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SMEs IN THE FUNCTION SUSTAINABLE DEVELOPMENT WITH ASPECT OF THE USE OF RENEWABLE ENERGY

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Abstract: Production, distribution and consumption energy are activities that directly or indirectly affect all areas of human activity, but also on commercial and economic developmentof each country. At the end of the last century, the world has adopted the concept of sustainable development of communities, which in the area of energy, in addition to energy efficiency, raises the demand for increasing the use of renewable energy sources (RES) in order to meet the increasing total energy needs. In the world today there is a broad consensus that the concept of sustainable development brings hope for the rebirth of our planet, but also that the coming decade is critical for the implementation of this concept. The current crisis has caused a new sense of the need torespond promptly to a number of unsustainable trends in production, consumption, social relations, and habits ofthe people, and therefore should strive and provide conditions forthe establishment of small businesses inthis direction.
Keywords: SMEs, sustainable development, renewable energy sources

INTRODUCTION

In an effort to increase part of total energy consumption, which comes from renewable energy sources, extensively around the world are taking many actions in the policy and legislative activities to promote and regulate the use of these energy sources. Within the framework of international and local financial institutions and organizations are established stable system of financing the construction and use of renewable energy, as well as research and education.

Developed countries as well as countries in transition and developing countries, defining short-term and long-termdevelopment strategy for the area, and the United Nations (UN), European Parliament and other relevant international organizations and institutions by their acts and directives definea very clear and precise directions and frameworks for these activity. The most striking political will to implement rapid introduction of renewable sources indicate countries of the European Union. The problem of climate change mustsolve urgent, reduce high energy consumption, especially in the transport sector, as well asto stop the disappearance of biodiversity and natural resources. The transition to a secure and sustainable econom ywith fewer negative effectson the environment will require in the near future, new economic policies at the global and local levels, as well as better strategic overview and management.

The EuropeanU nion, our strategic objective of this decade, is deeply committed to the goals of sustainable development, which was confirmed by the European Strategy to 2020. The European Union will base its development on smart, sustainable and inclusive growth, knowledge-based, innovations economy that makes efficient use ofr esources, "green jobs" and the territorial and social cohesion. In this kind of Europe will notbe a place for the state to ignore the principles of economic, social and environmental sustainability. The EU is generally attributed to buildings occupying 40% of the energy consumption and one-third of greenhouse gas emissions [4].

In line with B&H's efforts to join the EU, B&H legislation will must in a very short time to align with European legislation. To make this possible, it is necessary to establishan organized system of measures that will enable rapid implementation of EU directives in B&H legislation and achieving goals. Local communities (municipalities / cities) are units in which they directly exercise rights and responsibilities of citizens and the framework in which implemented these requirements, in practically daily and direct contact local governments with citizens [5].

In a word, the immediate implementationof all policies, regardless of whether the policies adopted at the level of B&H or the Entities and Cantons are executed immediately at the local level.

Legal status, competences, duties and responsibilities of local communities are regulated entity regulations. Laws on local government in both entities have been prepared in accordance with the European Charter of Local Government, so as to contain a lot of similar solutions on specific issues relevant to the position of local communities. A both laws contain provisions about what is the local government. In both laws, the definition of local government is enshrined in Article 2 of the lawas follows: "Local government includes the right and capacity of local governments, within limits of the law, to regulate and manage certain public affairs under their own responsibility and in the interest of the local population". Activities performed by the local government are also defined Laws.

In the Republic of Srpska has adopted the Law on Local Government (Official Gazette No.101/0442/05, 118/05), which regulates the legal statusof local communities. The scope ofactivities of local government regulates in Articles 12 and 22, and about competences and responsibilities of municipalities to provide better living conditions of citizens.

POTENTIAL OF RENEWABLE ENERGY SOURCESIN THE REPUBLIC OF SRPSKA

The potential of renewableenergy sources in the Republic of Srpskaa rehydro energy, biomass, wind energy, the potential of the sun and geothermal energy. Due to its natural characteristics, developed landscapes, quite developed hydrographic network, the Republic of Srpskar ank sin regions the rich hydro energy potential. Catchment areasi n the Republic of Srpska are: the Drina, Vrbas, Bosna, Sana, Neretva andTrebišnjica. The total technically exploitable potential watercourse in the Republic of Srpska, including border rivers is1 3.505,0G Wh/year. Technically exploitable potential, which belongs to Republic of Srpska amounts to10.027,5GWh/year. Hydro energy potential is exploited Republic of Srpska 2.985,8GWh/year, which means that there main in gun used 7.041,7GWh/year hydropower potential [9].

In the Republic of Srpska planned about 130 s mall hydropower (0.5 <P<10MW), with a total capacity of 360 MW and the potential production of 1,500GWh. Installed capacity and average annual production of micro and minihydro power plants upto 500 kW is not currently known [9].

Forests of Bosnia and Herzegovina covers 2,371,062 hectares, which is about 40% of the total area. Of that 1,250,391 hectares or 53% are located in the territory of the Republic of Srpska. The forest is nearly half the territory of the Republic of Srpska. Forests are one of the most important natural resources of the Republic of Srpska. Development of the forestry sector and wood industry is very important for the development of the Republic of Srpska [9].

Agricultural biomass resources come mainly from agricultural residues, including corn, wheat, vegetables, oil seeds (sunflower, soybean and beet), and remnant so forchards and vineyards.

To date,in the Republic of Srpska wind energy is not used for energy purposes as it is notbuilta single commercial wind farms. Regional atlas wind REGIONALRE-ANALYSIS uses global meteorological data and results obtained by using this modelare not verified measurements on the ground. Assimilation of measurements of the characteristic points on the ground to giv eaccurate results, however, and this wind atlas can b econsidered sufficiently representative for selection and macro location areas for construction of wind farms.

There is significant potential of solar energy in the Republic of Srpska. The number of hours of sunshine (insolation) in the northern part of the Republic of Srpska is about 2.000hours per year, while the southern part is around 2.500 hours per year [9].

Larger, especially the northern part of the territory in the Republic of Srpska is very promising in terms of the presence of geothermal energy resources and geothermal water. In that stands out Posavina, Semberijaand Lijevče fields. The main geothermal sites are located in theTriassic and Cretaceous limestones and making them reservoirs of geothermal water temperature of 35 - 150^{0}C.

EMPIRICAL RESEARCH OF THE IMPACTS Mes IN THE FUNCTION SUSTAINABLE DEVELOPMENT WITH ASPECT OF THE USE OF RENEWABLE ENERGY

The process of research is conducted on the territory of the Republic of Srpska, regions: Bijeljina, East Sarajevo and Trebinje. Municipalities or local communities in which the interviewing was conducted are: Bratunac, Srebrenica, Milići, Vlasenica, Sokolac, East New Sarajevo, East Ilidza, Gacko, Nevesinje and Trebinje. Interviewed are holders of local/municipal authorities in the area, or by the competent departments municipal services, and associates have spent the survey on the project TEMPUS SD TRAIN.

From the aspect of the survey can conclude that the level of local communities that were the subject of research, knowledge about the subject and the organization are not very high. There are some indications that in the future plans to devote more attention to the segment of renewable energy sources and the development of sustainable energy infrastructure by the relevant departments.

RESULTS AND DISCUSSION

Results of the research are presented graphically of the Figure 1 to Figure 8. The lack which was discovered is that there is no resor or department in to the municipal service which is competent that engages in with this issue.

From the local community till the local community those problems try to solved individuals from different departments as follows: Department of Economics and Department for Urbanism.

The most common problem that is encountered during the interview is to find appropriate interviewees that is relevant in terms this the survey and who can give answers to questions.

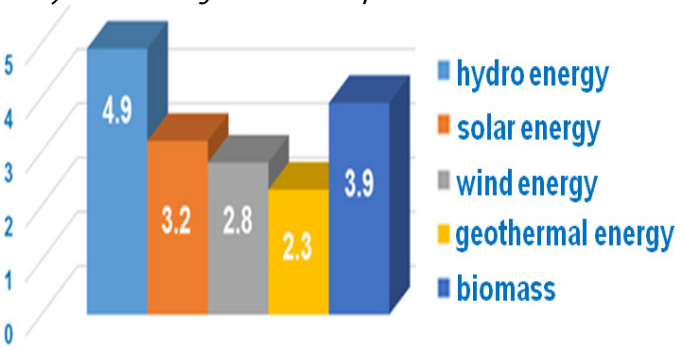

Figure 1. *Assessment of potential renewable energy sources in the Republic of Srpska*

From Figure1 it perceives that the hydro-energy and biomass as a potential renewable energy sources have the highest ratings, averaging 4,9 and 3,9.

From Figure 3 it perceives that the number of new SMEs in the sector of energy production from renewable energy sources in the Republic of Srpska in the next five years will be increased, the assumption of 80% of respondents.

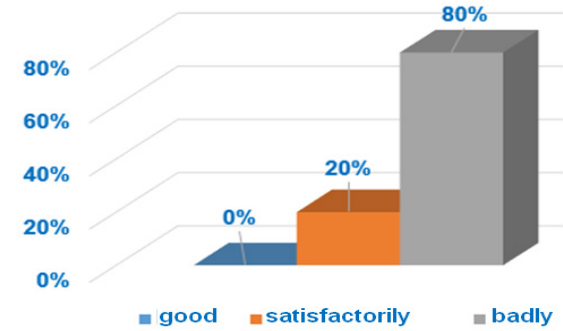

Figure 2. *Assessment of current business situation and business activity production from renewable energy sources in the Republic of Srpska*

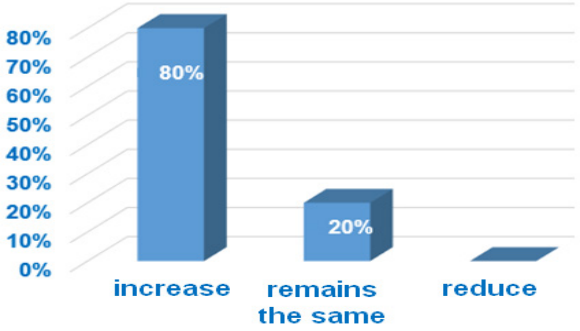

Figure 3. *Number of new companies in the sector of energy production from renewable energy sources in the Republic of Srpska in the next 5 years*

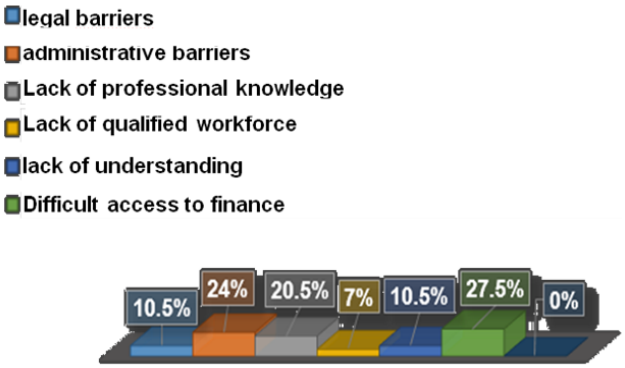

Figure 4. *The most common problems encountered by companies engaged in the production of energy from renewable energy sources in the Republic of Srpska*

Based on results and analysis of ABC perceives problems encountered by firms involved in the production of energy from RES in the Republic of Srpska, such as difficult access to finance, administrative barriers and lack of knowledge in a given area.

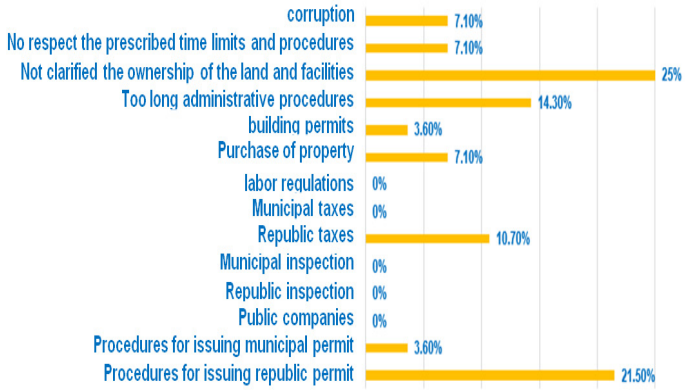

Figure 5. *Administrative and regulatory measures which restrict business development firms dealing with production of energy from renewable energy sources*

Based on results obtained and ABC analysis can be noted: administrative and regulatory measures which restrict business development firms dealing with production of energy from renewable energy sources, such as unclear ownership of buildings and land, as well as the procedure for the issuance of state licenses, following too long administrative procedures and the Republican taxes.

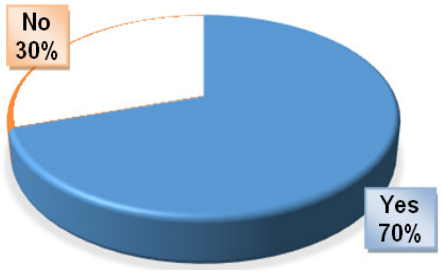

Figure 6. *Is there a possibility that producers of RES-apply for some kind of credit for small and medium-sized enterprises in the Republic of Srpska*

When asked whether in the Republic of Srpska is possible to producers of energy from renewable energy sources apply for some kind of credit for small and medium-sized enterprises in the area of renewable energy sources, we have received written responses stating institutions that offer some type of loan to IRB RS; Line ministries; International funds; UNDP; Commercial banks and other financial institutions; IPA; Fund for Environmental Protection and Energy Efficiency.

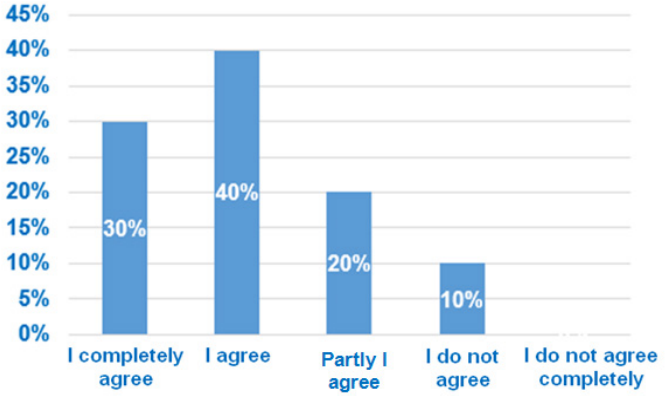

Figure 7. *Use of renewable energy sources can provide the improvement of competitiveness of domestic companies in conditions of market globalization*

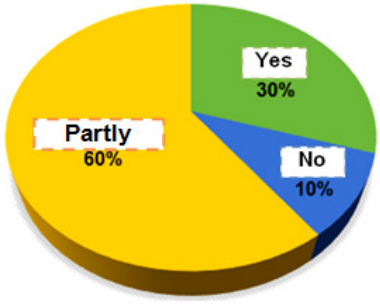

Figure 8. *Is there cooperation between local communities and Universities in the Republic of Srpska, Institutes, consultant companies or other scientific knowledge environment from which to seek services in terms of initiating projects based on renewable energy sources and energy efficiency*

CONCLUSIONS

In B&H needs to work onthe development of products and services related to renewable energy, or small businesses to design, manufacturing equipment, education, certification, and more. The Republic of Srpska and Bosnia and Herzegovina as a whole should accept the views of the European Union interms of energy efficiency, not only because of his membershipin the EU, but especially because it is the model that gave the best results. In this way the state should implement EU directives in a manner that responds to the social, economic and environmental conditions of B&H, ie on principles of sustainable development of B&H.

Energy efficiency is generally poorly promoted. It needs greater involvement of government and non-government sectors, educational institutions and the media to spread awareness and knowledge in the area ofenergy efficiency, as well as available sources of funding for projects in the area of energy efficiency and renewable energy sources. Activities to increasing the efficiency of energy use in buildings, industry, transportand others. As well as theuse of renewable energy sources are just activities that promote employment. The impression gets that in many areas, especially when it comes to energy efficiency in buildings, the use of biomassis not recognized. Increasing energyefficiency (on energy use) is a measure that increases the cost of business, reducing the cost of the family budget, but at the same time encouraging the development of domestic production, and reduce the demand for imported energy. Using renewable energy sources (mainly biomass and small hydropower) to encourage domestic employment, and also reduce the demand for imported energy. Public-private partnerships are a goodway to integrate the public interest and the ability of private management. It is necessary to establish the logistic of biomass (the chain of supply and use) to connect producers of energy (different stages) and equipment. It was pointed out that biomass is the most important renewable energy sources in B&H with the greatest potential and the effect on employment of local labour in the whole chain of exploitation and the technological and economic development of the local economy.

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