Sustainable energy in Russia: a pipe dream or an opportunity?

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A sustainable energy supply is one of the most important challenges we face in the 21st century. As is often the case, a challenge also means an opportunity and many small, medium and large sized businesses in many countries are capitalizing on this opportunity. These companies have become players in a steadily growing billion Euro industry, focused at the two pillars of a sustainable energy future: Energy Efficiency and Renewable Energy. The sustainable energy industry in Russia, however, is still in an embryonic state, and the big question is whether it will ever develop in the billion dollar industry we already see outside of Russia.

In 2010, the German market for energy efficiency technologies alone, was estimated to be 67 billion Euros. The investments in renewable energy in Germany in the same year stand at about 25 billion Euros, with most of that money going into biomass, solar energy and wind power projects. Bloomberg New Energy Finance estimates that the world wide annual investment levels in renewable energy will double from 243 billion dollars in 2010 to 500 billion dollars by 2020.

Investment in sustainable energy in Russia pales in comparison to what is happening in the rest of the world. The Russian Ministry of Energy estimates that until 2020, 80 billion dollars need to be invested in energy efficiency and 300 billion dollars in renewable energy. Considering that in 2009 Russia invested a little more than 2 billion dollars in renewable energy, there is still a long way to go.

After the United States and China, Russia is the biggest energy consumer in the world. If we look at energy intensity (the amount of kilograms of oil equivalent used per dollar of GDP), then Russia is even number one in the world. Not a first place to be proud of. With rising energy tariffs, increasing energy consumption and a stagnating energy supply, one would expect that Russia has a strong interest in catching up with the rest of the world, but not much is happening. The big question is 'why' and what can be done about it.

On one hand, the years 2009 and 2010 have brought about a situation whereby the Russian Government now has energy efficiency and renewable energy high on the political agenda. Increasing energy efficiency and making the transition to a rational resource consumption model is now one of the main economic modernization policies in Russia. After the adoption of the Energy Efficiency Law, further legislation is being drafted and federal and regional target programs are being developed.

On the other hand, there are many barriers that impede a healthy development of the sustainable energy market. First of all the tariffs, although steadily rising, are still three, sometimes four times lower than in most EU countries. All experts agree that for viable energy efficiency and renewable energy projects a considerable rise in tariffs is needed. In addition, one of the main drivers of the sustainable energy market in the West is missing in Russia – subsidies. Most of the biomass, wind and solar projects in the West have in one or another form received government subsidies or tax incentives.

Awareness about sustainable energy is also a cultural issue. In Western countries it is the middle class that has a savings culture and the small and medium sized enterprises are the ones that drive innovation, entrepreneurship and new developments in energy efficiency and renewable energy. In the Western economies more than 90 percent of the population consider themselves to be part of the middle class and small and medium enterprises produce more than 70 percent of the Gross Domestic Product (GDP). The Russian middle class accounts

for maybe 20 percent of the population and small and medium sized enterprises produce at best 16 percent of Russia's GDP. It is no wonder that investments into sustainable energy are accordingly modest.

Another constraint on the growth of Russia's renewable and energy efficiency market is caused by the low share of private investment and venture capital in this sector. These sources of funding are starting to play a big role in the USA, China and the EU. Venture capital investment into renewable energy in these countries equalled 4 billion dollars in 2010, which is two times more than all the renewable energy investments made in Russia in 2009.

Does that mean that investments in sustainable energy in Russia are hopeless and that you can stop reading this article? Not necessarily; there are always opportunities and they will come to those who know how to wait.

Investing in projects in the public sector is still a rather risky affair. Public officials tend to change regularly, procurement needs to be done in accordance with federal legislation (i.e. the lowest bidder wins) and commitment of funds from the state budget is limited to a small number of years, and thus, is likely to change as well. Projects aiming to invest into the residential housing sector are also difficult. All the tenants in a building need to agree with the investments made, and once the investor installs the equipment in the building, ownership issues arise immediately. Renewable energy projects, such as solar energy, wind power and biomass, will not be commercially viable, as long as subsidies and tariffs are not significantly increased. Although potentially, in a single hour, solar energy can supply all the energy consumed worldwide in one year, it will still have to be Research and Development (R&D) budgets and not investment budgets that develop solar energy as the potentially most viable renewable energy source known at this moment.

If you ask me what area of Russia's sustainable energy sector I will most likely put my money in, I'd say that it will have to be innovative products or businesses, where a mass market is involved or those projects where I can implement a sustainable energy project in a fully controlled environment.

Products, services or businesses, where a mass market is involved are those cases when goods or services are sold to a wide public of consumers, industrial clients or commercial clients. Any business dealing with state of the art energy efficient goods and technologies that have a wide market can be interesting. For example, products that can be used in and around the built environment such as insulation materials, energy efficient heating and cooling systems, lighting, intelligent control systems, smart meters and energy efficient appliances. But also technologies that can essentially be used in any industry, such as pumps, electric motors, compressed air systems and measurement and control systems are of interest. Also, consulting services such as advice on energy-efficient methods and production processes belong to this category.

Projects in a controlled environment, for example, are projects on, and within the boundaries, of an industrial (e.g. any production plant) or a commercial site (e.g. logistic or retail centres). Typically, an energy efficiency or renewable energy project includes a performance component. This means that part or all of the return on the amount of money invested in the project depends on the actual financial savings achieved. Examples of this type of projects are replacement of compressors, pumps and heating systems and the installation of combined heat (cooling) and power systems. In these cases, it is crucial that you be able to measure, benchmark and verify all the relevant energy consumed and that is only possible when you have a sufficient level of management control over the actual site of the project. These projects usually have still rather long payback periods, but with the rising energy tariffs they are becoming more interesting as we speak.

Many challenges lie still ahead of us and we can only face these challenges if each of us, living and working in Russia, reflects on our personal responsibility for energy saving, as it is becoming the norm all over the world. In the meanwhile, money can already be made in Russia for those with the right understanding of the market, of the peculiarities of the Russian business environment and with a healthy appetite for adventure.

In the ten years that I have been doing business in energy efficiency in Russia, I have seen many positive changes and I have seen the rate of change accelerate over the years. There is one thing that is clear to me: this is the time to move into the sustainable energy market!