

## REDUCING BARRIERS TO ACCELERATE THE DEVELOPMENT OF BIOMASS MARKETS IN SERBIA

### PROFILE

Donors: Global Environment Facility (GEF); UNDP

Budget: \$2,8 mil. (GEF) ; \$310,000 (UNDP)

Main Partner: Ministry of Mining and Energy

Duration: 2014-2019

### GOAL

To increase the share of energy from renewable sources in energy mix of Serbia, specifically the share of biomass in power generation.

### CONTEXT

Recognizing the benefits of renewable energy and equaling the target ambition of EU Member States, Serbia committed to increase the share of renewable energy in the overall energy consumption to 27% by 2020, compared to 21.2% in 2009. The National Action Plan for Renewable Energy Sources envisages setting up 30 megawatts (MW) of biogas plants by the target year.

The agricultural biomass, produced by agricultural and forestry sectors, is rarely used for energy generation in Serbia, even though it comprises 61% of the total potential of renewable energy sources. Energy generation from agricultural biomass is very rare although it creates added value, as it reduces waste from agricultural production, which has for a long time been a significant source of intensive water and soil pollution in Serbia.

The use of biomass is a technically feasible and cost-effective solution for a great part of Serbia's needs for renewable energy.

### FOCUS

- Reduction of Greenhouse gas (GHG) emissions associated with electricity generation in Serbia;
- Financing, construction and connecting to the power grid of six combined heat and power (CHP) facilities;
- Ensuring the continuity in supplying biomass-fired power plants and reducing risks in biomass production and sales;
- Improving knowledge and skills of local administrations, entrepreneurs and banks to identify, prepare, finance, construct and manage bankable biomass energy production projects;
- Establishing the specialized Biomass Support Unit within the Ministry of Mining and Energy, to strengthen the institutional capacity of Serbia to manage biomass as energy source;
- Assisting the Biomass Support Unit by providing technical advice and guidance;
- Development of a stronger and more effective secondary legislation (by-laws) related to biomass energy ;
- Raising awareness among policy makers, investors and consumers about the biomass energy benefits.

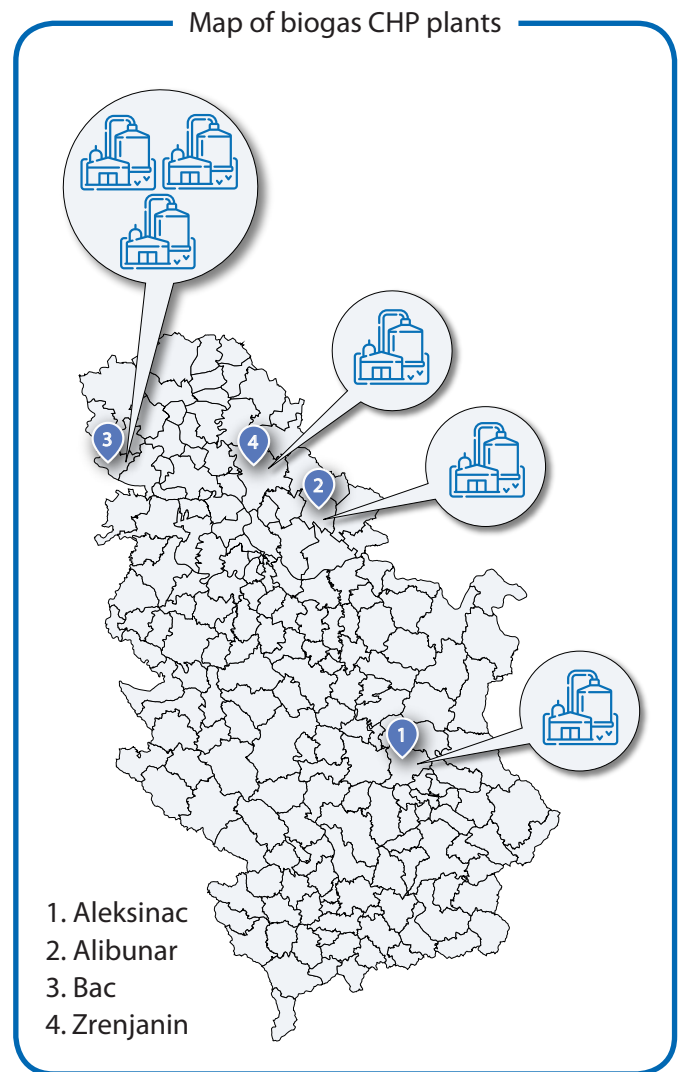


## RESULTS TO DATE

- ✓ Six biogas CHP plants with total capacity of 6.35 MWe have been constructed thanks to investment grants provided in the amount of \$1,600,000;
- ✓ Methodology prepared for monitoring the raw material consumption and energy production (heat and power) for biogas CHP plants;
- ✓ Model contracts on long-term biomass supply prepared, defining obligations of buyers (investors) and biomass suppliers;
- ✓ Woody and agricultural biomass technical specifications prepared;
- ✓ On-line biomass e-trading platform is set up and operational, managed by Chamber of Commerce;
- ✓ A model report has been developed for the producers of electrical energy from biomass to complement the Government Decree on Privileged Power Producers;
- ✓ Two films have been produced and broadcasted: a short "Biomass - energy all around us" video, and a longer documentary film on the use of biomass for energy plants;
- ✓ During study tours, Agriculture, Mechanical Engineering, and Technology students from the University of Belgrade and University of Novi Sad learned first-hand how biogas CHP facilities operate in practice.

**130%**

Increase in the total installed capacity  
of biogas CHP facilities in Serbia  
(compared to 2015)



**22.6 \$**  
**MILLION**



Total investment in six biogas CHP plants  
**\$1.6 mil.** seed funds attracted  
**\$21 mil.** private investments

Contributing to Sustainable Development Goal:



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