



Survey of the Danish Export - of Bioenergy Technology and Consultancy in 1998



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Introduction

In 1999 Centre for Biomass Technology conducted a survey of the Danish export of bioenergy technology and consultancy services in 1998. Export possibilities are often used as an important argument for investing in development of renewable energy technology in Denmark, which as an example hosts a large wind energy industry. The purpose of this survey is to gain detailed information about the significance of the export within the bio-energy sector as well as to reveal barriers to an increased export.

Centre for Biomass Technology

- a professional network cooperation for biomass information

Centre for Biomass Technology is a co-operation between four independent R&D institutions in Denmark, and financed by the Danish Energy Agency. Based on the extensive professional network of the four institutions, Centre for Biomass Technology covers all subjects from agriculture or forestry to heat and power and all problems from technology to economics and environment. See more on www.videncenter.dk

Danish Export in 1998: 95 Million Euro

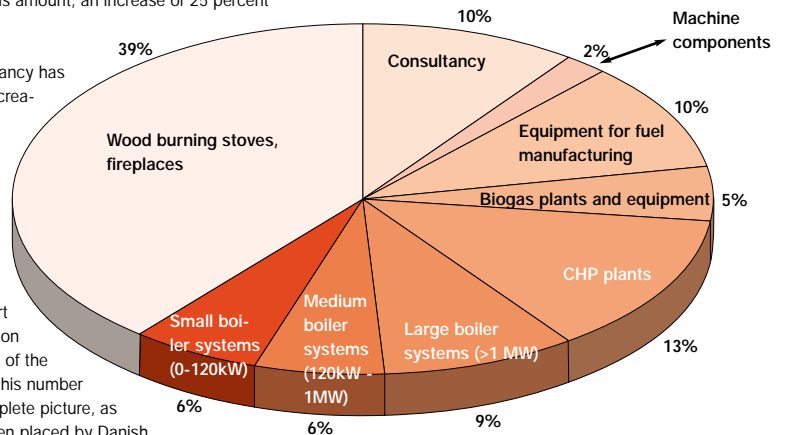
The total Danish export of bioenergy technology and consultancy in 1998 amounts to approximately 95 million Euro or almost the same as in 1993. With 35 million Euro, the export of wood stoves makes one third of this amount, an increase of 25 percent since 1993.

The export of consultancy has in the same period increased 9 times to 13 million Euro.

1998 was a low year for the export of technology for biomass fired combined heat and power production as this part was limited to 11 million Euro or only one third of the 1993 level. However this number does not draw a complete picture, as many orders have been placed by Danish companies in 1998 and in 1999, a tendency, which is expected to continue in the coming years. Thus the biomass CHP export for 1999 and ahead can be expected to reach over 50 million Euro annually.

The 1998 export is calculated to entail employment for 1200 people.

Danish 1998 export of bioenergy technology and consultancy divided by technology.



All Danish Companies Covered by the Survey

Information about the export is determined through a questionnaire and telephone interviews of 188 companies covering all Danish manufacturers of technology for combustion or biological conversion of straw, firewood, wood chips, wood pellets, bark, slurry etc., manufacturers of equipment or machinery for fuel production, processing, storage and handling as well as consultancy companies providing services within this sector.

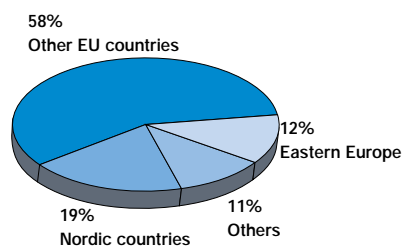
The questionnaire contains both quantitative questions about the size of the export, technology details, fuel type and markets and qualitative questions about which barriers to further export the companies experience.

153 companies have participated in the survey, of these 61 actually have exported in 1998.

1. The export amount?
2. Within which type of technology?
3. For which types of biofuel?
4. The currently most important markets?
5. Expected future important markets?
6. Which barriers to increased export has the company experienced?

Close Markets most Important

Danish bioenergy technology is exported worldwide, however the neighbouring markets are by far the most important. The Nordic countries - mainly Sweden - cover 19 percent, while the rest of EU - clearly dominated by Germany and Great Britain - account for 58 percent. Compared to 1993 the market in Eastern Europe is now three times as important, covering 12 percent of the export. Regarding expectations for future export markets, Eastern Europe is considered almost as important as EU, measured by number of answers in the survey.



Danish 1998 export of bioenergy technology and consultancy categorised by region

Barriers to Increased Export

The Danish companies experience a broad picture of barriers to export of bioenergy technology, covering technical testing of equipment, environmental legislation, ignorance or mistrust of the advantages of bioenergy, demand for Danish technology and the possibilities for national and international financing of large projects.

More companies mention the trend towards liberalisation of the electricity market as the largest barrier, as this development causes uncertainty, which holds back investments in bioenergy.