

ENTREPRENEURSHIP OF REGIONAL INNOVATION SYSTEMS OF RUSSIA AND BELARUS AS A FACTOR OF SOCIO-ECONOMIC TRANSFORMATION IN THE NATIONAL ECONOMY

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ABSTRACT

***Aim of the study:** Interaction as a basis of socio-economic integration in the construction of the Union state of Russia and Belarus determined by the ability of regional interstate economic projects. In particular, based on the integration of the latest technological processes. One such area is alternative energy.*

***Methodology:** The creation of a General for the Union state of Belarus and Russia program for alternative sources of electric energy will give the energy development of the two countries more dynamic and effective. The use of renewable alternative energy is an important way in the development of energy systems in many countries. And in Belarus, and in Russia already there are certain practices in this direction, but to achieve greatest result, it is important to join forces.*

***Conclusion:** In the framework of the Union state is currently implemented 14 joint programmes for implementation which only this year allocated more than 2.7 billion Russian rubles. Under development is another 27 programs.*

The most important current direction is the formation of the United energy system of Russia and Belarus. Also developed a long-term program of cooperation in the field of energy security, reviewed the tax and customs change, developing the necessary infrastructure.

Keywords: Region, Innovation System, Alternative, Energy, Structure, Formation.

JEL: Q41, Q42, Q38, N70.

INTRODUCTION

The permanent Committee of the Union state supports the initiatives of the development of the Federal program for development of alternative sources of energy, ready to consider the concept and proposals in collaboration with the relevant energy ministries of the two countries.

As noted by Executive Director of the Association "Renewable energy" (Belarus) Vladimir Nistuk, our country faces the challenge of bringing renewable energy by 2015 to 28%, and to 2020-mu - to 32%.

LITERATURE REVIEW

According to the program "Energy Saving" for 2016-2020, the share of renewables should grow to 6 percent. The actual "Green" energy solar, wind and water—the total volume of less than 1 percent, including wind power 0.003 percent (Abramov et al., 2017).

"Why limit with such a small production?", asks the owner of the solar installation, the farmer of Borisov district Minsk region Victor Yuriev. Costanza et al. (2017) "The capacity of my battery is only 10 KW," he told DW Yuriev. According to him, solar station he assembled himself and could put on the roof of the farm's solar panels still at 40 KW. "But because of the introduction of quotas will not work", considers Yuriev.

No plans to expand his farm and owner Vitaly Brick from the Brest region. "I have 2 wind turbines with a total capacity of 500 KW, I would find investors for the construction of wind farms with a capacity up to 1 MW," said Brick in an interview with DW (Antunes & Henriques 2016).

But, in his words, he has known the sad experience of colleagues, which after the introduction of the decree No. 209 has failed to obtain approval to enter the already mounted installations. "In our area, one I have been in this business for the whole country, only 60 wind turbines, what is there to restrict?", perplexed Brick.

DATA & METHODOLOGY

The problem with electricity is, even in such a resource-rich country like Russia. Such a large country economically difficult to provide each region with conventional energy (boiler-houses, power lines, transformers). This entails not only the expense of building new energy sources, but for the laying of gas pipelines, the organization's infrastructure (device storage of waste, access roads, etc.), connection to the grid. The issue of energy supply of each region can be Autonomous sources of energy. Experts in the field of energy has long found a solution to this problem: the sources of power for agriculture can become alternative energy sources. Only the biogas potential of Russia according to preliminary estimates is 81 million tons.t. This is enough to provide rural areas with electricity and heat (Varela, 2018).

McCarl (2017) For Russia the experience of introduction of renewable energy is still new, while many of the CIS countries already have practice. As in any business, in the beginning it is very difficult to move from theory to facts. Ayres (2016) For the proper development of alternative energy requires a strong legislative framework, raising capital for such projects, design, installation and proper operation (Tsangaris, 2017). In Belarus the first steps in the implementation of projects of alternative energy sources was also tough: they lacked practical knowledge, experience and technologies of producing biogas. In the implementation of these projects the investors were interested enough, all kept only on the initiative of the government and not always supported by the management of the enterprises. Brandt (2017) because for our country this period has already passed stage—our Russian colleagues it was good to hear about our example.

RESULTS & DISSCUSSION

In Belarus, except for renewable energy sources there are practically no other sources. Thus, the share of renewable energy up to 80% in the structure of a private TER.

Currently in the Republic is carried out

"Targeted programme of ensuring not less than 25% of the volume of production of electric and thermal energy through the use of local fuels and alternative energy sources for the period till 2012".

For obtaining thermal and electric energy in the amount of 25 percent of local fuel and energy resources it is necessary to increase the use of the latter to 5.93 million tonnes.t. in the year, as well as the use of thermal secondary energy resources, wind turbines, biogas fuel equivalent to 0.82 million tons.t. a year. Thus, it is planned by 2012 to increase use of local energy resources, including secondary heat resources, wind, solar, biomass to 2.8 million t.t. To date, the implementation of this program, the emphasis is on the use of wood and wood waste. The potential of other renewable sources of energy is negligible (Ferreira et al., 2016).

Renewable and alternative energy in the energy policy of Belarus One of the main indicators in the concept of energy security is the share of local fuels in the balance of TER. In Belarus the share of local types of fuel (MW) currently stands at about 17%. In accordance with the concept will be the increase in the proportion MW by 2010 to 20.5 % in 2015 to 27.5 %, by 2020–to 31.6 to 34.5 %.

Currently, the draft law *"On alternative and renewable energy sources"* is being coordinated by the Council of Ministers. (Demirel et al., 2017) It is expected that the law will determine: (1) the directions of state regulation in the sphere of development and use of alternative and renewable sources of energy (NRSE) and (2) the directions of the state support of RES. The draft law has not been published, so according to the official position among the most important provisions of the act specified the following provisions: (1) guaranteed connection of power plants using non-conventional and renewable energy sources, (2) a compulsory purchase by the state electricity supplying organizations of the energy produced at such facilities, (3) and payment of the energy at preferential tariffs (it is assumed that the payment of incentive tariffs will be carried out during the whole period of operation of such installations) (Purkus, 2016).

Ward (2016) Thus, the law *"On alternative and renewable energy sources"* may become a guarantor of support for the development of alternative and renewable energy and allow us to overcome many problems and barriers in the implementation of increasing the share of renewable energy sources in the structure of fuel and energy resources to 25% or more. However, govoritb the effectiveness of the law earlier, you must first get acquainted with its basic provisions.

Kovacic et al. (2017) According to the decree of Council of Ministers of the Republic of Belarus dated 24.04.1997 No. 400, as amended on 28.02.2002 №288 *"About development of small and nonconventional power"* (1) the concept of development of small and nonconventional power in the Republic of Belarus; (2) guaranteed connection to the power system of the Republic of objects of small and nonconventional power belonging to business entities regardless of forms of ownership and also delivered to these objects of energy; (3) developed procedures for formation of tariffs for electricity purchased by the grid from the objects of small and nonconventional power. Thus, the decision №91 of the Ministry of economy on 31.05.2006 G. sets a higher tariff for purchase of electricity produced from renewable sources, with a coefficient of 1.3, which is roughly 10–11 cents (and for mini-CHP natural gas–0,85).

Wei & Liao (2016) However, existing mechanisms are insufficient to stimulate the development of renewable energy.

Siahaan et al. (2016) In accordance with the *"program"* and other integrated programmes for national authorities (Ministries, concerns, regional Executive committees, etc.) developed increasing consumption of local energy resources indicating the amount of the increase in the share of MW to 2012, as well as specific activities indicating year of

commissioning and the volumes and sources of financing. Thus, promoting the implementation of the "*Target program ...*" is not provided, and developed administrative guidance. Gennaioli & Tavoni (2016) For the formation and implementation of policy in the field of renewable sources of energy responsible for three departments - the Department for energy efficiency of the State Committee for standardization of the Republic of Belarus, Ministry of energy, Ministry of natural resources and environmental protection. However, a single coordinating body does not exist. The duties of these bodies include the planning, implementation and monitoring activities in the field of renewable and alternative sources. Academy of Sciences of Belarus is responsible for development of scientific and technological base for implementation of projects on renewable and alternative energy (Medel-González, 2016).

Liu et al. (2016) Currently, the country has developed a complex bureaucratic system that hinders the development of renewable energy. Developed numerous concepts and programs, the effectiveness of which is questionable. For the implementation of projects for renewable and alternative energy the existing scientific and technological base is not sufficient, there is no technical legislation. However, it should also be noted that there are interested officials and institutions in the implementation of such projects.

CONCLUSION

Mass alternative energy in Russia is possible under controlled admission of individuals to the ability to ship the "*Excess*" energy into the network under the condition of subtracting the shipped energy previously consumed. On this subject there is a successful experience abroad. State costs for the development of this technology is close to zero requires a relevant legislative initiative. Perhaps there is a sense to think about legal entities that are not generators in the conventional terms.

Subject to reasonable state support possible successful alternative energy development in promising regions of Russia (first of all, it is our far East).

The use of alternative energy for power supply of Autonomous remote objects is still relevant.

The development of renewable energy sources considered by the state government as part of energy security of the country. The task of bringing MW to 25% will be achieved primarily by increasing production and consumption of wood fuel. Also in the near future expanded involvement in the energy balance of hydro, biogas and municipal waste, melioratorov and wind energy. The main constraining factors in the development of renewable energy in the Republic are:

1. The relatively low cost of traditional energy resources (natural gas) and therefore a bad return on renewable energy projects;
2. The insufficiency of economic incentives;
3. Cross-subsidies and provide incentives for housing and agriculture;
4. The lack of domestic investment resources for the development of the industry;
5. the fear of foreign investors because of bad image of Belarus and poor knowledge of the market,
6. The current situation suits the power (monopoly in the energy sector);
7. Insufficiency of scientific and technological base;
8. Lack of informing stakeholders (consumers in Belarus (individual consumers) should have full information about new energy efficient technologies, as well as to have access to them); and issues related to the projects themselves, namely
9. Significant capital expenditures;
10. Lack of experience in implementing similar projects.

Recently, the government of Belarus turns to face foreign investors, especially in areas such as renewable energy. This is the conclusion we draw from experience with specific foreign investors taking their first steps in Belarus. However, the government still has a lot to do in this direction, including measures to increase the incentive for investors in renewable energy sources, to simplify the procedures of allocating land for construction, coordination and examination of projects, connections to electricity etc., to improve normative and technical base. The development of renewable energy is extremely important for the Republic of Belarus. Only this will increase the real independence of the country in the first place from Russia. So how to talk about the independence of the country sitting on "a gas needle", at least silly, the development of renewable energy will have a positive impact on the economic and ecological state of the Republic. Belarus' potential in renewable energy is great. Conducted some research is informing authorities and local and approving authorities. The market is in the "low start". It's time to come leaders who will lead the development of the industry in the field of renewable and alternative energy.

The economic policy inherited from the Soviet past approach to development of innovations aimed mainly at the production, should pay more attention to the demand for products and the role that consumers play in stimulating innovation and making the innovation process the required forms. "Technological" approach to innovation, which is still typical for Russian innovation policy has serious limitations in a market economy, where the knowledge of consumers is critical to determine the directions of innovative activities. The development of science and technology is important, but not sufficient as a driving force of innovation. Demand, primarily manifested through the market, but also through building a chain priorities and their hierarchy of values within companies plays a crucial role in stimulating and defining the main directions of development of innovative activity. Properly structured innovation policy will accelerate the diversification of the economy will reduce its dependence on natural resources, will contribute to the development of the developing sectors of the economy, including services, and the development of previously powerful areas during the transition period has been given relatively little attention. At the same time to enhance competitiveness in the future is of great importance strengthening the position of existing industries, increasing the technical level of production through the involvement of scientific knowledge and their own innovation activities, and building relationships with suppliers of materials and components and consumers of finished products. Experience innovation cooperation between the Russian Federation and the Republic of Belarus in the conditions of formation of the Union state can be used in the framework of the Customs Union and the Eurasian economic Union, and later in the Eurasian economic Union.

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