly use fuels based on wood originating from their own forests or other nearby forests. In addition to procuring fuels, heat entrepreneurs also operate the district heating systems (plants). The average boiler size is 800 kW, ranging up to 3 MW. Entrepreneurs' income derives from the heating bills paid by their customers.

The experiences gained in North Karelia were studied and promoted in several other regions in Finland. The results were presented in three other Finnish regions, namely the Municipality of Masku, Pirkanmaa region and North-Savo region. In Masku several potential locations for heat entrepreneurs were studied, and the political decision-makers received specific information about potential challenges. Altogether about 100 professionals and policy makers attended the events organized during the project.

Heat entrepreneurs see that knowledge and information transfer is one of the most important things for successful small-scale heating businesses. They also pointed out that the quality of chips and information on how to achieve this is very important. Future growth potential is in small-scale combined heat and power production. There are still some legislative issues to be resolved in Finland in order to produce electricity in small biomass CHP-plants. Marketing, consulting and co-operation between the entrepreneurs are also important factors for the success of heating business.

The scale of the initial investment is one factor that could deter people from becoming heat entrepreneurs. Furthermore, the low price of energy in Finland is an obstacle to profitability. The attitude of officials towards the use of renewable instead of fossil fuels is important. The benefits of local heat entrepreneurship to municipalities are presented in figure X.

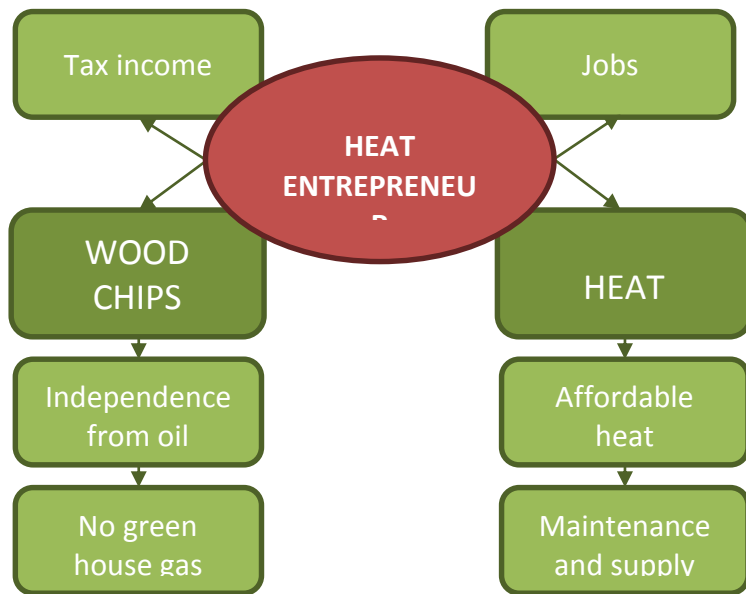


Fig. Benefits of using local bioenergy produced by a heat entrepreneur

Picture : Visiting power plant in Valtimo, North Karelia

On the whole, entrepreneurs were positive, but making a profitable business in the forest energy field (logging, transporting, chipping) remains difficult. The main obstacles were poor viability, availability of funding and own resources. The entrepreneurs themselves felt that they have good know-how about storing energy wood, environmental issues relating to logging and co-operation with other entrepreneurs, but wanted more training about subsidies, accounting, taxation and generation change.



Picture: Group work in the municipality of Masku