

A NEW APPROACH FOR ENERGY SECURITY – THE EFFICIENT MANAGEMENT OF FUNDS FOR INVESTMENT IN INFRASTRUCTURE FOR GREEN ENERGY

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Abstract: Today, perhaps more than ever, mankind faces a dilemma: to go on a road already trodden that no longer provide economic surprises than unpleasant or to venture in there, to places that show every day to design a more secure future. But nothing is free however how we use resources? Even though the are increasingly less effective use seems to be the solution. Of the two ways that choose Romania in the European context it is and that its potential behind to finally go and not leave out the decor? This paper comprises three key parts: the first of them identifies potential energy situation of renewable energy in Romania, the second part proposes financing solutions and, finally, the conclusion resume the most important ideas.

Keywords: energy security, green energy financing, energy vulnerability, green energy infrastructure

JEL codes: E22, G11, H54, P28, Q42, Q43;

Introduction

Energy has become over the centuries a part of human culture and for the modern man it seems to be indispensable, agreed elements of culture and civilization and inducing people who possess or know how to exploit a high degree of stability and progress . National economies today largely used in the production of fossil fuels - coal, natural gas and especially oil. Today is placed in front of a situation that although some will not accept it because it interests no longer can be materialized, to paint contemporary issues in the new variables: world population growth along with lower amounts of non-renewable resources. Therefore requires a greater amount of energy versus traditional reurselor decrease. Economic growth that every nation and claim induces a more vigorous pace of consumption of natural dowry to the detriment of future generations.

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After numerous conflicts of energy that erupted globally from international treaties were signed, they fired two important directions. On one hand, energy conservation, rationalization to the individual's conscious and endless discovery of new natural sources - hence the idea of green energy and how this issue can influence the economic future we individually and collectively. Global political leaders seem to understand and accept these alternatives slowly, drawing, both conceptually and practically, certain stages of transition from one era to another, from one way to live and work in another. Therefore required a number of issues: transition, constraints, objectives, environmental impact and practical solutions in terms of energy policy.

Therefore it requires an analysis of each problem domain in terms that it could meet any economy in transition to the "black economy" to the "green". This and it suggests that work - leaving the past conscious economy for the future given a chance by renewable energy. It is true that this idea can only be a requirement for any company or its broadest concept formulated for an article.

The situation of energy potential by renewable sources of energy in Romania

It is well known that conventional energy sources such as oil and natural gas have fluctuated in the international market. According to tests conducted on consumption and oil reserves in mining or prospecting, it seems that this energy source will be exhausted in about 50 years. At the same time another aspect that you must keep in mind the discussion on energy production and consumption is sustainable development. This concept places the conventional energy sources (oil, natural gas, coal) in the first position among the most polluting forms of energy. Given the responsibility that has for generations and the environment, the European Union has set clear targets on renewable energy production. Thus, the contribution of renewable energy sources in Romania's national energy consumption would have to reach the level of 20% by 2010, according to EU regulations set by the European Council in March 2007.

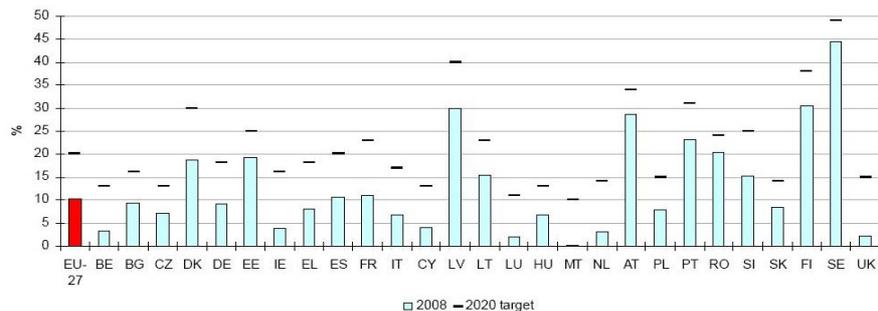


Figure 1. The contribution of energy from renewable sources in gross final energy consumption in 2008 and target for 2020

Source: Eurostat

Fortunately, Romania can develop production systems on all types of renewable sources, depending on the country-specific geographic areas. Following studies conducted in our country, the potential in the production of green energy is 65% biomass, 17% wind energy, solar energy 12%, 4% and 2% small hydro and geothermal voltaic.

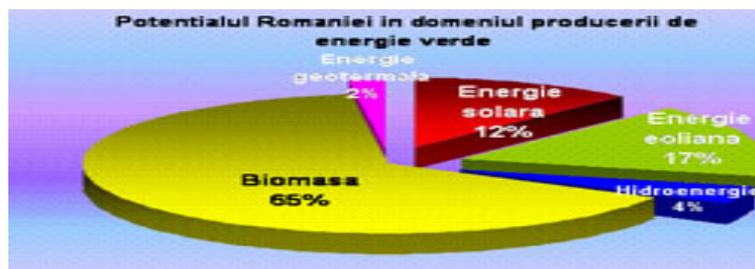


Figure 2. Romania's potential in the production of green energy

Source: ANM

The map prepared by the National Meteorological Administration, Romania's energy potential is assigned code, as follows:

- Danube Delta - solar energy;
- Dobrogea - solar and wind;
- Moldova - micro-hydro, wind, biomass;
- Carpathian - biomass and micro-hydro;
- Transylvania - potential for micro-hydro;
- Western Plain - possibilities for geothermal energy;
- Subcarpathian - potential for biomass and micro-hydro;
- Romanian Plain - biomass, geothermal and solar energy.

Whether complementary systems supply system already existing electricity and heat, be it autonomous systems of production and recovery, energy "green" is available to both operators and individuals. Basically, an operator can use such a

system both for own consumption and for trade of internal energy market. The high cost of implementing these systems are generally depreciated in about 5-10 years, depending on the installed production capacity.

Source of financing investment projects in infrastructure for green energy

European funding sources

Green energy infrastructure can be developed in two essential directions. On the one hand the existing technologies, and on the other hand those arising from research. This is supported by European and national instruments. At Community level, the Union positions three key funding instruments to support research and innovation: Cohesion policy which is financed through the Structural Funds and Cohesion Fund and the Research Framework Programme for Competitiveness and Innovation Framework Programme. For the period 2007-2013 the European Commission calls on Member States and regions to make effective use of financing instruments available in order to achieve the goal "Competitive European Regions through Research and Innovation". Program with the highest orientation to innovation proposed by the European Commission within the framework of the Competitiveness and Innovation is what comprises a series of sub-adapted to imperative needs of the EU: Competitiveness and Innovation Programme (CIP), the European Intelligent Energy (IEE), Entrepreneurship and Innovation Programme (EIP).

With a total budget of EUR 50 billion 7th Framework Programme for Research, Technological Development and Demonstration activities and FP7 Euratom Research and Nuclear training activities (FP7) is the main funding instruments for research in the period 2007 - 2013. These programs bring together research conducted in Europe under a common acoeriş plays an important role in achieving growth, competitiveness and employment work. Projects aimed at energy efficiency and renewable energy projects can be submitted under the theme "Environment and Climate Change" (a total budget of 1.8 billion) and "Energy" (total budget of 2.3 billion euros). Because FP7 is a dedicated research projects will lead to new solutions and technological progress. FP7 is open to any company, university, research center or government duly established, additional eligibility conditions are specific to each type of project. In most cases EU research funding offered through FP7 will be awarded to a consortium formed in order to submit proposals in response to a request. Are major components of FP7 Specific Programmes: Cooperation, Ideas, People, Capacities and Euratom.

In addition to the Competitiveness and Innovation Framework Programme for Research and Structural Funds support wine complete the development of green energy infrastructure. These channels 36% of the EU budget and funding is the

main instrument of regional policy. CSG on Cohesion Policy 2007-2013 lists the energy efficiency and renewable energy among the 12 thematic priorities. The purpose of the Structural Funds (European Regional Development Fund ERDF and ESF, - ESF) is to strengthen economic, social and territorial cohesion by reducing disparities in development level of regions and Member States. These financial instruments contribute to achieving the three objectives: Convergence, Regional Competitiveness and Employment and European Territorial Cooperation. Objective "Convergence" is implemented nationwide by the seven operational programs: Increasing Economic Competitiveness, Transport, Environment, Regional Operational Programme, Human Resources and Administrative and Technical Assistance Capacity Development. Activities to research and innovation and energy efficiency and renewable energies are financed by two operational programs: Operational Programme 'Increase of Economic Competitiveness' and Operational Programme Environment.

The European cooperation programs INTERREG remember what a CBC program funded by the European Regional Development Fund (ERDF). The program is organized around two thematic priorities each containing a number of sub-themes: Priority 1: Innovation and knowledge economy, Priority 2: Environment and risk prevention. To this is added the Transnational Cooperation Programme South East Europe, JESSICA and JEREMIE.

European Fund for Agriculture and Rural Development (EAFRD) is a tool developed by the European Commission funding to support implementation of the CAP in Member States. EAFRD will help to promote sustainable rural development throughout the Community in a complementary market and income policies in support of the common agricultural policy and cohesion of the Common Fisheries Policy. EAFRD will intervene in the Member States through rural development programs. National Program for Rural Development in Romania 2007-2013 is the framework for policy implementation of the Common Agricultural Policy in Romania, with the support of the European Fund for Agriculture and Rural Development. The main objective of the RDP will be to address and reduce structural disadvantages in agriculture and forestry, to upgrade, strengthen and restructure in order to ensure a high level of competitiveness and sustainability of agriculture.

National funding sources

Promoting research and innovation in renewable energy and energy efficiency is a priority not only for the European Commission but also national and regional governments of the Member States. Environmental concerns and the need to achieve the objectives of economic competitiveness led the Romanian Government to develop programs and projects with additional funding meant to actively

promote and support these industries. The most important Romanian Government financial instruments are: the National Inspection Plan, Development and Innovation 2007-2013 and Environment Fund. National Inspection Plan, Development and Innovation 2007-2013 (National Plan II - PN II) is the main instrument through which the National Authority for Scientific Inspection (NASR) is implementing the National Strategy for RDI. PN II aims to achieve the strategic objectives of the National R & D, namely:

Creating knowledge in order to obtain scientific and technological results, globally competitive, in order to increase international visibility of Romanian research and then transfer the results of socio-economic practice.

Increase the competitiveness of Romanian economy through innovation and knowledge transfer in economic practice at company level.

Improved quality of life by finding technical and scientific methods to ensure social development and improving human dimension.

Environmental Fund is a financial instrument issued by the Romanian Government to support projects and environmental programs. The program benefits from the annual allocation from the Environmental Fund, established by Government Decision.

Conclusion – threats and solutions

Across all its energy industry faces environmental issues raised: it into electricity, through all environmental legislation and taxation:

- transport electricity through the internal energy market
- energy distribution by public service obligations
- electricity supply through food safety.

Promotion of renewable sources is a matter of potential than individual countries. Viewed synthetic current major issues of energy sector in the Community, summaries of the Energy Green Paper are as follows:

- increasing dependence on imported energy resources. Two thirds of fossil fuels - oil, coal, natural gas, imported from now (20% of natural gas is imported from Russia). Over 30 years, dependence will increase to 70% of the total, and 90% of oil will be imported.

- the security of electricity supply. Dependence on imported energy resources lead to low energy supply security. The European Commission believes that the solution is more complex, containing inter alia diversifying energy sources, technologies, and a new energy demand management. The European Commission draws attention to the difference in approach to the U.S., which believes that the solution is found only in increasing production.

- structural weaknesses, geopolitical and social negative impacts of energy production on the environment, especially one related to emissions of greenhouse gas emissions commitments under the Kyoto Protocol.

Solutions arising from natural and gradual removal of these vulnerabilities and assumed ownership of green energy through rational funding at the expense of traditional energy. EU citizens are in favor of renewable energy. Changes in consumer attitudes towards green energy are also becoming more evident. Polls show that they appreciate the environmental benefits of more renewable energy than conventional polluting energy sources and prefer electricity companies that provide at least part of its energy from renewable sources. According to a Eurobarometer poll conducted in January 2007, 55% of Europeans consider that the use of renewable energy is a very promising solution, and 60% think that energy research should be a priority for the European Union. Moreover, citizens appear to support changing the energy structure, enhancing research and development and ensuring energy stability. Many of them think that guaranteeing low energy prices and the flow of resources should be a priority for national governments and 40% are willing to pay a higher price for electricity from renewable sources. This survey underlines the importance of renewable energy for European citizens. Increasingly, many consider that increased use of renewable energy will allow them to live in a clean, sustainable and safer.

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NOWE PODEJŚCIE DO BEZPIECZEŃSTWA ENERGETYCZNEGO – EFEKTYWNE ZARZĄDZANIE FUNDUSZAMI PRZEZNACZONYMI NA INWESTYCJE W INFRASTRUKTURĘ DLA ZIELONEJ ENERGII

Abstrakt: Dzisiaj, może bardziej niż kiedykolwiek ludzkość stoi przed dylematem: iść znaną już drogą, na której nie ma niespodzianek ekonomicznych czy nieprzyjemnych, czy zaryzykować i dążyć do miejsc które pokazują jak w każdym dniu zaprojektować pewniejszą przyszłość. Jednakże nic nie jest za darmo, tak więc jak korzystać z zasobów? Pomimo że wydają się znacznie mniej efektywne to wydają się być rozwiązaniem. Z dwóch dróg, jakie wybierze Rumunia w kontekście europejskim, iść dalej i nie pozostawać poza nawiasem? Poniższy artykuł podzielony jest na trzy sekcje: pierwsza z nich identyfikuje potencjalną sytuację korzystania z energii ze źródeł odnawialnych w Rumunii, druga proponuje rozwiązania finansowe a na zakończenie przedstawiona została konkluzja dotycząca najważniejszych idei

個對能源安全的新方法 - 綠色能源基礎設施投資的資金的有效管理

摘要：今天，也許比以往任何時候都多，人類面臨著一個兩難境地：走在道路上已經走過不再提供經濟較不愉快的驚喜或企業在那裡，顯示每一天的地方，設計一個更安全的未來。但沒有什麼是免費的，但是我們如何使用資源？即使是有效地利用越來越少，似乎是解決方案。兩種方式選擇羅馬尼亞在歐洲範圍內，它是和其潛在的背後，終於去，不留裝飾？本文包括三個關鍵部分：首先確定他們在羅馬尼亞的可再生能源的潛力的能源形勢，第二部分提出的融資方案，最後得出結論，恢復最重要的思想。