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Special Edition

Moldova Energy and Biomass Project Newsletter

Moldova Energy and Biomass Project

This project is funded by the European Union and co-funded and implemented by the United Nations Development Programme



MOLDOVA ECO-ENERGETICA 2011

MOLDOVA ECO-ENERGETICA, edition 2011

The Ministry of Economy and the Energy Efficiency Agency organized on December 7 2011 the first edition of "MOLDOVA ECO-ENERGETICA". Over 200 persons - representatives of the Government, ambassadors, donors, entrepreneurs, academia and civil society – participated at the first wide-scope event dedicated to the promotion of renewable energy and energy efficiency.

MOLDOVA ECO-ENERGETICA will be organized on annual basis and will aim to acknowledge the outstanding achievements in the area of renewable energy and energy efficiency in the Republic of Moldova. Starting with 2012, MOLDOVA ECO-ENERGETICA will give awards to individuals and organizations with significant contributions to energy production, transmission, distribution, and efficient consumption, development and promotion of modern technologies and innovations in the area of renewable energy and energy efficiency.

MOLDOVA ECO-ENERGETICA 2011 was organized with the support of the Moldova Energy and Biomass Project, funded by the European Union, and co-funded, and implemented by the United Nations Development Programme.



Use of alternative energy sources and promotion of energy efficiency represent a priority for the Republic of Moldova

Marian Lupu, Chairman of the Moldovan Parliament, Acting President of the Republic of Moldova:

"At the beginning of 2006 I visited a locality community in the central part of the republic country in order to launch participate at the official opening of one of the first biomass heating systems based on operating primarily on biomass, especially on straw, which demonstrated clearly an obvious economic, ecological environmental, and energy effect benefits. At that time, mass media and public opinion have ironized the idea of producing energy from straw and other agricultural residues waste. I am glad that today nowadays, five years later after, the topics related to use of renewable sources of energy represent a priority for the country, being accepted and encouraged by the society. For the

Republic of Moldova, which depends entirely on imports of thermal and electric energy, the use of alternative energy sources and promotion of energy efficiency are key elements crucial for increasing country's energy security. The Republic of Moldova has made its first steps in this direction, by passing and adopting the Law on Energy Efficiency, the Law on Renewable Energy Sources and by establishing the Agency for Energy Efficiency Agency. In this context, the launch of MOLDOVA ECO-ENERGETICA is an extremely important initiative. I would like to thank the for this pioneering event the Ministry of Economy, the European Union and UNDP Moldova, the key partners in launching MOLDOVA ECO-ENERGETICA" for supporting this innovative initiative .

The European Union supports the Government in reforming the energy sector

Dirk Shuebel, Head of the European Union Delegation to Moldova:

"I am delighted to be present at this Event promoting energy efficiency and renewable energy. I believe this is an important moment and I warmly welcome the Government's initiative in making today's event possible. Europe shares with Moldova the recognition that our citizens need a secure supply of energy at affordable prices. That is why EU policy focuses on creating a competitive internal energy market offering quality service at low prices, on developing renewable energy sources, and promoting energy efficiency measures. At the same time, we all understand that the negative effects of energy use,



particularly fossil fuels, on the environment must be reduced. Moldova, as the country highly dependent on energy imports (over 95% of Moldova's energy needs are ensured through imports) has a clear intention to diversify energy sources, as stipulated by several policy documents, in particular the Energy Strategy 2007-2020 which foresees gradual convergence with EU policies and rules. The set objectives are challenging for Moldova, however, the EU and other donors are ready to support the path taken by the Government with a substantial financial and technical support. Let me just briefly mention the most important ones that are funded by the EU and are closely co-ordinated with other donors: (1) The Energy and Biomass project amounting to 14,56 MEUR (implemented and co-financed by UNDP) that aims to significantly increase the use of renewable energy technology in Moldova; (2) "Support to Reform of the Energy Sector" amounting to 42,6 MEUR co-signed by the Prime Minister on 6 December. This programme will primarily focus on increasing Energy Efficiency and the use of Renewable Energy in the Republic of Moldova."

The social dimension is important in reforming the energy sector

Valeriu Lazar, Minister of Economy, Acting Chairman of the Energy Community:

– Minister Minister, this year the Republic of Moldova held the chair of the Energy Community, advancing in such a way advancing thus on the segment of European energy policies. What does the European energy philosophy mean for to Moldova?

- The motto of the European Energy Strategy "20-20-20" is the following: for competitive, sustainable and safe energy. It's a well-thought triad. It is not by chance that EU focuses on creating an integrated Pan-European energy market. The A market that brings together more a larger number of operators/suppliers, consumers, and more countries is represents a competitive market. And competition is a precondition

for fair and correct tariffs. The second message related to sustainability may be analyzed from the environment perspective. The energy technologies should be environment/environmentally -friendly, otherwise they have none will be no future for us. Sustainability also has another connotation: the financial affordability of these services for consumers. This triad may be also found in a well-balanced system of relations between the energy operators/suppliers, who should be fostered to motivated to invest make investments to in developing a proper the infrastructure necessary supporting the for efficient and qualitative transportation of energy to the consumer, and the residential/household and industrial consumers, who should know how to be informed how tariffs are set. The third part of this philosophy is the environment. This triad can be found in the Energy Strategy of the Republic of Moldova as well. "A secure The safely delivered energy supply" means the diversification of sources and energy mix, efficient use of consumption of energy, and as well as the social dimension.

- Minister Minister, did we only learn from Europeans or we also had some lessons to offer, even though these lessons are rather modest?

- Well, it is too ambitious to call them lessons. But it is for sure that we sent them some messages. While we try out best are aiming to become a part of to get integrated on the European market, but we also let let our European partners know about the realities specific for the East-European region, where our Moldova and other countries are located. Reforms are irreversible for the Republic of Moldova. We have need to get aligned to the European energy regulations/rules, European legislation and these , reforms that will lead to a rise in tariffs quicker faster than the purchasing purchase



power of the population and industrial sector. That is why during the chairmanship of the European Community, the social aspect implications of the energy sector reform were as one of the priorities of the Republic of Moldova, leading to the signature of a the Social Memorandum. The Republic of Moldova and other states from the region need a transition period whereby thefor the consumers wouldto benefit from the state Government support to overcomein overcoming the situation when the real incomes grow at a slower pace than the tariffs on the energy market.



Energy is central to everything we do

Kaarina Immonen, UNDP Resident Representative

“Energy is central to everything we do – from powering economic activity to ensuring adequate conditions to our kids in school, from creating jobs to guaranteeing security. In Moldova, as we have heard, many challenges have to be faced: (1) Efficiency in energy production, distribution and consumption is low which continues to be a burden for the economy and the country’s population; (2) The poorest households in Moldova have to spend almost a quarter of their income to heat their homes and rising energy prices exacerbate the situation; (3) For example, in difficult winter conditions public buildings such as schools, kindergartens and community centers are often maintained at uncomfortably low temperatures. At the same time there are many opportunities at hand: (1) There is a large potential for increased use of domestic renewable energy sources, most of which still remains unexploited. Specifically in rural areas this has the potential to bring multiple benefits in terms of new income opportunities, new jobs, increased comfort and reduced environmental impact; (2) Low-hanging fruit are there to be harvested. For example,

the energy consumptions of buildings accounts for almost half of total energy use and pilot projects indicate that low-cost investments in the energy performance of buildings can result in 40-50% savings at the level of consumers.

Overcoming barriers and scaling up renewable energy and energy efficiency will demand concerted action from all actors represented here tonight. It needs a committed government, an enabling environment for the private sector, a culture of innovation, good ideas which are supported, an active civil society and media landscape, and active individuals

The increase use of energy from renewable sources provides a sustainable economic development of the local communities

Gabriela Cretu, Energy Community Expert:

“In March 2010 the Republic of Moldova became a member of the Energy Community and during this year Moldova host the presidency of the Energy Community which has already been proved to be very successful. The promotion of energy from renewable sources and energy efficiency is aiming to address the regional challenges such as growing dependence of the energy imports and fragile security of energy suppliers. The increase use of energy from renewable sources provides a sustainable economic development of the local communities and mitigates the energy and transport sectors impact of the environment. Energy efficiency is one of the key pillars in sustainability and future addressing the economic demand. The Energy Community secretariat recognize the steps already taken by Moldova in promotion of energy form renewable sources and we encourage the authorities to intensify and to empower the relevant institutions to complete the legal and regulatory framework and to create an investment environment conducive to renewable energy projects. We will intensify





our assistance to the relevant institutions in the upcoming period as to achieve the common goals of the implementation of the renewable energy and energy efficiency acquis"

It is better to reduce the energy consumption than to struggle arguing with "Gazprom" for smaller lower gas prices for gas

Mihai Stratan, Chairman of the Energy Efficiency Agency:

"The Republic of Moldova can save Billions of lei may be saved by the Republic of Moldova by successfully implementing the while applying with success the Energy Efficiency Program. It is simpler easier to reduce domestic energy consumption, than to struggle argue with "Gazprom" for lower gas prices. smaller prices for gas. The highest level of largest energy savings energy consumption reduction can be may be achieved in the residential sector. It consumes accounts for about 45% of the energy resources consumption and it holds at the greatest potential for energy conservation rests with this particular sector. On the other hand, the Moldovan industry is four times more energy-intensive than the industry in the EU countries. Companies Businesses will be encouraged to install energy efficient equipment, benefiting from subsidies provided by the provided by the Energy Efficiency Fund which constitutes it with an amount of 180 million lei set for the next year lei in the following year. Transportation represents

23% of the energy consumption. The consumption reductions savings in this particular sector will be based generated from the on progressive use of low resistance tires with low level of resistance to and raceway and use of bio-fuels. It is estimated that the Th share of biofuels is share would will increase up to 10% of the total volume of fuel by 2020".



Watch the movie which outlines the potential and the benefits of the key renewable energy sources for Moldova, and energy efficiency on:

<http://www.youtube.com/watch?v=TCID17rXhJ0>

SUCCESS STORIES

During MOLDOVA ECO-ENERGETICA 2011 edition, 5 success stories related to the production, efficient use and consumption of energy in producing, use and efficient consumption of energy from renewable sources, and energy efficiency received symbolic awards.



ENERGY EFFICIENCY

They have centralized heat, but pay 40% less

An apartment building like many others. New and modern. One detail only makes the difference: a system of horizontal heat distribution is in place here. Due to this, the inhabitants of the apartment building located on 38/2 Maria Dragan Street, are among the first to have signed individual contracts with the heating provider - Termocom. Each apartment is equipped with thermostatic valves allowing the consumers to adjust the level of the heating agent individually. In addition, heating meters are installed in each of the apartments. Due to proper insulation, the building has its own heat supply point that distributes the heating horizontally, a fact that leads to a cut of up to 50% in the heating bill for the residents of this apartment building as compared to the average per city. In January 2011, the cost to heat a square meter on 38/2 Maria Dragan St. was from 10 to 16 lei, while the city average was of 20 lei. The installation of the individual heat supply point in the apartment building on 38/2 Maria Dragan St. was possible due to a grant from the Swedish International Development Agency (SIDA). Currently, in Chisinau there are four apartment buildings where the inhabitants are already benefiting from such systems, and two more buildings designed likewise are under construction.

To see the video story, please click on the link below:
<http://www.youtube.com/watch?v=NptYr41RsHM>

WIND ENERGY

Nicolae Constantinov built and installed 20 small-scale wind power generators

Since early childhood Nicolai Constantinov was interested in alternative methods of generating energy. Now he is considered an enthusiast of alternative energy sources, particularly energy from wind power. Constantinov deals with the design, manufacture and installation of wind power generators. He built his first wind turbine and installed it in its own yard back in the 70's. By now, he built and installed 20 wind power generators. They operate within small enterprises - farms, vineyards, sheep farms. The dream of Nicolai Constantinov is to transform his native town Comrat into the center of alternative energy in Moldova.

Click on the link to see the story:
<http://www.youtube.com/watch?v=saVqWt3pbzw>



BIOGAS

Vasile Moraru produces biogas and electricity from animal waste



The word around the village of Colonita is that the farmer Vasile Moraru is reborn from ashes. Making use of alternative energy sources is his second attempt to launch a business. The first has failed. The declining farming operation was saved by a new idea. Moraru decided to deal with the production of biogas. For this purpose, the farmer took a loan of 37,000 Euros from MOSEFF. Sourcing raw material is not a problem for the entrepreneur. The manure is supplied from the neighbouring cattle and swine farms. Moraru's installation processes up to 40 tons of biomass daily. The biogas that is generated contains 70 per cent methane which is used to heat the premises and for the production of electricity. The electricity is supplied via the network to GasUnion Fenosa according to the enforced tariff of 1, 73 lei per kWh established by NERA (National Energy Regulation Agency). The biogas production generates no wastes. Fermented biomass is further processed and converted into organic fertilizers. These are in high demand by Moraru's neighbours and are much more expensive than the mineral ones. The advantages are obvious.

See the story following this link:
<http://www.youtube.com/watch?v=4YgzjsnL0Qg>

SOLAR ENERGY

Health Care Centre CONSTRUCTORUL has hot water produced from solar energy

In medical institutions, the quality of services is as important as the proper accommodation conditions for the patients. The Health Care Centre "Constructorul" has solved the problem of hot water supply in a less common, but very effective manner, than other medical institutions. In 2007, solar collectors were installed on the roof of the building. The institution invested 50,000 lei of its own financial resources in the project. The water is heated with solar energy up to a temperature of 60-65 degrees centigrade. The system ensures non-stop supply of hot water from April to October inclusive. The project implemented by the sanatorium proved to be a lucrative investment since it brought benefits right from the first year. The managers of the Health Care facility experienced directly the advantages of the solar collectors by means of receiving lower utilities bills. They do not wish to stop there. In the coming years, the management intends to install solar collectors on the entire roof surface in order to supply all buildings of the Health Care facility with hot water obtained from solar energy.

See the video story on:
<http://www.youtube.com/watch?v=LCVdvqZ1kEU>





BIOMASS

The Village of Antonesti declared its energy independence

The Village of Antonesti, Stefan Voda declared its independence - energy independence. The school, kindergarten, library, arts centre and Church from the village are heated with energy produced from biomass, primarily straw. The escalating prices for natural gas and lack of state budgetary had the children freezing in the school classrooms and kindergartens. In the winter time, the educational process surrendered to the cold. 5 years ago, Antonesti participated successfully in a World Bank tender. The financial support granted was sufficient for the installation of four boilers. The largest, of 300 kW, is placed at the school. The advantage of straw based heating was appreciated not only by the children from Antonesti. Adults understood that straw is not a waste product, but a source of fuel and additional income. Currently, in Antonesti straw is purchased from local entrepreneurs. Compacted into bales, they serve as an energy source for the 4 institutions from Antonesti. In the

coming future, straw will be sold to a briquetting operation recently started in the village. The briquetting line is a new phase for the pioneers in the alternative energy sources-based heating. It will bring new jobs in Antonești, modern technologies and environmentally friendly fuel.

To see the video story, please click on the link below:
<http://www.youtube.com/watch?v=Sf00WRfMX9s>



MOLDOVA ECO-ENERGETICA 2012

Starting with 2012, the Moldova Eco-Energetica will be an annual ceremony to award the most outstanding achievements in the area of Renewable Energy and Energy Efficiency in the Republic of Moldova. The awards will be conferred to individuals and organizations who made significant contributions in efficient energy production, transmission, distribution and consumption, development and promotion of modern technologies, and innovations in the field of renewable energy, technology and energy efficiency.

Who can apply to the competition?

The competition is open to everyone, including:

- Private companies
- Public authorities and institutions
- State enterprises
- Nongovernmental organizations (NGOs)
- Individuals

How to apply for the Awards?

The detailed application guidelines and awards criteria will be made available on the Energy Efficiency Agency's website (www.aee.md) in March 2012. A complete application package has to be submitted to the Energy Efficiency Agency by June 30 2012

What are the Awards categories?

The Moldova Eco-Energetica Awards will be conferred for the following categories:

- Best Project of the Year in Solar, Wind, Biomass, Biofuels, Biogas, Geothermal and Hydropower Energy

- Innovation of the Year
- Communication and Awareness Initiative of the Year
- Best Energy Efficiency Project of the Year
- Best Renewable Energy and Energy Efficiency Education Initiative of the Year
- Leadership: Policy and Sustainable Development Contribution
- Best Youth Initiative of the year

How will the Awards winners be selected?

The winners in each category will be selected by an independent panel, consisting of national and international experts, representatives of the Energy Efficiency Agency, academia, donors and members of the civil society. The winners will be announced in November at the MOLDOVA ECO-ENERGETICA 2012 event.

The MOLDOVA ECO-ENERGETICA Awards will play an important role in the recognition and promotion of the most notable, ambitious and innovative projects in the area of Renewable Energy and Energy Efficiency. It will acknowledge the eco-energy champions and will inspire others to follow them.

Contacts:

131, 31 August 1989 str., Chisinau, UNDP Moldova, <http://www.undp.md>, e-mail: ina.zglavuta@undp.org

This newsletter is produced in the framework of the Moldova Energy and Biomass Project. The project implemented during 2011-2014 has a budget of 14,56 million euro, granted by the European Union (14 million euro) and UNDP Moldova (560.000 euro).

The views expressed in this publication do not necessarily reflect the views of the European Union.