Optimizing the Ways of Meeting the Kyoto Targets – Biomass Project AKCENT Malopolska

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Abstract

In the wake of the "Development Strategy of Renewable Energy Sector" and of the government ordinance introducing mandatory quota for electricity derived from the Renewable Energy Sources one observes in Poland an explosion of interest in planting the fast growing willow and production of pellets or briquettes based on wood and wood waste. The development of the biomass sector is of great importance for meeting the Poland's Kyoto and EU commitments. It may also have a very positive impact considering its social and economic implications. The paper describes the existing biomass potentials and investment opportunities from the perspective of the space heating needs of small and medium size consumers. The market tentatively estimated for up to 400 000 biomass boilers in the range of 25-100 kW present a significant challenge. Examples are given of two projects (i) the project in Trzcianne addressing the problem of reducing the units cost of an investment by organising a commune-wide action of conversion of heating sources from coal to biomass (effect of scale), and (ii) a GEF project in Jordanow addressing the - so far unresolved – problem of utilisation of biomass produced by small, scattered biomass suppliers (wood processing SMEs or farms, typically small in Poland) by creation of a local wood waste market. The paper puts emphasis on the fact that most of the investments are at present undertaken *ad hoc*, while they should be based on scientifically grounded data and research. A systemic approach to the problem is lacking and there is practically no co-ordination of actions, which would lead to optimisation of the use of the biomass potential in a region under consideration, given the local agro-technical conditions and other constraints. Considering these circumstances four Krakow Universities (Jagiellonian University, AGH University of Science and Technology, Krakow Polytechnic and the Krakow Agricultural University) decided to undertake a common effort within their research consortium AKCENT, to provide scientifically based information for investors, utilities or local administrations to enable them to optimize their decisions regarding the parameters of their interest, such as return on capital, GHG emission reduction or job creation. The project has both research and demonstration components. The paper describes the present status of the project and research plans for the future.