



ENERGY AND BIOMASS

Content

- *Leova District will have 16 new biomass heating plants and a service unit for their management*
- *Biofuel manufacturers will be required to check the quality of produced briquettes and pellets*
- *Journalists and communicators from Republic of Moldova discover the Austrian experience in recovering energy from biomass*
- *140,000 EURO granted to Südzucker Company biogas plant by the EU-UNDP Moldova Energy and Biomass Project*
- *18 Successful Initiatives in the area of Renewables and Energy Efficiency have been awarded at Moldova Eco-Energetica Prize Award Gala*
- **THE MOLDOVA ECO-ENERGETICA CHAMPIONS**
- **SUCCESS STORIES**

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Moldova Energy and Biomass Project

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MOLDOVA ECO-ENERGETICĂ

Gala premiilor, 6 decembrie 2013



We wish you Happy Holidays filled with peace and understanding! May we be better, more generous and courageous! Let us dream and have faith in the magic of the winter holidays! Happy New Year!

Best wishes,
the team of Moldova Energy and Biomass Project

PROJECT NEWS



LEOVA DISTRICT WILL HAVE 16 NEW BIOMASS HEATING PLANTS AND A SERVICE UNIT FOR THEIR MANAGEMENT

Leova District Council and the United Nations Development Programme have signed on 18 December a Public-Private Partnership Agreement envisaging to build 16 new biomass heating plants in Leova District and to set, for the first time in the Republic of Moldova, a service unit for managing bioenergy-based heating plants.

Setting a service unit for managing biomass heating plants is one of the initiatives launched by the EU-UNDP funded Energy and Biomass Project with the aim to establish a reliable market of integrated services in the bioenergy sector. The Energy and Biomass Project investment made for setting the Public-Private Partnership in Leova District amounts to EUR 100,000, allocated at the expense of European funds, while the selected economic entity is expected to allocate at least MDL 6 million (EUR 350,000).

"This is a first-time experience for Leova District to set a Public-Private Partnership between a second-tier Local Government and an economic entity. We are

glad to be the first District in the Republic of Moldova to promote the biomass heating infrastructure, having established integrated services for its management. We would like our model to inspire other districts to follow our example", Eufrosinia Gretu, Chairperson of Leova District, has asserted.

Leova District Council launched the tender for selecting the economic entity – part of the Public-Private Partnership; the file submission term is 60 days from the date the announcement is published by the Official Gazette. The selected economic entity is expected to invest at least EUR 350,000 in building 16 pellet-fired heating plants, and to provide them and other five heating plants already in place, with high-quality biofuel, having employed operators to manage these biomass heating plants.

Leova District Council will be the owner of these heating plants, and the latter will be managed by the selected economic entity for 11 years.

The Public-Private Partnership Model to be launched in Leova District aims to be a successful example in setting integrated services for heating plants management, including their construction, provision with biofuel and operation.

"I am confident that this example will serve as a model to be followed by other districts. We do hope that the local market for biomass heating plant management services would evolve, resulting in reliable supply of biomass-based heat to public institutions and creation of new jobs, new businesses and, last but not least, in environment protection", Narine Sahakyan, UNDP Moldova Deputy Resident Representative has stated.

Leova District has been selected to pilot such a Public-Private Partnership model following a public tender involving 13 Districts that brought 15 Project Proposals. The bids have been screened in two stages: file evaluation and site assessment of the first three finalists.

Moldova Energy and Biomass Project is a four-year project implemented during 2011-2014. The Project total budget amounts to EUR 14.56 Million, provided by the European Union (EUR 14 million) and UNDP Moldova (EUR 560 thousand). So far, five biomass heating plants have been installed in Leova District at the expense of European funds, and the Project investment amounted to \$381 thousand.

BIOFUEL MANUFACTURERS WILL BE REQUIRED TO CHECK THE QUALITY OF PRODUCED BRIQUETTES AND PELLETS

Biofuel manufacturers will have to certify the quality of the produced biofuels. At its sitting held on 04 December 2013, the Moldovan Government approved a decision in this regard that required labelling the solid biofuels manufactured in the Republic of Moldova.

The manufacturers will have to label the biofuel origin and source, including the characteristics on additives, nitrogen, sulphur, chlorine, as well as the ash characteristics upon burning.

“The Regulation on solid biofuels has been developed in a way to let the final user get acquainted with specific heat capacity of any type of biofuel. Also, the costs of briquettes and pellets will vary depending on their quality and heat capacity”, Tudor Copaci, Deputy Minister of Economy, mentioned.

The Regulation on solid biofuels stipulates the essential quality requirements, technical characteristics as well as the rules for placing the products within the market, for market surveillance and conformity assessment. Mandatory certification of solid biofuels will be carried out as per the joint initiative launched by the EU-UNDP funded Energy and Biomass Project and Energy Efficiency Agency by the Ministry of Economy, and comes as a response to the need to ensure proper operation of biofuel heating plants installed in schools and kindergarten with the Project support.

“Sustainability of investments made by the EU-UNDP Energy and Biomass Project depends on the practical implementation of this Regulation. We install modern biomass-fired heating plants and suggest new technologies for schools, kindergartens and community centres from the Moldovan villages. The biomass heating plants can be operated efficiently when appropriate quality biofuel is used depending on the boiler installed”, Nicolae Zaharia, Business Development Officer, EU-UNDP Moldova Energy and Biomass Project, asserted. For the current heating season 100 rural public institutions have biomass-based heating system installed thanks to the investments made at the expense of European funds.



Certification of solid biofuels will be mandatory for all manufacturers as of 01 January 2015.

The number of briquettes and pellets manufacturers increased ten times during the last two years, reaching 65. The solid biofuel manufacturers already in place hold a total annual production capacity of 120 thousand tonnes. This capacity exceeds almost four times the current needs of biomass-based heating plants installed within public settings thanks to the financial support provided by the EU-UNDP Moldova Energy and Biomass Project.



JOURNALISTS AND COMMUNICATORS FROM REPUBLIC OF MOLDOVA DISCOVER THE AUSTRIAN EXPERIENCE IN RECOVERING ENERGY FROM BIOMASS

A group of journalists and communicators from Republic of Moldova have met the experience of Austria in using the renewable energy. In the period of 16-21 December, 13 journalists and communicators visited locations/projects that are using and producing energy from biomass, and also met the mass media institutions, NGO's active in this particular sector, as well as Austrian Energy Agency representatives.

The objective of the study visit was to learn the Austrian experience in using biomass energy and other renewable energy sources, and also get acquainted with Mass-media in promoting the topics on renewable sources, its impact on public opinion and decision makers.

During 5 days the journalists visited enterprises that produce solid biofuel, companies that produce biomass boilers, and localities that are using at a large scale the energy from renewable sources.



Austria is one of the leading countries in production and consumption of energy from renewable sources. 32% of the entire energy consumed in Austria comes from renewable sources.

The Study visit was financed by EU-UNDP Project "Energy and Biomass" and co-financed by the United Nations Industrial Development Organization (UNIDO) and Global Energy Fund (GEF).

140,000 EURO GRANTED TO SÜDZUCKER COMPANY BIOGAS PLANT BY THE EU-UNDP MOLDOVA ENERGY AND BIOMASS PROJECT

The grant agreement provided to Südzucker Company to implement cogeneration technologies was signed on 10 December by Alexander Koss, speaker of "Südzucker Moldova" SA Management Committee and Mihai Stratan, Energy Efficiency Agency Director.

The grant worth EUR 140,000 provided to Südzucker Company will be used to buy cogeneration equipment. The funds have been allocated by the EU-UNDP Moldova Energy and Biomass Project, and the assessment and selection process has been conducted under the Energy Efficiency Agency aegis, responsible for expertise and transparency.

"The national economy depends on energy imports, therefore the promotion of renewable energy sources and energy efficiency measures underpin the action plan aimed at cutting down both the energy imports and consumption. The grant agreement concluded with Südzucker Moldova is a welcome action serving as an example worthy to be followed by other companies", Tudor Copaci, Deputy Minister of Economy, present at the event, mentioned.

"This is the outcome of an open competition involving five companies from the agri-industrial sector. We will provide information to those people who are interested to invest in this sector, which is relatively new for the Republic of Moldova", Mihai Stratan, Energy Efficiency Agency Director, stated.

"We are honoured to be part of this Project. Since 1999, when Südzucker Company took over the sugar factories, we managed to halve the energy consumption. The biogas plant is the next step in this direction aimed at cutting down substantially the use of black oil, which price soared ten times during the last 14 years", Octavian Armasu, member of Südzucker Management Committee, pointed out.

Building a biogas plant is an efficient method of using the organic waste remaining after sugar beet processing by the Company. The plant will produce electric power to be supplied mostly to other customers, enabling the Company to cut down its reliance on natural gas.

The funds are allocated by the EU-UNDP Moldova Energy and Biomass Project, while the assessment and selection process was covered by the Energy Efficiency Agency responsible for expertise and transparency.



18 SUCCESSFUL INITIATIVES IN THE AREA OF RENEWABLES AND ENERGY EFFICIENCY HAVE BEEN AWARDED AT MOLDOVA ECO-ENERGETICA PRIZE AWARD GALA

18 successful initiatives in using and promoting renewables and energy efficiency have been awarded at Moldova Eco-Energetica Gala, 2013 Edition. The Event has been unrolled in the evening of Friday, 6 December 2013 at "Mihai Eminescu" Theatre. More than 300 Invitees, representatives of Country Top



Leadership, Ministers, Ambassadors, representatives of international organisations, private sector, Academia, and civil society have attended the event.

„Moldova committed to align to the European Union standards. In this respect, we joined the Energy Community and want to benefit from the status of member of an integrated European energy market. Use of renewable energy brings visible benefits to the citizens: new incomes, new jobs, heating comfort increased and reduce green-house gas emissions and environment pollution reduces green-house gas emissions and environment pollution”, Iurie Leancă, Prime Minister of the Republic of Moldova has asserted.

60 files submitted to Moldova Eco Energetica, 2013 Edition, competed for the title of the Best Project in using or promoting renewable energy sources and energy efficiency. The files were submitted by individuals, public institutions, private companies, Media and NGOs during the active period of the Contest, i.e. 5 June - 20 September 2013.

The files that entered in competition were reviewed in three stages:

1. by Evaluation Panels;
2. during the field visits carried out for checking purposes;
3. by the Coordination Board, which passed the final decision.

18 finalists—individuals, enterprises, public institutions, NGOs—have been designated as Winners of 2013 Contest Edition.

„The EU is delighted to support the 3rd Moldova Eco-Energetica. Improvement of energy efficiency and development of renewable energies are key priorities of EU support in Moldova and this reform process needs the active participation of all actors of Moldovan society to become a success. I wish to congratulate all those who participated in the Moldova Eco-Energetica competition

with their great initiatives and projects”, Pirkka Tapiola, Head of the European Union Delegation to the Republic of Moldova, has stated.

Moldova Eco-Energetica is the largest prize award contest of successful initiatives in the area of renewables and energy efficiency. Moldova Eco Energetica is organised by the Ministry of Economy and the Energy Efficiency Agency in partnership with Moldova Energy and Biomass Project funded by the European Union and co-funded and implemented by UNDP Moldova.

“I would like to congratulate on the occasion of the 3rd event edition and how in such a short period of time it became this highly-visible annual flagship event, bringing together all key actors in the sector, including government, private sector and practitioners, academia, civil society and development partners”, Nicola Harrington-Buhay, UNDP Moldova Resident Representative has mentioned.

Moldova Eco Energetica Contest for 2014 will be launched during the first half of the next year.

The Moldova Energy and Biomass Project is a four-year project implemented during 2011-2014. The Project total budget amounts for EUR 14.56 million, provided by the European Union (EUR 14 million) and by UNDP Moldova (EUR 560,000).

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THE MOLDOVA ECO-ENERGETICA CHAMPIONS

BEST SOLAR ENERGY PROJECT: Photovoltaic

**Boris Grama,
Hartopul Mic,
Criuleni**

Boris Grama “made” an agreement with the Sun, which accepted to share its light on a daily basis, while the Master would transform it into power. The 12 panels placed on the house roof would serve as intermediaries. Thus, each month Boris Grama supplies more than 260 kWh to the national power grid, being a promoter of solar energy efficient use: www.youtube.com/watch?v=-7AIJ7f3RDU

**Oncological
Institute,
Chisinau**

Thanks to the photovoltaic system, i.e. to the solar panels installed on the Institution territory, 30% of the energy needs would be covered by the Sun. The annual savings are of circa 700 thousand MDL and cutting CO2 pollution with 132 tonnes annually: www.youtube.com/watch?v=h6oqHlq3gl0

BEST SOLAR ENERGY PROJECT: Thermal

**Enterprise
“Autosalubritate”**

“has been sweeping out” not only the City streets, but the air carbon pollution as well. Since 2001, the solar panels installed on the institution territory provide the enterprise employees with hot water for half a year. The Institution managed to recover the investment, having saved 204 thousand MDL for over 12 years: www.youtube.com/watch?v=54OqGNjKXyI

BEST WIND ENERGY PROJECT

**Anton Port,
Popeasca,
Stefan Voda**

Not a single cent is taken out of his pocket; hence, enthusiasm could generate both power and heat. Thanks to the life-long computations, as Anton Port has stated himself, he managed to privatise the Sun, the Rain and the Wind: www.youtube.com/watch?v=ERPxr7-cGKc

BEST GEOTHERMAL ENERGY PROJECT

**Lyceum Elimul
Nou & Modern
Term**

Since 2009, the lyceum is heated, speaking metaphorically, from the Earth. The geothermal plants provide the institution with heat in winter-time. Elimul Nou Lyceum is proud to be the first education institution to implement a geothermal energy project in the country: www.youtube.com/watch?v=Xi-g3xJSEkg

BEST BIOENERGY PROJECT: Solid biofuels

SG Green Farm

Company has decided not to forsake these energy sources all over the hills anymore and picks them up directly from the fields to produce biomass briquettes. The investments are over 3 million MDL. The benefits: 17 new full-time jobs and other 15 – 17 seasonal jobs: www.youtube.com/watch?v=NS7yBJqDPA0

BEST BIOENERGY PROJECT: Liquid biofuels

SC Junicart-Com

has found a solution for the used tyres, which can be converted into biofuel. The pyrolysis gas and oil are used to heat the industrial premises, steel cables are recycled, and carbon is used as solid fuel: www.youtube.com/watch?v=vgNPkmN9Bqw

BEST BIOENERGY PROJECT: Gaseous biofuels

Sudzucker-Moldova

The residues remaining after the sugar production are just perfect for the generation of heat to be used by enterprise premises and of power for own use and to be fed into the national power grid: www.youtube.com/watch?v=BvOs2jxTU_o

Tevas Grup

has set the goal to curb environment pollution by 2023 and to find some plausible use for the gas released by waste, concomitantly, having created new job. With an investment of 14 million MDL, the company intends to transform the wastes from Tantareni into energy: www.youtube.com/watch?v=P68q0UXgkzs

BEST BIOENERGY PROJECT: Heat production

Polimer Gaz Conducte

had found the recipe of organic and healthy profit: growing vegetables in a smartly-built greenhouse so that the latter enables heat conservation. The Ingredients?! The warmth of the Sun and the energy of the Earth provide us with less expensive organic vegetables, and the most important thing is that they are “Made in Moldova”: www.youtube.com/watch?v=K2YPPy-nlno

Dumbravita Village Hall, Sangerei

Those almost 900 children, school and kindergarten teachers from Dumbravita village, Sangerei district, have heat in the winter like in summer. Modern biomass fired boilers were installed at the school and the kindergarten from the village: www.youtube.com/watch?v=XmcUWKc4PFw

BEST BIOENERGY PROJECT: Bioenergy production technologies

Moldagrotehnica

is the only manufacturer of biomass boilers in the country. Moreover, the enterprise premises are heated with bioenergy generated by boilers manufactured at the enterprise. These heating plants are ecological, operated autonomously for longer periods: www.youtube.com/watch?v=2AxQKGIQHFQ

BEST ENERGY EFFICIENCY PROJECT: in the construction/services sector

Linella SRL & Dina Cociug SRL

Since 2006, the network "Linella" stores waste no heat, having found a new application for it. The heat released by freezing plants is used to heat the premises in cold periods and supply domestic hot water: www.youtube.com/watch?v=CYf3aXGPvaE

BEST ENERGY EFFICIENCY PROJECT: in the public sector

Tatarauca Veche Commune, Soroca

more than 300 LED-based technology luminaires for street lighting have been installed commune-wide, comprising six villages. Tatarauca Commune may be proud of becoming a symbol of street "enlightenment"
<http://www.youtube.com/watch?v=MwSjrEN0FIk&feature=youtu.be>

BEST COMMUNICATION INITIATIVE

FurioSnails

Sun Da-I Fest - the first concert in the country powered by solar energy – was held in 2013 in Chisinau. An open air event, with exhibitions promoting renewable energy technologies and protection of environment:
www.youtube.com/watch?v=ToNgL5q1qI4

BEST EDUCATIONAL INITIATIVE

Continuous Education Institute

6000 children know how to make use of the renewable energy sources and are familiar with the secret of energy savings. They have been studied at schools renewable energy courses in a modern style. The most active schools students, selected as results of a competitive process, participate in the Summer Camp "Energel":
www.youtube.com/watch?v=hcLS3Pt4Sto

BEST YOUTH INITIATIVE

Circle of Young Inventors

More than three thousand school children, teachers and parents have been taught about the benefits of clean energy. Ion Cozma and his fellow colleagues speak about energy efficiency to students, and implement projects proving that energy could be both cheap and ecological: www.youtube.com/watch?v=bNxGuyBlv9I

SPECIAL PRIZE

Europlast Grup

has learned how to make energy savings out of energy! Hence, the Company has decided to cut the use of energy by having installed more converters. Today, Europlast Grup SRL is proud to report a 30% energy saving: <http://www.youtube.com/watch?v=3bMesW2eMSs>

SUCCESS STORIES



GREEN ENERGY CREATES NEW OPPORTUNITIES FOR WOMEN

Overwhelmed by daily concerns, having to cope with the challenges of being a mother of two and an excellent wife, Ludmila Abramciuc from the town of Balti in Moldova, leaves everyone in awe when she announces that since 2008 she finds time and energy to manage a biomass briquette production company.

Difficulties? There were many indeed, the woman confessed, but she managed to address them gracefully. It has been a challenge to demonstrate to her business partners that besides excelling in the kitchen, she can successfully lead of a company - "Ecobricheta" LLC, that operates in a field primarily dominated by men – the energy efficiency sector.

"At the beginning, my business partners, and even my employees, regarded me somewhat suspiciously. They probably doubted whether I could 'make it' in the energy field, where one encounters mostly men than women. In spite of this, their doubts vanished the moment they realised they are talking to a professional. In fact, having many years of hands-on experience in the recycling industry has helped me a great deal in managing the present company. Moreover, I am pleased with the fact that I managed to create 15 new jobs", proudly states Ludmila Abramciuc.

Half-joking, half-serious, the leader of "Ecobricheta" SRL is convinced that there should be more women engaged in renewable energy field:

"Only in such a way the country would be kept tidy. Nothing should be discarded, everything needs to be recycled. Moreover, I think that recycling businesses should be managed by women, who are, in my opinion mindful and cost-effective. Honestly, I would prefer to have more women on my team because they are more responsible and aren't late for work", Ludmila Abramciuc stated.

Her spouse, also owner of a non-metallic waste recycling business, supported Ludmila in all her aspirations. For more than a decade "Junicart-Com" LLC, led by Ivan Damaschin, processes carton, plastic, rubber and textile waste, and converts it into pyrolysis oil, a fuel that can be used for heating.

In the businessman's opinion, the household waste is not just a source of odour and pollution as many could think. The waste, properly processed, may generate liquefied gas that can be used for heating. Prior to the establishment of the company, the waste from Balti municipality was simply buried near the outskirts of the city: *"The waste was collected daily and disposed of at the town landfill to be buried afterwards or, even worse, burnt, in absence of another alternative. Since the breakup of the Soviet Union, the waste has not been recycled, thus, has been polluting the environment ever since. Once we started to work in this field, we began to sort the wastes. We paid some private individuals who were eager to earn an additional income, and they collected the specific types of waste that we purchased from them, and recycled it."*



Ivan Damaschin admits that he is proud to introduce his wife to his business partners not just as an excellent better half, but as a dependable business partner as well.

Since the businesses headed by this couple proved their efficiency and sustainability on the Moldovan energy market, they have recently been assisted by the Energy Efficiency Agency and the Energy and Biomass Project, funded by the European Union and implemented and co-financed by UNDP in Moldova, in procuring highly performing briquette production equipment out of cereal and forestry residues (sawdust, straw, sunflower hulls). The entrepreneurs admit that without the project support they would have not been able to afford such equipment, which costs over MDL 300, 000 (approx. 23,000 USD). Thus, thanks to the new installation, "Ecobricheta" LLC would achieve a threefold increase in briquette output. If until now the company was able to produce 90 tonnes of briquettes per month, nowadays it can produce more than 300 tonnes. The latter quantity is sufficient to heat five schools and kindergartens during the winter season.

The 1 million EUR financial assistance provided by the Energy and Biomass Project aims to stimulate the Moldovan biomass fuel production market, and is intended to facilitate the procurement, under a leasing scheme, of a wide range of biomass baling, milling, briquetting and pelleting equipment by private businesses. The equipment is provided under advantageous conditions for a three-year period with 0% commission, 0% interest and zero-rate VAT. It is expected, that 200 – 250 new jobs will be created as a result of implementing the leasing financing programme.



The endeavours undertaken by Ivan Damaschin and Ludmila Abramciuc from Balti haven't remained unnoticed. They found themselves among the champions in the renewable energy field in Moldova and were awarded for their success at the "Moldova Eco-Energetica" Gala, organised by the Ministry of Economy and Energy Efficiency Agency with support from the Energy and Biomass project.

By means of such programmes, the Energy and Biomass Project hopes to contribute not just to the achievement of the national targets set by the Moldovan authorities in terms of reducing the country's energy dependence, but also to promote the economic and civic participation of women as widely as possible, explains Victoria Ignat, gender focal point and training specialist with the project: *"The experience of the Energy and Biomass Project shows that women play an important role in the decision making processes associated with the implementation of biomass heating projects in beneficiary communities. Thus, around 56% of the members in the Community Project Committees are women, who work side by side with men, in designing project proposals for affordable heating of public institutions with biomass, mobilising local citizens and collecting community contribution - at least 15% of the EU-UNDP investment value. We are also pleased that the leasing mechanism implemented by the project opens new possibilities for women entrepreneurs who want to start or expand clean fuel production businesses in Moldova."*

The EU-funded Energy and Biomass Project has set the goal to connect at least 130 kindergartens, schools and community centres across the country to biomass heating systems by the end of 2014.

Only by the end of 2013, some 121 public institutions, mainly schools and kindergartens, will have access to environmentally-friendly and affordable biomass-derived energy. The institution managers may channel the savings obtained from lower heating bills to supplement the libraries with textbooks, to repair gyms or to arrange playgrounds for children.

According to the project data, around 7,000 people, of whom 80% are women employed as managers, teachers or civil servants, benefit from better working conditions and improved heating comfort in rural public institutions throughout Moldova.

The indirect beneficiaries of the project are the parents of those 42,000 children attending the schools and kindergartens, who are no longer worried that their children would spend time in cold or poorly heated classrooms or kindergartens. Also, they have now more time to undertake full-time employment, thus contributing to increasing the family incomes in the longer run.

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