

To pay for the wind

Green energy needs an initial impulse

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The Government is developing the laws to support the renewables. First large-scale contracts have been made about the production of wind generators. According to the rating of 30 countries with favourable conditions for the renewable energy made by Ernst & Young, an essential growth of the wind energy is expected in Russia in 2011.

Can the green energy ever become an equal partner of the carbon energy? We addressed the question to President of RAWI (Russian Association of Wind Industry) Mr. Igor Bryzgunov.

- Igor Mikhailovich, the wind energy is often skeptically considered a fashionable, but expensive toy. Is it really so?

- A wind energy market is one of the most rapidly developing markets in the world. In 2009 the global turnover of the wind industry was about 50 billion euros. Last year it increased by 31%. The Russian share is 0.013%, and that is unacceptable for a country with the highest wind potential. Technically, the wind energy potential is around 1637 GW in Russia. This is approximately 15 times higher than the actual average annual capacity of all power plants in the country. If we look at the financial side of the market, we will see 135 bln rubles by 2013, and 315 bln rubles by 2015.

- Russia has claimed its goals in the green energy industry. Will the legislation about the renewable energy change?

- There is a political background for development of the renewable generation in Russia, now an economical one appears. The Government has adopted a resolution to state criteria for renewable generators with up to 25 MW capacity. According to the law, the costs for connection to the grid will be reimbursed. However, there is no mechanism yet. It is not clear who will pay and for which amount, and who will get the subsidies. To make the document work there should be certain additional laws. Besides, draft amendments to the Energy Law (N 35), stating the encouraging principle for the renewable energy, were presented to Duma. The Government supported the initiative of Renova Group and chose the capacity compensation approach. Therefore, the renewable projects have become much more investment attractive, as risks are minimized and the installed capacities and social expenses can be controlled.

- How does the European scheme work?

- The European scheme is the fixed or feed-in tariffs covering the difference between the market price and the feasible price. So far the expected feed-in tariffs have been used in the calculations of renewable projects. But if the feed-in tariffs were established for the renewable energy, other energy producers like oil and gas companies would have a reason to feel unsatisfied. Finally, the capacity price is to be implied as the supporting tool. I would say, this concept is more logical and fair. Moreover, the capacity market is more developed than the electric energy market.

- Is the capacity market a sort of the commitment market?

- Any energy system has its peak loads, so suppliers should guarantee that a certain capacity will be produced by a certain time. Renewable generators depend on natural conditions, so they will be paid for the capacity that they can really produce. I would like to note that we don't ask for

the money from the budget! The Government should earn by the new industry, not subsidize it. That is what we are heading for. But we need an initial impulse, a push. Speaking about the whole technical cycle with all the expenses (including environmental and medical costs, etc.), the renewable energy can compete with the traditional energy even today. However, there is no real economical competition: now 5-6 dollars for the traditional energy come for 1 dollar of subsidies for renewables in the world. Therefore, implemented subsidies for the renewables will equal the conditions for all the technologies (approaches) of generation. In a longer term perspective, the development of the renewable energy is basic for modernization of not the energy industry only, but the Russian economy, science and industry in general. 1% increase of renewable energy will make 1.5% increase of GDP. Look at the effect of renewable energy production in Europe. For the last 5 years the wind industry has created 33 vacancies a day. By 2020 the renewable energy expects to create 2.8 mln vacancies more and add around 1.1% to the GDP. This is equal to billions of euro. China installed 13.8 MW of renewable generators in 2009 and rapidly became a driving force for the global wind energy together with Asia in general (40% installed capacity). Detailed economic statistics are available in RAWI. So far Russia itself can do the installation, construction, and various surveys for the wind industry. It makes about 30% of the related activities. The rest 70%, the equipment mainly, are procured. But we can integrate the western technologies and produce blades, generators, and gearboxes locally.

- Are there any plans like these?

- Now investors finance wind projects at their own risk with no guarantees of any refunds, not talking about profit. But there is some good and promising news. The Russian wind energy market is opening for the first large-scale projects. Siemens has signed an agreement with Rostechologies and RosHydro about the local production of wind turbines. A division of Rosatom – OAO Atomenergomash – has claimed its intention to produce wind turbines and build wind parks. If big companies with state shares are ready to enter the wind energy market in Russia, there is a good reason to believe that the market will become profitable and have equal conditions for traditional and renewable energy.

- Can wind turbines influence the human environment badly – by the aerodynamic noise?

- Old wind turbines had a noise spectrum with infrasonic vibrations (3-15 Hz) that had a negative impact on living creatures. The solution for the problem was found back in 1980s when the proper blade profile and the rotation speed were chosen. At the distance of 200 m the modern turbine makes the same noise as the fridge in the kitchen.

- What impact does the wind energy have on the energy price?

- The wind energy makes the average market price lower. This is a stated fact. Every 5% of wind generators on the energy market make the wholesale prices lower by 1%. 1 ruble of the social expenses will correspond to 1.39 rubles of the social profit.

- Is the Russian market interesting for the world?

- Of course, there is a great interest. Russia has enormous wind resources, especially in the Far East, Western and Eastern Siberia, North-West and South regions. Russian developers have been working on the future wind parks already. And they do hope for the governmental approval of the initiative to support the renewable energy in general and the wind energy in particular. The total capacity of expected wind parks in Russia known to RAWI is over 2000 MW so far.

Published by The RG-Business, N781, December 21, 2010.