



## ENERGY AND BIOMASS

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# Nº19

November-December 2014

# 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



# PROJECT NEWS



## THE BIGGEST PROJECT IN THE RENEWABLE ENERGY SECTOR WILL BE EXTENDED

During the Moldova Energy and Biomass Project (MEBP) Board meeting, held on 11 December, it was announced that, due to the success achieved, the project shall be extended for a period of three years.

The Deputy Minister of Economy, Valeriu Triboi, congratulated all stakeholders involved: *„This is a really successful project. I would like to sincerely thank the project team for their efforts and for results obtained and to thank the foreign partners for their support”*

The project team presented the final Report for a 4-year period (2011 – 2014) of Energy and Biomass Project implementation, financed by EU and co-financed and implemented by UNDP.

Alexandru Ursul, Energy and Biomass Project Manager mentioned the fact that *„The Project’s success is mostly due to the good collaboration with the national partners and the state agencies.”*

Thanks to the project, a growing market for biomass processing technologies was established in Moldova, which has contributed to increased use of renewable energy sources, implicitly contributing to the reduction of heating costs, the creation of a clean environment and very important: to increased awareness of the population of the importance of using renewable energy.

Therefore, it is important to note that the main project objective, initially established as to contribute to the creation of a secure, competitive and sustainable system of energy production from renewable sources in the Republic of Moldova, was successfully accomplished.

Nicola Harrington-Buhay, the UNDP Moldova Resident Representative, highlighted that the project has exceeded its expectations and its results have been globally recognized: *„It is for the first time in my career when I see that a single project touches upon so many important aspects: job creation in rural areas, including jobs for women, educational activities for adults and children; establishment of successful public-private partnerships at local level; involvement of foreign experts”.*

According to the final report, it can be noticed that during this period 160 public institutions have been connected to biomass heating systems, meaning by 30 institutions more as it was initially envisaged in the project. More than 360 jobs have been created thanks to the project.

At the same time, the project maintained an efficient communication at all stages with the goal of not only to inform, but also to change the behavior, with the following key messages: we waste renewable energy sources; energy efficiency means new technology, jobs creation and a cleaner planet for all of us.



Local communities were involved at all stages of implementation as to increase the understanding of the importance of energy efficiency at the level of the entire community and to ensure the project's sustainability. Therefore, the project collaborated with both, teachers and children; an optional subject "Renewable energy sources" was developed for grades 5-9. The Public Administration Academy introduced the module „Renewable energy sources, biomass and energy efficiency". At the same time, "Energet" summer camps were organized, where children participated in the educational activities about how they can protect the environment.

Alexandre Darras, the representative of the EU Delegation in Moldova announced at the end of the meeting that it was decided to extend the project:

*„ The success and the impact of the project determined its extension for another 3 years. During this period, we will extend the project even more; we hope to cover also the Transnistrian region. This time, we aim to support the private sector, as to stimulate it to use energetically efficient technologies in the production process."*

#### **ENERGY AND BIOMASS PROJECT: A 4-YEAR PATH**

The Energy and Biomass project has completed its mandate. Launched in 2011 for a period of 4 years, the project succeeded to achieve the following:

##### **1. Connected public institutions to biomass heating plants**

- 144 schools, kindergartens, community centers have modern biomass heating systems
- More than 90 thousand persons benefit from ecologic and increased heating comfort
- Over 350 new jobs have been created in target rural communities
- 182 million lei invested in heating systems on solid biomass fuel
- 28 million lei represented the contribution of local communities for switching to biomass-based heating
- The total installed capacity of the heating systems reached the level of approximately 30 MWth
- Approximately 300 TJ of thermal energy can be produced by those 144 biomass heating systems in rural communities
- 100 million lei are annually paid to local producers of biomass and are not transferred abroad for the import of energy resources
- Carbon emissions reduced by 45 thousand tones

##### **2. Developed the private sector of bioenergy**

- 1 million Euro provided for the development of biofuel production sector
- 30 businesses launched and developed in the solid biofuel production sector
- 100 new jobs created

##### **3. Offered biomass boilers to households at subsidized prices**

- 600 biomass boilers were provided through the subsidy program of the Moldova Energy and Biomass Project from European funds
- Subsidies of 1300 Euro for the installation of biomass boilers in households or small- and medium-size enterprises
- 30 companies assemble biomass boilers locally and offer them to consumers
- The total installed capacity of boilers for households is around 12 MWth

##### **4. Launched a cogeneration pilot project**

- 7,5 million Euro invested in the construction of biogas plant in Drochia
- Production capacity of 7,3 million cubic meters of biogas per year, with a content of 51% methane
- A reduction of 15% annually of oil consumption in the sugar production process by Sudzucker Moldova



### 5. Launched a pilot Public Private Partnership project on provision of bioenergy services

- 25 public institutions from Leova district connected to biomass heating
- Total installed capacity of the heating systems is 4 MWth
- 54 new jobs created
- Increased heating comfort for pupils and teachers
- Maintenance, storage, operation, etc costs covered by the private partner
- Monthly bill of 997 lei per Gcal, less than the production costs on gas or coal
- Private investment of 500 000 Euro
- The private partner will manage the heating plants for a period of 11 years

### 6. Increased knowledge of people about bioenergy

- 1.765 LPA representative from the country gained practical skills on collecting the local contribution in the implementation of projects on installation of biomass heating plants
- 1.592 beneficiaries at local level participated in trainings on sustainability of biomass heating projects in public institutions, developing 127 local projects
- 1.227 LPA representatives benefited from specialized trainings on new technologies and the use of biomass boilers and on the normative and institutional framework on energy efficiency, diversification of energy sources at local level, estimation of biomass potential in the rayon and identification of modalities of its use.
- 376 operators from 127 communities were trained on how to operate a biomass heating system
- 413 agricultural producers were trained on automation of vegetal waste collection, collection and storage of raw material, financial models and investment recovery models, pellets and briquettes production equipment and technology, etc.

### 7. Launched in schools the course on renewable energy and energy efficiency

- 352 schools in the country became part of the educational initiative on renewable energy sources and energy efficiency
- **19 000 pupils participated in the courses on renewable energy and energy efficiency**
- In 2013, the course was introduced, by an order of the Ministry of Education, as an optional subject in schools
- 272 children participated in the period 2011 – 2014 in the ENERTEL summer camp

### 8. Launched Moldova Eco-Energetica, the biggest competition in the sector of renewable energy and energy efficiency

- 12 award categories
- 3 editions of the national competition Moldova Eco-Energetica
- 200 successful project registered in the competition
- 52 successful projects awarded at the Award Ceremony Moldova Eco-Energetica





### ECO-ENERGY SECTOR CHAMPIONS REWARDED AT THE GALA OF AWARDS MOLDOVA ECO-ENERGETICA

Over one thousand promoters of renewable energy and energy efficiency gathered at the Gala of Awards Moldova Eco-Energetica for handing prizes to the champions of eco-energy sector on 5 December.

14 successful projects on eco-energy and energy efficiency use and promotion, 5 companies developing eco-responsible technologies on the market of the Republic of Moldova took their merit awards, while a eco-responsible project idea benefited from a credit-guarantee by a commercial bank, the government having the role of guarantor for the given transaction. The winners of Moldova Eco-Energetica Competition, issue 2014 are:

#### The Best Project on Solar Energy:

- **Photovoltaic:** Kindergarten of Chiscareni village, Sangerei rayon
- **Heat:** „Tony Hawks”, Chisinau

#### The Best Project on Wind Energy

Elteprod SRL, wind power plant in Bratuseni village, Edinet rayon

#### The Best Project in Geothermal Energy

Commercial Centerl „Convel” SRL, Chisinau

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#### The Best Project in Bioenergy

- **Solid biofuels:** Ala Gadrautan, Braniste village, Rascani rayon
- **Power supply systems (private sector)** Green Farm SRL
- **Power supply systems (private sector)** Mayor's Office of Calfa village, Anenii Noi rayon

#### The Best Initiative in Communication

Anatol Caciuc, National Radio

#### The Best Initiative in Education

Association for Promoting Wind Energy, Comrat

#### The Best Youth Initiative

Young Inventors Center, Chisinau

#### Special Prize:

Mayor's Office of Gaidar village, TAU Gagauz-Yeri

#### Eco-Responsible Technologies:

- **Bioenergy (energy willow):** Biagro Invest SRL
- **Geothermal energy (heat pumps):** Cvadro Therm SRL
- **LED based technologies (eco-lighting):** Eco Evolutions SRL
- **Constructions (thermo-insulation and soundproofing of buildings):** Polytech Therm SRL
- **Constructions (production of energy efficient windows and doors):** Profsystem SRL

*„It is a pleasure to participate in the awards gala Moldova Eco-Energetica, which has become a nice tradition for the Republic of Moldova. I want to congratulate all the participants in the competition. It is a message of gratitude for your innovatory projects that help transform together the energy sector with the view to insure cheaper, safer, and cleaner energy for the citizens of the Republic of Moldova”, stated Pirkka Tapiola, Head of the European Union Delegation to the Republic of Moldova.*

Moldova Eco-Energetica is the biggest competition for awarding successful initiatives in the renewable energy and energy efficiency sector. The competition was at its third issue, and gathered over 200 successful projects in renewable energy, and energy efficiency, of which 52 have been nominated as winners.







The winners were selected as a result of a complex evaluation process carried out by independent experts from the sector. Those 11 categories, including 12 sub-categories of the competition represent all the forms of renewable energy and energy efficiency use and promotion.

*„I am glad to see that Moldova Eco-Energetica is becoming of interest and benefiting from an increased support every year. It is a success story due to the fundamental partnership between national and development partners. The involvement and commitment of the Ministry of Economy and of the Agency for Energy Efficiency from the first edition were key to its success. In the context of development by UN of the future Sustainable Development Objectives, the United Nations Organization in the Republic of Moldova will remain a devoted partner in insuring sustainable development that all citizens of the Republic of Moldova would benefit from”,* stated Nicola Harrington-Buhay, Resident Representative of UNDP in Moldova.

In 2014, Moldova Eco-Energetica competition added two new components: Competition of Eco-Responsible Technologies, and Financing Fair of Eco-Responsible Project Ideas. The initiative belongs to the Ministry of Economy and Agency for Energy Efficiency, and represents a logic addition to the competition that grants awards, starting this year, for Eco-Responsible Stories, Technologies, and Ideas.

*„The magnitude gained by Moldova Eco-Energetica demonstrates that the energy efficiency and renewable energy sector is developing very fast, and this fact helps increase competitiveness of the national economy and makes us more independent from energy point of view”,* stated the Director of the Agency for Energy Efficiency Mihail Stratan.

Moldova Eco-Energetica competition was launched in 2011 by the EU-UNDP „Energy and Biomass Project” and carried out in team with the Ministry of Economy and the Agency for Energy Efficiency. 2014 is the last year when the Energy and Biomass Project co-financed the competition and the gala of awards, while starting 2015, it will be fully taken over by Ministry of Economy and the Agency for Energy Efficiency.

#### **THE FAIR OF ECO-RESPONSIBLE IDEAS WAS CARRIED OUT FOR THE FIRST TIME IN CHISINAU AS PART OF MOLDOVA ECO-ENERGETICA COMPETITION**

Ten (10) companies participated in the bid with their investment projects before potential financiers within the Fair of Eco-Responsible Ideas, carried out for the first time in Chisinau. The most successful projects will receive financing from investors present at the event – commercial banks, investment funds, and development partners who instituted and made available to economic entities a Fund in the amount of 100 million MDL.





Among Eco-Responsible Ideas presented are apartment blocks and an energy-efficient residential complex with 260 houses in Leova town, hydrophone and energy-efficiency greenhouses, energy plant growing projects, a hydropower plant on the Raut river, a 1MW capacity biogas factory, the installation of an 80 kW photovoltaic park, etc.

The companies which convince the investors about the project feasibility will be able to receive state secured loans under advantageous conditions.



The Fair of Eco-Responsible Ideas is a component part of Moldova Eco-Energetica competition, which is the biggest competition in the area of energy efficiency and renewable energy sources. The event is organized by the Ministry of Economy, the Agency for Energy Efficiency, with the support of the Energy and Biomass Project, financed by the European Union and UNDP, and of the Fund for Energy Efficiency. The Commercial Bank Moldova-Agroindbank SA is the general partner of Moldova Eco-Energetica Competition and Gala of Awards.

## THE SECOND EDITION OF BIO-FORUM WAS HELD IN CHISINAU

Tens of companies and enthusiasts of renewable energy participated in the second Bio-forum dedicated to energy plants on 4 December. The Bio-forum is part of Moldova Eco-Energetica range of events that addressed the experience of Romania and other European countries in growing energy plants and their perspectives in Moldova, the progress regarding the introduction of energy willow in the registry of plant varieties of the Republic of Moldova, etc.

Deputy Minister of Economy Valeriu Triboi expressed his confidence in the future of energy plants, taking into account the already existing big trade market for biomass fuel. *„In 2012 already, approximately 4% of the final gross energy consumption was ensured from renewable energy sources, while in 2014, biomass based heating plants installed in public institutions and households had a total capacity of circa 49 MW, which makes 9% of the final annual heat consumption”*, stated Valeriu Triboi when opening the event.

The President of the Academy of Science of Moldova Gheorghe Duca referred to the need for insuring synergy between the development funds of government institutions in order to have a stronger impact on the development of renewable energy sources. He



highlighted that Moldovan researchers already have multiple studies on how to grow energy plants, the scientific community being interested that the latter find a practical use in business.

Dr. Ruben Budau, from Energowood Acacia company talked about the economic efficiency of energy acacia plantations with a ultrashort cutting period, which other speakers referred to the ways of using biomass, quality requirements for solid biofuel, balance between cultivation on agricultural land of food and energy crops.



We would like to remind that the first edition of the Bio-forum was held in 2014, gathering solid biomass fuel producers and consumers.

The Bio-forum organized by the Ministry of Economy, Agency for Energy Efficiency, and the EU-UNDP "Energy and Biomass" Project.

The Energy and Biomass Project in Moldova is a 4-year project, implemented within 2011-2014. The total budget of the Project is 14.56 million Euro, provided by the European Union (14 million), and UNDP Moldova (560,000 Euro).

### **BLOGGERS' TOUR TO THE FINALISTS OF MOLDOVA ECO-ENERGETICA**

Successful projects in using renewable energy sources and energy efficiency were visited by a group of bloggers and journalists within the framework of events that are part of the 2014 edition of the national competition Moldova Eco-Energetica.



The bloggers visited the kindergarten in Calfa village which, starting from 2013, is heated with biomass fuel, saving considerable funds and insuring a higher heat comfort for children. An 81 kW heating plant based on biomass pellets was installed in the kindergarten with the financial support of the EU-UNDP Energy and Biomass Project, which insures heating for the entire building. *„After moving from gas based heating to the biomass based heating plant, we have now a higher heat comfort, dampness has disappeared, while attendance among children has increased,”* said Natalia Grigoraş, Director of Pestisorul de aur/Golden Fish Kindergarten.

Bloggers and journalists visited the largest photovoltaic park in the Republic of Moldova, installed in suburb of Chisinau. It stretches on almost two thou-

sand square meters and has an installed capacity of 350 de kW/h. the Co-owner of the company Franck Le Born stated that they sell the electric power generated by them into the national grid for 1,92 MDL per kW, which is an advantageous tariff for recovering the investment in a reasonable timeframe. The business man plans to put into operation another photovoltaic park in Falesti, which will have a capacity of approximately 100 kW/h, and later – another 4 MW photovoltaic park in the same rayon.

The last point in the bloggers' itinerary was the house of Sergiu Cocarla, the first Moldovan who installed a geothermal heating system in his own house. According to Sergiu Cocarla, the monthly heating costs for his house with an area of 400 m<sup>2</sup> constitute approximately one thousand lei, while the temperature inside the house is maintained at 22-23 degrees Celsius. In 2006 the price of such a system was approximately 18 thousand Euro, now, the price went down to approximately 7 thousand Euro and is much more accessible. *„It is important to make correct calculations regarding the necessary capacity, and the benefits will come without delay”,* said Sergiu Cocarla.

Bloggers and journalists who participated in the tour were impressed by what they had seen. They took pictures and posted them on Facebook with hashtags [#MDecoenergetica](#) as well as on their own blogs.

### **THE BUSINESSMEN FROM THE REPUBLIC OF MOLDOVA DISCOVERED THE EXPERIENCE OF THE POLAND IN BIOENERGY DEVELOPMENT**

A group of businessmen in the bioenergy sector made a study visit to Poland in the period 24-28 November. The study visit is organized by the Energy and Biomass Project, financed by the European Union and co-financed, implemented by the United Nations Development Programme.

12 businessmen, men and women, representatives of biofuel production companies and companies producing and assembling biomass boilers visited in Poland pellets and briquettes production companies, plants producing biomass boilers for the internal and the external markets, exchanged their experience, had meetings with the businessmen in the bioenergy sector and with national authorities responsible for the renewable energy and energy efficiency sector.

The goal of the trade mission is to obtain experience from the developed states in the bioenergy sector and to develop bilateral partnerships with the European states.

*„Poland is a very good example, because it is very close to our country in terms of equipment structure, its variety or raw material structure, such as straw, agricultural wastes and, less, the wood. The group included not only producers, but also boiler suppliers, because often this communication*

*is missing among them, which ultimately touches upon the consumer ”*; Nicolae Zaharia says, expert in business development sector, Energy and Biomass Project.

In total, visits were made to 8 companies producing biomass boilers and briquettes and pellets production equipment.

This is the third study visit organized by the Energy and Biomass Project for the private sector representatives, the first two being organized in 2013 to Czech Republic, Poland and Romania.

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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 and UNDP.**