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# The extensive use of biomass has brought new technologies, jobs and increased the energy security in the Republic of Moldova



he production of renewable energy in the Republic of Moldova has increased in just a few years from 4% to over 14% of the energy consumption, mostly thanks to the European Union's support, provided within the Energy and Biomass Project. Nevertheless, the concern about the energy security and efficiency, and the production of its own energy from renewable sources still remains essential for the Republic of Moldova.

The prospects of the biomass energy market after 2017, the final year of the Energy and Biomass Project in Moldova, were discussed within the press club, organized at 28 of April, with the participation of Octavian Calmîc, Deputy Prime Minister, Minister of Economy; Pirkka Tapiola, EU Ambassador to the Republic of Moldova; and Dafina Gercheva, UN Resident Coordinator and UNDP Resident Coordinator in Moldova.

"Being the most accessible renewable energy source in the Republic of Moldova, the biomass is the first option when it comes to promoting the renewable resources. It already provides more than half of the total amount of primary energy produced in the country and the main concern of the Government will be to ensure the smooth operation of all the elements of this market", Octavian Calmîc said. "Thus, the biofuel quality, the availability of the raw materials, the accurate planning of the procurements and of the deliveries to the public institutions will be among the priorities of the Ministry of Economy throughout the coming period", the official specified.

Unlike other technologies for the production of the renewable energy, the biofuel has a great potential for job creation. The approximately 100 biofuel companies have generated over 300 new jobs in the Republic of Moldova and over 280 thousand people work in the sector of the solid biomass fuel in the European Union's countries.

"The EU funded biomass project is part of the comprehensive package provided by the EU in the Energy sector to support the Republic



of Moldova in the diversification of its energy sources and reinforcement of its energy security. With this, the EU is helping to provide cheaper, more secure and sustainable energy to all the citizens of the country", Pirkka Tapiola, the European Union Ambassador to the Republic of Moldova, stated.

The development of the biomass energy consumption sector, as well as of the solid biofuel market in the Republic of Moldova has brought about the transfer and the implementation of modern, eco-friendly technologies and has enhanced the life quality in rural communities, being thus among the priorities of the Sustainable Development Goals approved by all the UN member states.

"Rural areas could gain enormous benefits if biofuel industry is properly developed in Moldova. These include employment and wealth creation and rural infrastructure development. Expansion of biofuel industry market in rural areas in turn attracts other services providers and this create the multiplier effect which would not only aid rural development, reduce energy poverty, but also help in strengthening energy security

and reducing country's dependency on gas and oil import", Dafina Gercheva, UN Resident Co-ordinator and UNDP Resident Representative, mentioned.

The Republic of Moldova has committed to cover 17% of its domestic energy consumption from renewable sources by 2020 and it has already reached the level of 14.7% (according NBS) in 2015, 92% of the total amount being produced from biomass.

The Energy and Biomass Project, the second stage, is a three-year project implemented throughout the period 2015-2017. The Project has a budget of 9,41 million Euros allocated by the European Union and it is implemented by the United Nations Development Programme. It follows up the first stage of the project, implemented in 2011-2014, with a total budget of 14,56 million Euros, provided by the European Union (14 million Euros) and the UNDP (560 000 Euros).

For more information about the Energy and Biomass Project, see www.biomasa.md website and the Energie din Biomasă Facebook profile.

# The school and the kindergarten in Brătuleni, Nisporeni district, switched to biomass heating thanks to the EU investments



The pupils in the gymnasium of Brătuleni, district of Nisporeni, enjoy a better thermal comfort at school for three winters already, and, since this year, the community kindergarten will have a biomass heating plant and will be provided with hot tap water produced by solar collectors. They were installed with the financial support of the European Union in the framework of the Energy and Biomass Project. The grant amounted to over 163 000 Euro, and the community allocated a contribution of 600 000 Lei for the repair of the heating system and the installation of the energy efficient windows.

"Now, except an unused wing, we heat the entire school building, that is over 2 000 square meters. Before, wishing to make savings, we did not heat the corridors, the library, the festivities hall and other rooms. Moreover, the air temperature in the classrooms is now more comfortable, it only lowers to 18–20 degrees Celsius in the afternoon, when the lessons are over", the school director, Ludmila Jicol, stated.

The school of Brătuleni has over 230 pupils. "It's good to learn in a warm school. For several winters, it is no longer cold in the corridors, in the gym room, in the library. Even the learning seems to be more resultful", Cezara Bondar, pupil at the school of Brătuleni, stated.

About 70 tons of pellets are used during one heating season and the school purchases them to a trader from Ungheni, located to a distance of nearly 20 kilometres. The entrepreneur was born in Brătuleni and he duly supplies the required amount of pellets. "The pellets are of a very good quality and the heating system works perfectly with them. Previously, we had different suppliers, but we have even had to cancel the contract with one of them, because he had misestimated his production capacity and had no fuel stocks. Although the pellets' price raised in January 2017, it is better to use them, than coal: they are cleaner, environment-friendly and produced in Moldova", Ludmila Jicol added.



According to the director, the operators of the heating plant are very pleased with it, as it is clean and causes less worries, compared to coal heating. They have recently attended a training session at the Training Centre for biomass boiler operators and returned with new knowledge on proper management of the heating system.

Resources from the community budget will be allocated this year for replacing the windows in the gymnasium's corridors in order to reduce the heat loss. The mayor Nicolae Chercheja puts efforts to encourage the inhabitants to stay in the village, creating comfortable conditions for them. "As a result of using the locally produced renewable energy, the community and the region are developing. The money paid for the biofuel remains in our country and helps it to develop step by step. The investments made by the European Union in the installation of the environment-friendly heating systems helped us to make this change. Thanks to the European funds, the school and the kindergarten have become energy independent", Nicolae Chercheja said.

Understanding the benefits of biomass heating in Brătuleni, the District Council of Nisporeni decided to install biomass heating plants in four other communities within a public-private partnership (PPP). To this end, the District Council has launched a competition to select the private partner that will install the new biomass boilers in schools and will take over the management of the three heating plants already operating in the schools of Brătuleni, Soltănești and Vărzărești. Throughout 10 years, the private company will manage the heating plants, hire and train their operators, supply the biofuel and provide heating to public institutions, all these services being included in one bill.

Brătuleni is one of the 235 beneficiary communities in which, with the financial support of the European Union, 187 biomass heating systems were installed and 40 other are under construction in the framework of the Energy and Biomass Project.

Video testimonial with beneficiaries from Bratuleni is available here.

# Launch of the sixth edition of "Moldova Eco Energetică" National Contest



The Ministry of Economy and the Energy Efficiency Agency have launched the sixth edition of "Moldova Eco Energetica", the biggest national competition awarding the successful initiatives in the field of energy efficiency and renewable energy sources. The announcement was made by the Deputy Prime Minister, Minister of Economy, Mr. Octavian Calmîc.

"Moldova Eco Energetică" Contest supports the most important achievements in the area of the production, the transmission, the distribution and the efficient consumption of energy, of the implementation, the development and the promotion of the modern technologies, of the innovations in the field of the renewables and energy efficiency. Since 2012, "Moldova Eco Energetică" annually rewards the people and the organisations that have significant contributions to the renewable energy and energy efficiency fields. Over 70 successful projects focussed on the use and the promotion of the renewable energy sources were awarded within the 2012–2016 editions of "Moldova Eco Energetică" Award Ceremonies", Octavian Calmâc stated.

A new category – "Combined Systems" – was for the first time added this year for the projects that combine different technologies for the use of the renewable energy sources and for the increase of the energy efficiency within the same installation. In addition to it, an "Audience Award" will be given as a result of the audience's voting on the contest's website <a href="https://www.mee.md">www.mee.md</a>. Further information on the application procedure, the contest's categories, the application forms, etc. can be found on the same site.

"The contest is open to public institutions, representatives of the private sector, NGO-s, foundations, initiative groups, mass-media and individuals who have successfully implemented notable, innovative and ambitious initiatives in the renewables and energy efficiency sectors. The participants will have the opportunity to compete in the three announced categories: Eco-Responsible Stories, Eco-Responsible Technologies and Eco-Responsible Ideas", Dragos, Pidleac, interim director of the Energy Efficiency Agency, mentioned.

The entrants to the competition are requested to submit an electronic or a printed participation file to the Energy Efficiency Agency, specifying the category they wish to compete in. They will also have the possibility to send their full participation files to the following email address: **moldovaecoenergetica@aee.md** during the time limit 10th of March – 5th of August.

To be eligible for the 2017 edition, the projects submitted in Eco-Responsible Stories and Eco-Responsible Technologies categories should have been implemented before the submission of the participation file.

The winners will be announced and awarded at the "Moldova Eco Energetică" Award Ceremony. They will be acknowledged as advocates of the eco-energy sector, being a source of inspiration for those wishing to join the sustainable energy consumption.

"Moldova Eco Energetică" Contest is organised by the Ministry of Economy and the Energy Efficiency Agency. It is conducted at the initiative of the Energy and Biomass Project in Moldova, funded by the European Union and implemented by the United Nations Development Program.

# Dozens of organizations form a cluster to boost biomass energy sector in the Republic of Moldova



Dozens of organizations get together to boost biomass energy sector, with the support of the European Union. Thus, a biomass energy cluster was established on 24 of March, following Romania's model, to promote the development of the biomass energy sector through advocacy, research, international cooperation.

The cluster will embrace private companies, public authorities, research institutions, universities, active associations of green energy sector. The EU funded Energy and Biomass Project and implemented by UNDP provides assistance for the establishment of the biomass energy cluster.

"The goal of our EU-funded MEBP project is to ensure the establishment of a sustainable biomass market in the Republic of Moldova. We welcome the creation of this cluster today which is a new step in the reinforcement of biomass market in the Republic of Moldova and will favour further successful development of this sector, which will lead to tangible results for the citizens", Alexandre Darras, Attaché, Project Manager at the EU Delegation, mentioned during the event.

The cluster will set a framework for the cooperation between key stakeholders on the biofuel market, will help to create local, regional and international partnerships in the fields of interest. Its members will identify those challenges faced by the sector and will prioritise cluster's activities, considering their impact on the sector. "It is important to have an entity to represent the interests of all these sector's stakeholders. The cluster will help us to become one voice that will make us heard, for the sake of promoting the biomass energy sector, which is still at the starting line of its developments", Vladimir Brăgaru, the President of the Association of Solid Biofuel Producers and member of the cluster coordination board, said.

"European Business Association is interested in forming biomass energy cluster which will help to solve a series of sector challenges. Among these — the development of the secondary legislation in renewable

energy sector which is a bottleneck for the development of market, need for a systemic approach of biomass heating for public institutions and pro-active involvement of local public authorities all over the value chain", stated Mariana Rufa, executive director of the European Business Association.

The new entity consists now of 23 members, including the Regional Development Agencies (North, South, Centre), the Organisation for Small and Medium Enterprises Sector Development, the Association of Solid Biofuel Producers, universities, NGO's, the network of business incubators, businesses entities of the sector and other institutions. The membership is open to new members.

"The need for clusters comes when the market reaches a certain degree of maturity and needs to ensure the continuous growth and to overcome the problems caused by the lack of interaction between the companies, the research organisations or the educational institutions, donors or public authorities", stated Lajos Vajda, President of the "Green Energy" Innovative Bioenergy Cluster from Romania, who assists Republic of Moldova in the establishment of the cluster. In Romania, the "Green Energy" Innovative Bioenergy Cluster was set up in 2009.

# Pupils who study the renewable energy course take part in a national green energy competition

Pupils are invited to participate in the "Renewable Energy Sources" national competition organised by the Ministry of Education, in partnership with the Energy and Biomass Project in Moldova. The local round of the competition unfolded from 22nd of March to 28th of April 2017. The jury will assess the works of the participants and select the finalists for the national round to be held on 26th – 27th of May 2017.

The competition is open to individual or group projects that may include sequences of curricular or extra-curricular activities, interviews, presentations of school or community achievements, initiatives intended to promote the green culture in the energy production, transmission and consumption, the promotion of the renewable energy sources and of the energy efficiency.

### The contest can be attended by:

- general education institutions of the Republic of Moldova from the communities where heating plants were installed within the Energy and Biomass Project;
- pupils of the 7th–9th grades who study the optional course of "Renewable Energy Sources".

The national contest "Renewable Energy Sources" will be conducted for the first time. It is organised by the Ministry of Education, in partnership with the Moldova Energy and Biomass Project (at the project's proposal).



Within the local round, the teams of contestants were invited to develop a project related to the field under consideration that might include: sequences from various curricular and extra-curricular activities, interviews, presentations of individual and group results, dissemination of the achievements in this field in their school and community, examples of engagement towards the promotion of the green culture and of the capability in the field of the energy efficient production, transmission and consumption, the use of the alternative energy sources and the promotion of the energy efficiency measures, as well as the evidence of the personal input. After the evaluation, the best selected projects from each institution (1 project per institution)

will be submitted for the national round (of this contest), after being endorsed by the director of the institution and coordinated with the concerned official from the local specialised body in the field of education.

Within the national round, the projects will be evaluated by the contest's Evaluation Board that will establish the final ranking.

The pupils who will win the contest will be awarded diplomas and prizes.

The teachers (mentors) who will win the contest will be awarded certificates of participation and credits.

# Visit the stand of the Energy and Biomass Project on Europe Day, the 13th of May



The team of the Energy and Biomass Project will be waiting for you, full of good energy, on 13th of May, in Ştefan cel Mare şi Sfânt National Park of Chişinău. Visit the Project's stand to communicate, participate in interactive activities and learn more about the changes undertaken in the country's green energy sector.

The Energy and Biomass Project, teamed with other projects funded by the European Union and imple-

mented by the United Nations Organisation, will have a dedicated alley in the European City. The European Union and the United Nations cooperate to support the Republic of Moldova in implementing its development priorities. This collaboration derives from a broad global relationship between the European Union and the United Nations, covering various issues, from development to climate changes, human rights, the fight against corruption and crime, etc.

# With EU support, the School in Baltata village, Criuleni district, switched from gas to biofuel produced by a local entrepreneur



Founded early in the XX century by Ukrainians who had migrated from the Western Ukraine and bought land to a local landholder, the Baltata village in Criuleni district has about 2,000 inhabitants.

Given the growing number of the population and the need to maintain a large school, the local government decided in 2011 to apply for the European funds of the Energy and Biomass Project and installed a 220 kW pellet heating plant. The boiler heats the school with the area of 2,000 square meters which has more than 160 pupils. Previously, the school was heated by natural gas, but not all rooms were heated, because of the high costs.

# More than 80,000 EUR investments from European Union funds

"We did not have enough money to heat the sport hall, the corridors, other rooms of the school and the children were cold. In fact, we did not have the most comfortable temperature at least in the classrooms. Now, the whole school is heated and the temperature is much better for children, while the costs are lower. Moreover, we can be sure that the fuel supply will not be interrupted, because it is produced right in our village", the school director, Galina Todoriuc, says.

The Energy and Biomass Project has allocated, from the European funds, more than 80,000 EUR for the purchase and installation of the heating plant and the community contributed with over half a million Lei. Now, the costs during a heating season amount to about 120 thousand Lei, that is 40% less than the amount paid for gas heating.

"We plan to switch from gas to biomass other local public buildings: mayoralty office, kindergarten, community centres. We need to invest in sustainable community development in order to ensure the clean future for next generations", the community mayor, Olga Coronciuc, believes.



#### Wastes can be a reliable energy and income sources

The heating costs are even lower, if the biofuel is purchased within a distance of less than 50 kilometres. This is just the case of Baltata, where Pavel Cersac launched a business five years ago, producing pellets from sawdust, straw and sunflower husks. Afterwards, he has diversified its business and, using the same equipment, he also produces combined feed for rabbits.

"The idea of a pellet production business came to me at an international exhibition, where I saw how the biomass was transformed into biofuel. In our village, there are several wood-processing enterprises, several farming cooperatives that generate a lot of wood waste and I thought that, instead of treating it as just waste, it might become a source of income", Pavel Cersac says. The entrepreneur sells to the village school about 40 tons of pellets per season and, being aware of the biofuel efficiency, many families in the community switched to biomass heating. In order to meet the demand, the entrepreneur intends to plant energy crops, which will provide to him quality raw material.

"The renewable energy means more than energy security and climate preservation. It also means energy and resource efficient modernisation, in line with other EU countries, socially equitable and with low carbon emissions", Victor Cotruta, manager of the Energy and Biomass Project, stated.

## Facts about Moldova Energy and Biomass Project:

The Energy and Biomass Project, the first large project in green energy sector launched in 2011, has an ambitious purpose: to contribute to safe, competitive and sustainable production of biomass energy, the most viable and accessible source of renewable energy in the Republic of Moldova. Throughout 6 years of operation, it has undertaken a visible change within the national energy sector:

### **Green energy in public sector:**

- 271 schools, kindergartens, community centers, hospitals have modern biomass heating systems
- 57 Solar Hot Water Systems to be installed



- 190,000 persons benefit from securely supplied & locally produced green energy
- 400 new jobs established
- 40,000 tons of CO2 emissions annually reduced

#### Green energy in household sector:

- Over 1,000 families heat houses with green energy thanks to the subsidy programme
- Subsidies up to 1.300 EUR from EU funds

## Biomass energy market start-up:

- 30 national companies locally assemble or manufacture biomass boilers
- 35 biofuel production businesses launched via leasing mechanism: 1 M EUR (0% VAT, profit, commission)

- Other new 70 biofuel production businesses launched independently
- First testing laboratory for physical and chemical parameters of biofuels launched

## **Green energy in schools:**

- 21,000 students studied renewable energy course in schools
- 400 children participated at ENERGEL Summer School

The Energy and Biomass Project is funded by the European Union and implemented by the United Nations Development Programme. The budget of the second stage of the project (2015–2017) amounts to 9.41 million Euros, allocated by the European Union.

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