Environmental Engineering and Management Journal

February 2015, Vol.14, No. 2, 321-330 http://omicron.ch.tuiasi.ro/EEMJ/



"Gheorghe Asachi" Technical University of lasi, Romania



RURAL DEVELOPMENT THROUGH THE OPTIMIZATION OF THE RENEWABLE ENERGY POTENTIAL

Liliana Topliceanu^{1*}, Konstantinos Sioulas²

¹ "Vasile Alecsandri" University of Bacau, Department of Engineering and Management of Mechanical Systems, 157 Calea Marasesti, 600115 Bacau, Romania
²Centre for Renewable Energy Sources and Saving, 19th km Marathonos Ave, 19009, Pikermi Attiki, Greece

Abstract

The development strategy of the European Union until the year 2020, Europe 2020, militates for an intelligent economy, sustainable and favorable to inclusion. Following these principles, each Member State establishes its targets and action plans at a national level. On the other hand, the rural zones benefit from diverse forms of renewable energy which can assure their development and energetic autonomy, bringing important advantages to the rural community: the diminishing of energy bills, stimulating new investments in the village, the new jobs possibilities, the decline of poverty, the development of access roads, etc. Starting from these presumptions, the paper makes an analysis of the available renewable energy from the rural environment and an evaluation of the way in which this energy can be exploited by the local community. For this study, an advanced methodology is used, methodology which was developed within the Network of Small Rural Communities for Energetic-neutrality, IEE/07/547/S12.499065/2008 project, financed through the Intelligent Energy Europe program. The necessary steps are presented for the fulfillment of this analysis which is applied, through exemplification, on the actual case of a rural community, community which benefits especially by biomass as renewable energy source. Quite laborious and requiring a rigorous approach and expertise, the method is extremely useful for the local development strategy. It allows the mobilization of the local community in attracting investments to optimize the potential of renewable energy of the area.

Key words: biomass, energetic autonomy, renewable energy, rural communities

Received: November, 2015; Revised final: February, 2015; Accepted: February, 2015

^{*} Author to whom all correspondence should be addressed: e-mail: lili@ub.ro; Phone/Fax: +40234580170