

VÖRÅ MUNICIPALITY IN FINLAND - A FORERUNNER IN BIOMASS HEATING

SUMMARY

Vörå municipality located in the Ostrobothnia region in Western Finland is a forerunner in the use of biomass for heating purposes. Since 1993 the municipality has worked towards conversion of all municipal buildings to biomass heating. By 2003 around 95% of the buildings will be heated with biomass. This has been possible thanks to long term political commitment, foresighted and motivated officials, the use of various types of heating systems such as heating entrepreneurship, wood chips heating, and wood pellet heating. The case shows that an energy strategy may be more effective than a detailed energy plan, and that positive experiences in the public sector also spread to the private sector.

BACKGROUND

Vörå municipality, located in the Ostrobothnia region in Western Finland, is a forerunner in the use of biomass for heating purposes. In 1992, the Municipal Council adopted an energy strategy with a vision to convert all municipal buildings to biomass heating. Since then, the municipality has worked towards achieving this vision. This case study document summarizes the main activities, results and lessons learned during this time.

RESULTS

In order to convert all municipal building to biomass heating, Vörå municipality has implemented the following activities:

- Introduction of biomass heating based on heating entrepreneurship in and elderly peoples home in 1993.
- Establishment of the first wood pellet factory in Finland in 1997
- Conversion to wood pellet heating (20-100 kW) in 9 municipal buildings in 1997-2002.
- Conversion from heavy fuel oil to biomass heating in the district heating plant in the centre of the municipality in 2002.
- Pilot plant for small scale CHP with Stirling engine in 2000-2001.
- Host organisation for Wood Energy Forum – a regional wood energy development project since 1997.

By 2003, around 95% of the municipal buildings will be converted to biomass heating. The good example and the experiences from the municipal sector have contributed to the installation of around 15 wood chips heating plants and 20 wood pellet heating plants in the private sector. The activities have had the following positive impact:

Employment: 13 local jobs created

- 3 part time jobs for heat entrepreneurs
- 6 jobs in the wood pellet factory
- 1 person in the supply of pellet burners
- 3 jobs in fuel supply to the district heating plant
- 2 jobs in the wood energy development project

Environment: 2,5 million kg/a less CO₂ -emissions by substituting fuel oil with wood fuel



Left: The construction of a district heating plant for wood chips is an important step in converting all municipal buildings to biomass heating Vörå, Finland.



Right: The production and provision of heat for sale provide local farmers with additional employment and income during the winter months when farming activities are low.

LESSONS LEARNED AND POSSIBLE IMPROVEMENTS

The lessons learned include:

- An energy vision or energy strategy with clear goals may be more practical and flexible than a detailed energy plan.
- Successful implementation of a municipal energy strategy requires long time, long -term political support, and foresighted and motivated officials.
- Conversion of all municipal buildings to biomass heating was in this case only possible through installation of range of various types of heating systems; heating entrepreneurship, wood chips heating plants, and wood pellet heating plants.
- The good examples and experiences in the public sector have contributed to the installation of 35 biomass heating system in the private sector.
- Economic aspects, local employment and environmental impact are important aspects when deciding on heating systems at local level. Energy agencies and wood energy projects have here an important role to play by making pre-feasibility studies and comparative impact assessments of conversion to biomass heating.

For more information:

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Duration:	6 years
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