

# Innovative Energy Technologies in Austria – Market Development 2012

## Biomass, Photovoltaic, Solar Thermal Collectors and Heat Pumps

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### Abstract

The year 2012 shows further recovery on the market in the area of the examined technologies. One factor was the permanently high oil price which was more than 100 \$/barrel in 2012: the second year in a row with such a high oil price. A negative factor was the reluctant economy last year. However the market development of the examined technologies was not as uniform as might have been expected from the marginal conditions. After losses in the previous years biomass heating stoves and heat pumps clearly increased on the market last year. The growth of photovoltaics on the market continued the fourth year in a row whereas the photovoltaics market almost doubled in 2012. On the contrary the sales figures of biomass heating stoves and solar heat decreased. Consequently the sales figures of solar heat decreased the third year in a row. Reasons are the increasing competition between solar heat and photovoltaics in regard to surface area and investments. The further development of the sales figures of the examined technologies depends heavily on the general development of the economy. Furthermore the main market of the heating technologies will move from new construction to reconstruction in the upcoming years whereby the reconstruction rates will become an important factor.

The consumption of final energy from **solid biofuels** was 174.2 PJ in 2012 and therefore it was 2.7% higher than in 2011. The trade balance shows an import of 934,834 tons of wood log, wood chips and wood pellets. Fuels from solid biomass contribute to a CO<sub>2</sub> reduction of almost 9.8 million tons for 2012. The whole sector of solid biofuels accounted a total turnover of 1.3 billion euros and 12,748 full time jobs.

The Austrian market for **biomass boilers** comprises 23,227 boilers in 2012, including wood log, wood chip and pellet boilers. Furthermore 32,256 **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 1,247 million euros in 2012. This resulted in a total number of 5,870 full time jobs.

**Photovoltaic** systems with a total capacity of 175.7 MW<sub>peak</sub> were installed in Austria in 2012. 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 362.9 MW<sub>peak</sub>. As a consequence the sum of produced renewable electricity by PV plants in operation amounted to 337.5 GWh in 2012 and lead to a reduction in CO<sub>2</sub> - emissions by 130,798 tons. The home market of photovoltaic accounted a total turnover of 389 million euros and created 4,847 full time jobs.

In 2012 a total of 209,630 m<sup>2</sup> **solar thermal collectors** were installed. Considering the technical life span, in the year 2012 approximately 4.9 million m<sup>2</sup> of solar thermal collectors were in operation in Austria. The solar yield of these systems was equal to 2,011 GWh<sub>th</sub>. The avoided CO<sub>2</sub>-emissions were 459,096 tons. The export rate of solar thermal industry was 81%. The development of the solar thermal collector market in Austria is characterized by a decrease of the sales figures of 16.0% in 2012. The turnover of solar thermal industry was estimated with 345 million euros for the year 2012. Therefore approx. 3.400 full time jobs can be numbered in the solar thermal business.

In the Austrian **heat pump** market 17,494 plants (all types and performance classes) were sold in the year 2012. These were 6.7% more than in the year 2011. Considering the technical plant life span, in the year 2012 193.558 heat pumps were in operation in Austria. These plants made 1,683 GWh environment heat usable. Considering the electric current demand for the operation of the heat pumps CO<sub>2</sub>-savings of 431,486 tons can be registered. The export relation of the total Austrian heat pump market 2012 was 37%. For the heat pump industry a 2012 turnover of 212 million euros and 1,127 persons employed were registered.

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