

The Policy, Market Development & Outlook of Biomass in Germany (and European Union)

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by Dr. Ernst Kürsten

Congress-Report GmbH / University of Göttingen (Germany)

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Executive summary

After a strong increase during the last years in Germany actually 13% of the agricultural land is dedicated to the production of renewable resources, mainly bioenergy. The by far dominant part of the bioenergy, of course, comes from the forests. About one third of the wood production is being used for energy. In 2005 the biomass share of the total primary energy consumption in Germany was 3.3% (in total 470 PJ).

The most important application of biomass is **heat generation**. Nearly 40% of the bioenergy (200 PJ) is being consumed as split wood in traditional ovens in private houses. But modern clean and efficient boilers for split wood and especially for wood pellets are spreading very rapidly. So during winter 2005/2006 shortages in pellet supply resulted from that, but new pellet production capacities recently were built.

Another very fast growing market is **electricity generation**, especially from biogas (20 PJ in 2005). Since the introduction of a bonus payment for electricity generated from energy crops in the Renewable Energy Sources Act amendment of 2004, more and more farmers take the opportunity to make money by bioenergy production. As there is another bonus for using the waste heat from electricity generation, new biogas plants try to find consumers of their heat production. Especially during the summer this is a problem and the drying of wood fuel or grain are good ideas to solve it in rural areas.

Finally the production of **liquid fuels** from biomass is a topic of high priority. Over the last few years the sales of biodiesel in Germany have almost tripled. The actual share of fuel supply of biodiesel and some much smaller amounts of vegetable oil and bioethanol is 3.4%.

These developments in biomass use for energy are driven by rising energy prices and by a subsidy and tax legislation which tries to reach the **goals of European and German energy policies**. Especially the German Renewable Energy Sources Act has been proven to be a very successful means to foster electricity generation from biomass, wind and solar energy.

Due to this success in Germany now the first signs of shortages especially on the wood market appear. Therefore **research projects** are aiming at the better exploitation of the existing biomass resources and at the creation of new resources like agroforestry systems and special crop cultures for biogas production. In addition new processes of biomass conversion to energy will open new applications for plant materials and also new possibilities for long distance transports.