

RENEWABLE ENERGY UTILISATION IN THE SOUTH-EAST HUNGARY**FODOR DEZSŐ**

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The topic of increasing the usage of renewable energy sources has become a vital issue in the South Plain Region as well, due to the growing energy costs, the decentralisation of energy supply and the strengthening role of environmental protection.

The total energy consumption in Hungary is approximately 1100 PJ.

The rate of renewable energy sources within the total energy consumption is 3.6%. Hungary wishes to increase this rate up to 6% by 2010 and up to 12% by 2015. The renewable energy potential is estimated about 2800 PJ with the solar energy and the bio-mass as the greatest contributors.

In Hungary and within that in the South Plain Region we have possibilities for the exploitation of the following renewable energy sources: geo-thermal energy, solar energy and bio-mass energy.

The situation of geo-thermal energy exploitation

Hungary has favourable geo-thermal endowments. The heat current density is approximately 100 mW/m^2 , the gradient value of the temperature is $5 \text{ }^\circ\text{C}/100 \text{ m}$.

The geo-thermal potential is about 63PJ, the centre of the utilisation is in the region of Szeged, Szentés and Hódmezővásárhely. The rate of the consumption is 4.4% at the moment.

The situation of solar energy exploitation

The possibilities for solar energy exploitation in Hungary, especially on the South Plain, are favourable. At present we can find a good number of examples for direct thermic exploitation in the region, the photoelectric exploitation is in the initial stage.

The situation of biomass energy exploitation

Biomass exploitation has a rate of 85 % within the exploitation of renewable energy sources at present with the following distribution: firewood 72,5%, waste wood 10,9%, and biogas 2,75%. In the future the energetical exploitation of chopped wood and baled straw can also be competitive. The production of energetical equipment based on biomass use can also create new work-places. At present biogas is used for heating buildings. Next year it is planned to realise its utilisation for electricity production.

Hungary and within that the South Plain Region of Hungary has significant energy potential of renewable energy sources, the exploitation of which is vital in order to decrease our import dependence, the decentralisation of energy supply and the strengthening role of environmental protection. The endowments of the South Plain Region are outstanding with regard to solar, biomass and geothermal energy exploitation. The further spread of the use of the renewable energy sources mainly depend on the economic background and the supports. The improvement of competitiveness can be expected as the price of the traditional energy sources keep rising, so the objective of increasing the rate of renewable energy sources within the total energy use seems to be a realistic one.