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RENEWABLE ENERGY Feasibility study

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INTRODUCTION

The XXth century has registered a succession of spectacular changes in all the domains. The technological progress of this century, based on great scientific discoveries in the domains of mathematics, physics, biology and informatics, has unleashed an unprecedented dynamism in the economical and social life, in society's evolution.

The rhythm of this economical development was determined to a greater extent by the expansion of fossil fuel energy utilization (oil, gas, coal). We can ascertain today that these fantastical progresses were at the same time generators of serious problems that were unknown to the humanity history till the modern age. The civilization has clashed with the environment, with the natural support of its own existence and of the life on earth, not only by the exhaustion of the natural resources of energy, but mainly by the deterioration of the quality of environmental factors – water, air, soil.

The acceleration of modern development has amplified the pressure on the nature that we remain dependent on. New forms of ambient imbalances – the reduction of the stratosphere ozone layer and the atmosphere warming – began to deteriorate considerably the ecosystems, population's health, etc.

In such a critical situation, it's necessary to undertake urgent and drastic actions in order to avoid a possible ecological crisis and to ensure an environment of durable development for the next generations. All the world countries will involve in the progress of solution finding, independently of their territorial dimensions or economical potential. Terra should be laid out and treasured by common efforts, as it is a home of all world nations.

The paper reflects an attempt of arguing the possibilities of using three types of renewable energetic resources taking into account the climatic and economical conditions of the Republic of Moldova (RM) and implicit, the decrease of gas emission with greenhouse effect, which result in the process of electrical and thermal energies generation. There are also proposed judicious solutions for other problems that concern the insurance of the state's energetic security.

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