

ENERGY SAVING AT COMMUNITIES LEVEL IN RUSSIA: DAY-AFTER-DAY BEST PRACTICES FOR MITIGATION CLIMATE CHANGE

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Businesses and communities at different degree contribute to the climate change, and all "participants of climate damaging" just request a compensation for their losses and expenses. So, when one says "justice" and "sustainability" – another asks: "For whom?" People usually have in mind that "justice" and "sustainability" should be for "human being", for "living being". These "beneficiaries" need first of all sustainability of biosphere, hydrosphere, atmosphere (and lithosphere) for protecting (saving) biodiversity, and ethno-diversity. And the reference principle for different conditions is – differentiated approach for different countries, different environment, different levels (global, national, local, individual) taking into consideration common values.

And when we say "ETHICS and Climate CHANGE" that means – the problem is caused by- or connected with people, their activities and impacts on Nature. And we all - as "participants in climate changes" act in variety ways: jointly- as citizens of cities and megapolities; jointly - as plants and businesses "armed with techniques and technologies", which emit and discharge pollutions; and individually - as citizens and users of energy, resources, and as "producers of wastes". And, depending on these different ways of impact on Nature and Climate- scientists and interested groups elaborate different methods and tools, and mechanism of mitigation and prevention measures. Mankind continue to learn and test how to control pollution emissions, to develop and implement verity of mitigation measures for reducing ecological and health risks from anthropogenic load. We use ecological laws, norms, standards – at international level (as Kyoto Protocol), at national level (Clean Air Law), at local level. And all these tools and mechanisms are valuable only when they re applied to concrete acclivities, places, and situations.

All types of experience are important, but motivation of individuals to participate in suggested by scientists scenario for sustainable mitigation is a undoubted priority.

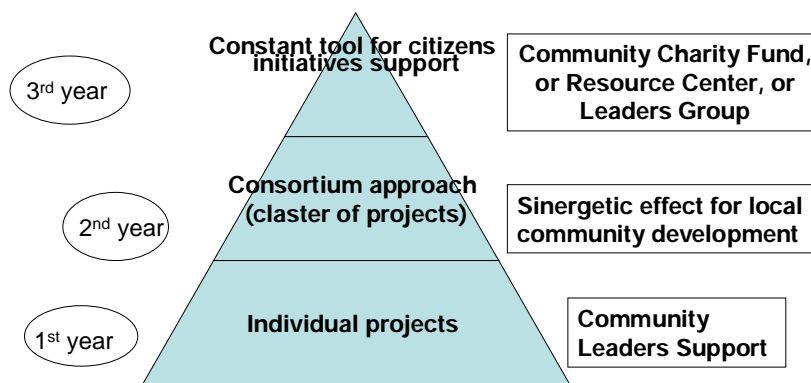
Thus, impact of business has to be regulated be ecological-technical- economical norms, laws, standards. Russian business in a line with the world trends and strategies, and the country characteristic property of economy pays more attention for energy saving. As it was underlined in EBRD Report on Energy Savings in Russia, 2007 ("OREANDA-NEWS") "energy saving is hence a vital part of being a socially responsible company, which entails minimizing the negative impacts of economic growth on the environment and responding to the global challenges of diminishing energy resources as well as the climate change. Increased attention to the issues of energy efficiency will certainly improve the image of Russian companies as environmentally conscious and socially responsible corporate citizens. However, these challenges still need to get a wider recognition as climate change, for instance, is not placed very high on Russia's corporate agenda

At local level - involvement of common people - plays a key role in motivation civic society to better understand and participate in appropriate way in climate mitigation measures. "Learning from doing" - is the most obvious way to mobilize the communities. And the recognized leaders in this process are local and national NGOs. One of more experienced Russian NGO in this field is Fund for Sustainable Development (FSD) – as Russian NGO with 10 years of experience on the country ecological social service market. FSD has brought together professionals who have been working in the area of supporting community development since 1996 with emphasis on conservation and energy-efficiency. The current activities of FSD are focused on promoting civic initiatives through a system of contests and grants. Along with the United States Agency for International Development (USAID), which is the key donor of FSD, it also works with national Russian and international companies, with regional and community sponsors and clients.

During the last decade FSD designed and implemented few programs dedicated the issue – communities mobilization for energy saving at local level in Russia. Geographic coverage - from Russian Far East- till Karelia- West European part of the country. There are “Star Communities Initiatives Program”, “Community Development Support Program”, “Environment and Public Health in Nevinnomyssk and Other Regions of EuroChem Presence”. FSD has been introducing so called “Resource Model”. It’s a mechanism that through public engagement promotes introduction of energy saving techniques as a tool for reducing emission, saving resources (heat, and electric),

FSD Resource Model

to strengthening social partnership through
“learning from doing” social design



During the 1st year about 20 000 citizens gained positive impact
due to the Program implementation

Case-study #1. The “Environment and Public Health in Nevinnomyssk and Other Regions of EuroChem Presence”.

Big business is interested in introduction “community development programs” at its territory as in mechanism of addition social resources for its own development. Socially responsible business “grows up” the active social partner (members of local community), who understand social-economic local problems, and who learns how to solve these problems using modern tools and “new rules of the game” – that means new institutional relationship between different sectors of society, between so called social partners. The energy efficiency projects help to introduce new approach to health saving –through citizens involvement in health creation, and changing for better environment. That coincident with the world trend - “active public health prevention”.

Within the program FSD funds the most interesting citizens project initiatives through competitive grant process: development and introduction of energy efficiency instruments and mechanism allowing to reinvest energy saving into developing program ; dissemination of the best community practices; community development education; creation of the new community development mechanism.

The “Environment and Public Health in Nevinnomyssk and Other Regions of EuroChem Company Presence Program” was launched in December 2006 in Nevinnomyssk, Stavropol Krai. The Program, funded by EuroChem Company and the United States Agency for International Development (USAID) and managed by the Fund for Sustainable Development (FSD) with active support from the city government, is scheduled for three years and is aimed at

improving the quality of medical services and promoting conservation, energy-efficiency, and the rational use of natural resources. Of much respect is the company’s effort to form responsible partnership relations with its staff, the community and the state overall and its determination to ensure maximum industrial safety along with social support to communities

and regions where its facilities are based. The Program budget is US\$ 750 000 (Russian business contributes 2/3 of the expenses).

Example. Energy-water saving project in the city hospital.

Reducing expenses for water consumption and energy resources at the City Hospital by



replacing the existing electric cooking boilers with gas cooking boilers and modernizing the cooling system of the refrigerating unit; it is expected that by the end of 2008, over US\$28,000 will be saved and used for acquiring additional medical equipment, which will allow to improve the quality of medical services provided annually to 10,000 residents of Nevinnomyssk. It helped to save nearly US\$12,000 during one year and almost the same amount as a result of replacing the electric

boilers with gas ones and, thus, the costs of grant was recovered practically in the course of one year.

Case-study #2. The Community Development Support Program in the Russian Federation (2006-2009).¹

The most visible FSD program is "Community Development Support Program" which is addressing economic, social and environment concerns through engaging community members into solving critical local problems promoting introduction of energy-efficient techniques. The energy saving approaches are simple: modernization of the heat system in schools and outpatient clinics; heat boiler plant in municipalities; introduction effective low-cost techniques reducing heat loss and heat consumption in local hospitals; replacing old windows and doors. The small projects leads to important improvements in the lives, and help people to make first steps towards sustainable development.

This multi-faceted community development program is composed of the following components: 1. Grant-making in the targeted communities. 2. Dissemination of best practices. 3. Training for development. 4. Creation of new community development tools and practices.

The Program is carried out in the Russian Far East, Lake Baikal Region, Northern Caucasus and in some other regions of Russia with financial support from the United States Agency for International Development (USAID), which has provided a total of \$5.65 million for the period from 2006 through 2009.

Primary Program Goal is to design and disseminate both innovative and proven models of community development throughout the Russian Federation. The key Community Development Support Program objectives are as follows:

- to engage local citizens in addressing local needs and problems through a series of targeted grants focused on energy efficiency, local economic development, waste management, public health, small business development, social assistance and natural resources management;
- to develop and introduce tools for energy savings and mechanisms to allow communities to reinvest saved resources into development programs;
- to involve all interested stakeholders in selected communities in identifying priorities for community development;
- to train community leaders, government officials, and business leaders to better address community needs through collective efforts;
- to replicate best community development practices in a selected region.

The Program facilitates: an increased standard of living in Russian regions; an enhancement of the potential for future community development; citizen participation in

¹ Based on materials developed by Dr. Andrey Volkov, Dr. Andrey Zaitsev, Dr. Elena Milanova - project Mangers, FSD.

decisions-making regarding their communities through interaction with local government and business.

FSD's "know-how" is a consortium approach, in which projects proposed for grants are not isolated undertakings, but parts of one group of projects targeted toward addressing common community issues.

Consortium approach, which FSD has been using in its community development offers communities an opportunity to take part in a contest of socially significant local projects. Not separate projects, but a complex of interrelated initiatives. This means that in the process of preparing for a contest a kind of a public consortium is formed of NGOs, businesses, local leaders and municipal officials. All the projects are planned in such a way so to work together to resolve a certain issue that is critical for the community. It is important that the participants in the consortium are the ones to identify this issue and to understand what is wrong in their city, district or settlement. To be able to do this, people have to meet to discuss matters and identify priorities and, thus, begin to develop their community. This serves as a strong impetus to begin a permanent dialogue and facilitate multi-sector interaction.

The project contests are divided into several phases. At the first phase, FSD organizes training and guide the participants to become project-minded. At the second phase FSD starts certain projects that are supported by local leaders. After the initial proposal selection process, FSD's managers go on site visits, where they not only oversee projects, but, if needed, help to create a project structure, to "put ideas on paper" in the form of project proposals, to finalize documentation, etc. At the third phase, FSD launches the entire project consortium. As a "quintessence" of the joint effort and to ensure that our social technologies become permanent mechanisms, local community funds or municipal development funds – the titles may vary - are founded. As a result of FSD activities, such funds have already appeared in over ten municipalities in 2007. Consortium approach allows to build more elaborated relationships in a community and to achieve a synergetic effect - when several small projects play trigger a strategic planning and local development process based on multi-sector participation.

When people witness real work and real improvements, they are ready to invest. For example, in the city of Svirsk, a portion of grant funds came from Teploseti, a local limited liability company. To be more exact, the proposal to close the detrimental boiler plant in the local hospital and build a new one became the winner in the grant contest. One new boiler was installed on our initial grant and after Teploseti had become interested in the project, it donated funds for the second boiler.

Example. Nesterovsky Raion located in Lake Baikal Region in the Republic of Buryatia. Following a decision of the Russian Federation Government, a special federal recreation area is being built there. That is why the complex of project proposals we had selected included energy-efficiency projects, a project involving the creation of an ecopark, and another project that improved a section of the Great Baikal Trail to further promote ecotourism. Thanks to our first grant, the raion administration installed a combined gas-producer and boiler module in the local school. It replaced an old dilapidated wood-burning stove that was a fire hazard and consumed enormous amounts of firewood that the school had to buy. Having seen such tangible results, the Era Foundation of the Republic of Buryatia added nearly \$25,000 for installing solar batteries and building a water pipeline from the school to the local kindergarten. In other words, we began with an energy-efficiency project – replacing a heating stove with modern equipment in one place – and ended up providing hot water to the local kindergarten.

Another example - the consortium of projects "**Our Lovely Nevyansk**"- in the city of Nevyansk (Sverdlovskaya Oblast, the Urals) with a population of 20,000. The situation in the city was the usual story: lack of money and complete deterioration. The community was trying to change things and had initiated development training. FSD offered them an opportunity to realize their ideas. During the first year, they used grant to introduce an energy-efficiency technique at the local factory and began saving \$60,000 a year. FSD requested one condition: the energy savings were to be spent for the city. The local council decided to use these funds for renovating heat pipelines. First of all, pipelines leading to the

Veterans Home were insulated. Thus, the members of the community saw that the authorities were concerned about the city and responded in the same way. They began to plan joint self-help programs. Nevjansk city administration developed a new energy efficiency program for the whole raion (population by 36,000 people). As a result, when FSD representatives came to this city two years later we saw a modern glass roofed market in the place of the old pipes. Without outside help, a Territory Development Fund was revived.

The second grant was entitled "Meeting Each Other Halfway" and was aimed at promoting interaction between the administration and local NGOs. As a result of two benefit events, enough funds was collected for organizing a city contest of social projects. Project participants included local schoolchildren who offered to find the old names of the streets of their city that is 300 years old. They spent the whole summer in archives, and near the usual street nameplates they hung nameplates created in a "retro" style with the old names of the streets. The children also found an entrepreneur who sponsored the creation of the nameplates.

The third grant was used for founding a fund for supporting small and middle-sized businesses. The city began to develop plans of attracting tourists: it is located 120 km from Yekaterinburg and is an ideal location for weekend family recreation. One of the city's historical sites is a tower built in the 18th century by the Demidovs and renovated for the celebration of the city's 300th anniversary. Around Nevyansk, there are small villages with small potteries and shops where felt boots are made and where the local women make lace. The project consortium decided to bring all this together. A workshop devoted to small business development was organized and of the 16 attendees, 8 had later opened their small enterprises, such as hotels, or to be more exact, rural guest houses; and local crafts shops began to appear in the villages. Today, the results of these activities become obvious when you enter Sverdlovskaya Oblast by car and see advertising panels along the road inviting guests to the local "gem" – the city of Nevyansk. Tourists are brought there by bus. The regional administration provided money for building a business incubator in the city. All this was begun with the \$60,000 we had brought here as a grant and which was used for launching the process.

Example. Project in Dagestan (Northern Caucasus).

The project complex that is being carried out in a remote mountainous area includes modernization of water supply system in the raion hospital and an energy-efficiency system installation in the middle school of Tpig Settlement where the old wooden windows were replaced with new modern heat-insulating ones. The local self-government introduced a system of reinvesting energy savings. Much attention was focused on the project to develop tourism in Agulsky Raion. The project developed the tourist routes that will be used by the republic's tourist agencies. Another project that has been accomplished under CDSP projects in Sergokalinsky and Kayakentsky raions were devoted to the utilization of a new solar energy technology. Thanks to the opportunities provided by CDSP agricultural products' processing units are being assembled in these communities and a system of producing dry fruit with the help of sun drying is being arranged. The new solar energy collecting panels will provide hot ware supply to the raion hospital and the children's summer camp. As a result of the project activity a number of business firms in Dagestan had agreed to continue financing the introduction of modern solar energy techniques.



Officials of Agulsky Raion Administration and the staff of the raion hospital located in Tpig Settlement are glad that the hospital now has hot water



In the winter of 2008, the pupils of the middle school in Tpig Settlement for the first time studied in warm classrooms

Example. Recent accomplishments of Community Development Support Program at RFE.

Currently 16 projects have been funded in the framework of Community Development Support Program at the Russian Far East. Nine of them are already closed but still deliver profit and initiate positive impacts on rural communities. In Topolevo settlement due to the change of the public transportation scheme emissions from the buses were reduced by 45% in the settlement. New energy saving light system helps to save 30 MWh per year. Three permanent jobs were created in the settlement. According to the local police station reports new sports facilities distracted students from the street what resulted in 25% of local youth criminality rate decrease. Citizen engagement (volunteering) increased from 5 to 15% of the total population. CDSP funds were leveraged with local businesses donations. This partnership helped the community to get First Prize at the All-Russian contest of rural municipalities for healthy environment and life quality.



New solar power lights were installed in Topolevo settlement near Khabarovsk

bank of the Angara River.

The first project, **Rational Use of Heat Energy**, fulfilled by MUP Teplotsentral, involved a modernization of a municipal boiler plant in Mikroraiion Settlement in Svirsk during which two new economical water heating boilers working on wood waste instead of coal were installed. As a result of this project, from October 2007 through January 2008, total energy savings amounted to 215,000 rubles, most of which (189,000) were reinvested in modernizing the heat supply system in the local hospital, while the remaining US\$1,000 were invested in the budget of the contest of small social projects entitled "Together We Will Achieve More!". This project made it possible for the community to participate in the regional program

Project Complex "Svirsk – A Sustainable and Comfortable Living Environment for the Community".

The consortium included three projects that were carried out in the city of Svirsk (population – 14,700), Irkutsk Oblast, located 150 km from Irkutsk on the left

“Development of Communal Heat Power Engineering” and to receive US\$ 300,000 of additional funding from the regional budget. This money, together with the project’s energy savings were used for laying 584 m of a heating main from the boiler plant in Mikroraion Settlement to the hospital and eliminating an inefficient boiler plant.

The second project of this complex, **Comfort at the Outpatient Clinic**, was devoted to replacing windows and doors in the building of the local outpatient clinic, which is attended by all residents of Svirsk and nearby villages. As a result of these energy-efficiency activities that included the replacement of 41 windows and 4 doors in the children’s and emergency departments, the cost of maintaining the building decreased by US\$2,300 – this money is being reinvested in stopping heat loss in the other departments of the clinic; comfortable conditions were created - the level of illumination in the consulting rooms increased by 30% and the temperature in winter increased by 5° ; and the frequency of acute respiratory illnesses dropped both among the patients (especially, among children) and the staff of the clinic. Under this project, the doctors of the clinic monitored the health and conducted examinations of patients from risk groups twice a quarter; and organized seven training seminars for young people devoted to health protection and four conferences on child care for mothers and women of fertile age. As a result of the close cooperation of the three projects, a synergetic effect was reached: resources were pooled, experience was shared, multi-sector interaction was achieved; and citizen participation was promoted.



The new economical water heating boiler in the municipal boiler plant in Mikroraion Settlement in Svirsk



Replaced windows and doors in the hospital in Svirsk

These FSD “social technologies” serve as adaptation strategy at local level (which help to respond to the negative consequences of climate change on eco- and social- economic systems), and help to find addition resources for sustainable communities development via prevention of possible social and health consequences.

FSD proved approaches aimed to involve common people to deliberately participate in climate change mitigation measures at local level have win-win results. And people from small communities see themselves that they can contribute to mitigation of climate change by introducing energy-saving technologies. Saving energy results in saving local budgets that in accordance with the grant program rules should go to the sustainable development of the community-grantee. The process of decision-making at local level begin to include more people, and new aspects of sustainability – energy saving.

Such SFD programs provide a new experience to community leaders and strengthening self-governance, promote sustainability processes and demonstrate the relationships between climate change and lifestyles. At the same time FSD’s programs contribute to reducing CO2 emissions through the active engagement of communities, altogether with other actions at several levels - international, national, regional. Involvement wide range of people into grant procedure stimulates their activity and reconsideration of individual and collective behaviors and lifestyles.