

## Assessment of Biomass-for-Energy-Potential in Bulgaria in frames of CEUBIOM Project Anna Aladjidjiyan, Nikolay Kakanakov, Aleksandar Zahariev

National Biomass Association (BgBiom) is partner in the project CEUBIOM financed in frames of Seventh Framework Programme. One of the aims of CEUBIOM project is to prepare a survey on routines and current activities on terrestrial methods of biomass assessment,

Biomass potential assessment methods (the specific conditions of the region, present agricultural production, environmental impact of possible crop change, present use of biomass in the region and future prognosis, socio-economic issues and specific legislation and support measures)

National data on plant growth and primary productivity, assessing the feasibility of promoting non-food agricultural production for energy utilisation.

The aim of this paper is to present current situation in Bulgaria on terrestrial methods used for assessment of biomass potential.

### Present Situation in Bulgaria

Recently biomass-for-energy politics in Bulgaria has been developing very fast. The most relevant political programmes concerning the development of biomass for energy include: Energy Strategy (2002)

National Long-Term Programme to Encourage the Use of RES 2005-2015

National Long-Term Programme to Encourage the Use of Biofuels in the Transport Sector 2008-2020

Renewable and Alternative Energy Sources and Biofuels Act (2007)

National Long-Term Programme to Encourage the Use of Biomass 2008 -2020

The mentioned documents have been based on the national goals:

Bulgaria has signed Kyoto protocol and took the commitment to reduce GHG emissions by 8% (based on 1988 levels) for the first commitment period 2008-2015 (National inventory report 2008 for Bulgarian GHG emissions)

According to the National Long-Term Programme to Encourage the Use of RES for the period 2005-2015 the share of RES in the electric power production in 2010 must surpass 8% of the total electric power production, and in 2015 – 9%.

As shown in the National Long-Term Programme to Encourage the Use of Biomass for the Period 2008-2020, the final energy consumption for 2005 represents 20137 ktoe (843 PJ), of which from biomass and biofuels 745 ktoe or 68 PJ (8%). The share of RES in 2005 in Bulgaria is 10,4% of the generation of primary energy, thus larger corresponding to the value for EU-25, where it is 12% for 2004. In 2020 in case of full utilization of the biomass energy potential its share will reach 8,5% in gross domestic consumption. About 38 % of the biomass utilized in 2020 is expected to be used for the generation of electric and heat energy, which amounts to about 8,37 ktoe. From the above total quantity about 70% of the biomass will be used for the generation of heat energy, and respectively 30 % - of electric energy.

The share of biomass in final energy use will reach 10,7%. The largest relative share will be that of households – 55, 8% followed by transport – 25,4% agriculture etc. The following figures show the final energy consumption of biomass by basic economic sectors for 2005 and 2020 (source: the National Long-Term Programme to Encourage the Use of Biomass for the Period 2008-2020).

### Conclusions

1. Most of the works related to the concept of biomass potential have used statistical data from Statistical Yearbook or similar publications of related Ministries. Data for the Statistical Yearbook have been produced on the basis of surveys methodologically based on the EU legislation.
2. The lack of data on Comparative assessment of current known/applied terrestrial methods and experiences of biomass assessment in a trans-European context for a harmonised EU approach, as well as the lack of data on the Assessment methods for calculating the exploitable potential (economic, market potential) and technical potential – agreeing on single definition taking into consideration biomass availability, climate conditions, soils, environmental concerns, socio-economic issues state the importance of CEUBIOM project.

