

Regional implementation of small scale biomass in Upper Austria

O.Oe. Energiesparverband, Austria

Summary

Upper Austria is a highly industrialised area with a population of 1.4 Mio. inhabitants and a surface of 11,980 km². In 1993, the first Upper Austrian Energy plan was passed which defined concrete goals to reduce fossil fuel consumption by increasing both energy efficiency (EE) and the use of renewable energy sources (RES) by the year 2000. This plan led to an increase of RES from 25% in 1993 to 30% in the year 2000 including for example 15.000 modern automatic wood heating systems. In the year 2000 this successful first phase of the energy action plan was continued with the "Energy 21"-strategy. Again, concrete goals were defined (to be reached by 2010) including (among others): doubling the share of modern biomass heating systems and of thermal solar collectors and reducing energy consumption for heating and hot water supply by 20%.

But beside the clear political commitment, comprehensive programmes and a broad mix of measures ranging from information and awareness building strategies, financial support and legal measures to training, seminars, conferences and R&D-activities. The O.Oe. Energiesparverband, the regional energy agency, is responsible for the implementation of most of the measures included in the energy action plan.

End-user area	Target Audience	Technical
<input type="checkbox"/> New buildings	<input type="checkbox"/> Citizens	<input type="checkbox"/> Energy efficiency
<input type="checkbox"/> Refurbishment of buildings	<input type="checkbox"/> Households	<input type="checkbox"/> Heating
<input type="checkbox"/> Transport and mobility	<input type="checkbox"/> Property owners	<input type="checkbox"/> Cooling
<input type="checkbox"/> Financial instruments	<input type="checkbox"/> Schools and universities	<input type="checkbox"/> Appliances
<input checked="" type="checkbox"/> Industry	<input checked="" type="checkbox"/> Decision makers	<input type="checkbox"/> Lighting
<input checked="" type="checkbox"/> Legal initiatives (municipal regulations, directives, etc)	<input checked="" type="checkbox"/> Local and regional authorities	<input type="checkbox"/> CHP
<input checked="" type="checkbox"/> Planning issues	<input type="checkbox"/> Transport companies	<input type="checkbox"/> District Heating
<input type="checkbox"/> Sustainable communities	<input type="checkbox"/> Utilities	<input type="checkbox"/> Solar energy
<input type="checkbox"/> User behaviour	<input type="checkbox"/> ESCOs	<input checked="" type="checkbox"/> Biomass
<input type="checkbox"/> Education	<input type="checkbox"/> Architects and engineers	<input type="checkbox"/> Wind
<input type="checkbox"/> Other	<input type="checkbox"/> Financial institutions	<input type="checkbox"/> Geothermal
	<input type="checkbox"/> Other	<input type="checkbox"/> Hydro power
		<input type="checkbox"/> Other

Context

3 major actors are responsible for a well developing market:

- The general public – the consumers, the end users, especially when speaking about the small scale biomass market

- The biomass-industry, providing heating systems which are technical sufficiently developed, reliable, economically, working fully automatically (requesting a consistent fuel) and offer the same heating comfort as comparable oil- or gas-systems
- The political decision makers that provide the legal measures and a financial support to make biomass heating systems competitive

Luckily we have a situation in Upper Austria where we have a long tradition in using biomass for heating, a lot of wood, innovative companies offering RES-technology especially small scale biomass systems for wood-chips and wood-pellets and a very positive political climate for RES and RES-technology.

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Objectives

In 1993, the first Upper Austrian Energy plan was passed which defined concrete goals to reduce fossil fuel consumption by increasing both energy efficiency (EE) and the use of renewable energy sources (RES) by the year 2000. In the year 2000 this successful first phase of the energy action plan was continued with the "Energy 21"-strategy. Again, concrete goals were defined (to be reached by 2010) including (among others): doubling the share of modern biomass heating systems and of thermal solar collectors and reducing energy consumption for heating and hot water supply by 20%.

Process

Beside the clear political commitment, comprehensive programmes and a broad mix of measures ranging from information and awareness building strategies, financial support and legal measures to training, seminars, conferences and R&D-activities.

Financial resources and partners

The O.Oe. Energiesparverband, the regional energy agency, is responsible for the implementation of most of the measures included in the energy action plan. Total investment RES installations triggered by the energy action plan:

- 1994-2001: 870 M€
- 2002-2010: 875 M€(estimated)

The Government of Upper Austria has an annual budget for energy efficiency and renewable energy programmes of around 50 million Euro.

Results

Beside the result that the total energy consumption of upper Austria has increased from 25% in 1993 to 30% in the year 2000 in the first phase of the energy action plan, in detail the number of installed small scale biomass heating systems is quite impressive. With a total number of 13.200 wood-chip heating systems Upper Austria has a share of 33% of the installations on the Austrian market. In 1997 the first wood pellet boilers appeared on the market and at the end of 2000 there were around 2,200 systems in operation and at the end of 2001 there were about 3.400 fully automatically wood-pellets central heating systems installed in Upper Austria, so this is a very fast market introduction for a completely new technology. Beside the number of installed systems, a group of companies offering this technology saw a quite similar boom in the last few years. Companies like Froeling, OekoFEN, Guntamatic and others are market leaders for biomass not only in Austria, but in Germany too. Growing and well developing companies have an effect on the employment and the job creation. A quite similar situation can be seen on the Austrian thermal solar collector market.

Lessons learned and repeatability

The example of Upper Austria and the O.Oe. Energiesparverband clearly demonstrates that a great deal can be done on a regional level, provided the necessary political backing is given. Although many decisions are taken on a European level, the implementation of European or national programmes very often is up to the regions. Upper Austria shows that renewable energy sources, together with increasing energy efficiency, are a solution for the security of supply in Europe.

Future efforts can be seen in the support of the very quickly developing biomass technology producing companies that are at the moment trying to strengthen their export activities to the non German speaking countries. Other improvements have to be done in the standards and norms on the wood-fuels like the pellets and their transportation and the standards of the storage rooms, especially after the lessons learned in the flood of the summer 2002 in Austria.

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