

## Local woodheat offers many benefits

Finnish municipalities have a long tradition in investing in wood fuel plants. After the World War 2 district heating was favored in order to increase energy efficiency in energy generation. The exploitation of renewable energy sources was boosted in the 1990's by efforts to mitigate climate change. Other factors favoring the increasing use of renewable energy sources in Finland include the need to guarantee the energy supply from local sources where possible, and the desire to increase employment opportunities in rural areas and find new uses for set-aside farmland.

In the beginning of the 1990's some municipalities started to invest in biomass heating systems for municipal buildings like schools, retirement homes etc (output < 1 MW<sub>th</sub>). A new form of business was born in the Finnish countryside during the 1990s, when farmers started to produce heat from wood fuels, first supplying heat for schools and old people's homes and later expanding into municipal district heating and the provision of heat for industrial processes. This 'heat entrepreneurship' has boosted rural employment while also reducing carbon dioxide emissions.

### *What are the benefits of woodheat?*

Municipalities have been a key player in establishment of heating enterprises that have taken the responsibility in heating public buildings, such as hospitals, schools, offices and libraries, private houses and industrial estates. While woodheat business has been proved in practice, heating enterprises have gained many private customers as well. Also the size plants have been increasing. For a municipality there are several benefits to buy heat from such an enterprise:

- Almost all capital investments stay within the municipality
- Increased use of local labor and new business opportunities
- Supply of local raw materials for energy and decreased CO<sub>2</sub> emissions
- Increased energy security and supply in the municipality
- Reliability of heating of municipal buildings
- Saving in energy costs

Furthermore, the fact that money previously spent on fossil fuels now stays in the community, thus promoting local livelihood and increasing taxable income are considered important at a municipal level.

For a local woodland owner there are also several benefits like:

- Unmerchantable wood can be used effectively
- Under-utilized timber harvesting equipment can be use more effectively
- More income from wood sales

- A possibility to add value to wood sales by becoming a heat entrepreneur
- More job opportunities

### *An example from Finland*

Already in 1997 the municipal council of Eno included woodfuel in its natural resource strategy. Eno is a small municipality in eastern Finland with about 7,000 inhabitants. That decision has since been put into practice and it has led to establishment of three heating plants using wood chips as fuel. All plants are operated by Eno energy co-operative which consists of local farmers, woodland owners and forestry entrepreneurs.

Installing district wood heat systems has brought clear benefits to customers, producers and the whole municipality. For example:

- Heat produced with woodfuel is remarkably cheaper compared to oil (oil 51€/MWh, wood 31 €/MWh, in 2006)
- Wood chip fired boilers replace over 1 million liters of light heating oil
- About 700,000 € were saved by the local economy (in 2006)
- Carbon dioxide emissions are reduced by 3.2 million kg annually
- The switching of oil to local energy sources has created jobs for over 20 people, totally 7-10 man years
- Local energy sources bring safety and independence in times of possible price fluctuations and energy crises

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