Innovative Energy Technologies in Austria – Market Development 2011

Biomass, Photovoltaic, Solar Thermal Collectors and Heat Pumps

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Abstract

In 2011 the use of renewable energies differed a lot. The solar thermal energy home market decreased, the thermal heat pumps just became stable whereas the selling of pellet boilers was very successful. The tremendous market increase of photovoltaic continued the third year in a row. In 2011 there were winners and losers among the evaluated technologies. Anyhow the market development cannot be directly related to the general conditions in 2011. All renewable energy technologies should have benefited from a high oil price throughout the whole year. Furthermore the reduced investments after the financial and economic crisis should have touched all technologies. However as private investors lost their trust in the currency stability they put their money into real things like technologies for the use of renewable energies. In the course of these investments a noticeable competition among the evaluated technologies developed.

The consumption of final energy from **sold biofuels** was 168.9 PJ in 2011 and therefore it was 3.4% higher than in 2010. The trade balance shows an import of 1.2 million tons of wood log, wood chips and wood pellets. Fuels from solid biomass contribute to a CO_2 reduction of almost 9.6 million tons for 2011. The whole sector of solid biofuels accounted a total turnover of 1.4 billion euros and approximately 14,200 full time jobs.

The Austrian market for **biomass boilers** comprises 21,193 boilers in 2010, including wood log, wood chip and pellet boilers. Furthermore 39,259 **biomass stoves** were sold. Austrian biomass boiler and stove manufacturers typically export approximately 70% of their production. The biomass boiler and stove sector obtained a turnover of 994 million euros in 2011. This resulted in a total number of 4,662 full time jobs.

Photovoltaic systems with a total capacity of 91,674 kW_{peak} were installed in Austria in 2011. That was the highest market diffusion in Austria since the market introduction and it was supported by different promotion mechanisms of the federal provinces and the federal government. The cumulated total installed capacity of photovoltaic systems was 187.2 MW_{peak}. As a consequence the sum of produced renewable electricity by PV plants in operation amounted to 174.1 GWh in 2011 and lead to a reduction in CO_2 - emissions by approximately 71,900 tons. The home market of photovoltaic accounted a total turnover of 272 million euros and created 4,181 full time jobs.

In 2011 a total of approx. 236.240 m^2 **solar thermal collectors** were installed. Considering the technical life span, in the year 2011 approximately 4.7 million m^2 of solar thermal collectors were in operation in Austria. The solar yield of these systems was equal to 1.920 GWh_{th}. The avoided CO_2-emissions were 440,395 tons. The export rate of solar thermal industry was 78%. The development of the solar thermal collector market in Austria is characterized by a decrease of the sales figures of 17.4% in 2011. The turnover of solar thermal industry was estimated with 365 million euros for the year 2011. Therefore approx. 3.600 full time jobs can be numbered in the solar thermal business.

In the Austrian **heat pump** market 16,686 plants (all types and performance classes) were sold in the year 2011. These were 1.6% fewer than in the year 2010. Considering the technical plant life span, in the year 2011 185,191 heat pumps were in operation in Austria. These plants made 1.543 GWh environment heat usable. Considering the electric current demand for the operation of the heat pumps CO_2-savings of 392,354 tons can be registered. The export relation of the total Austrian heat pump market 2011 was 35%. For the heat pump industry a 2011 turnover of 201 million euros and 1,060 persons employed were registered.

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