



BIOMASS FROM FORESTS AND ITS UTILIZATION AS RENEWABLE ENERGY SOURCE IN BULGARIA

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National policies and legislation related to biomass utilization as RES

- **Law on renewable energy sources** (adopted 2011, amended 2015) encourages the development of new technologies with high extend of environmental protection when producing energy from biomass (from forests including);
- **Governmental Management Program** for the period 2017-2021
 - ❖ Aim 166: Increasing the effectiveness and efficiency of management regarding public forests and development of national green economy and modern forest industry
 - ❖ Measure 65: Diversification of the incomes from forests based on production of bio products, **production of energy from forest biomass,**;
- **National action plan for energy efficiency** 2014-2020 – supports projects for energy efficient house holdings and public buildings by replacing low effective heating systems with state of art installations on biomass;

National policies and legislation related to biomass utilization as RES

- **National long-term program for encouraging the use of biomass** for the period 2008-2020 – the aim is sustainable and independent energy development by mobilizing energy recourses from renewable and alternative sources, **timber biomass being the biggest source of bioenergy for the country;**
- **Integrated plan in the field of energy and climate** of Republic of Bulgaria 2021-2030
 - ❖ 66% of the population uses biomass for heating
 - ❖ The plan foresees introduction of individual devices for burning of biomass with at least 85% effectiveness for house holds and at least 70% effectiveness for industrial buildings
- **National Action plan for energy development from forest wood biomass** 2018-2027
 - ❖ contains strategic framework with 6 priority areas and concrete actions for increasing the efficiency in utilization of forest biomass as RES

Potential of timber biomass for energy from forest territory

Forest data – 31.12.2019:

- 4 149 351 ha forest territories (about 37 % of the country's territory); 3 789 195 ha forested area (about 34% of the country's territory) ;
- Over 680 500 000 m³ total volume;
- 14 million m³ annual increment;
- 8 007 915 m³ annual harvesting (standing timber)
- 4 095 423 m³ firewood



Potential of timber biomass for energy from forest territory

Harvested wood used as RES (firewood)

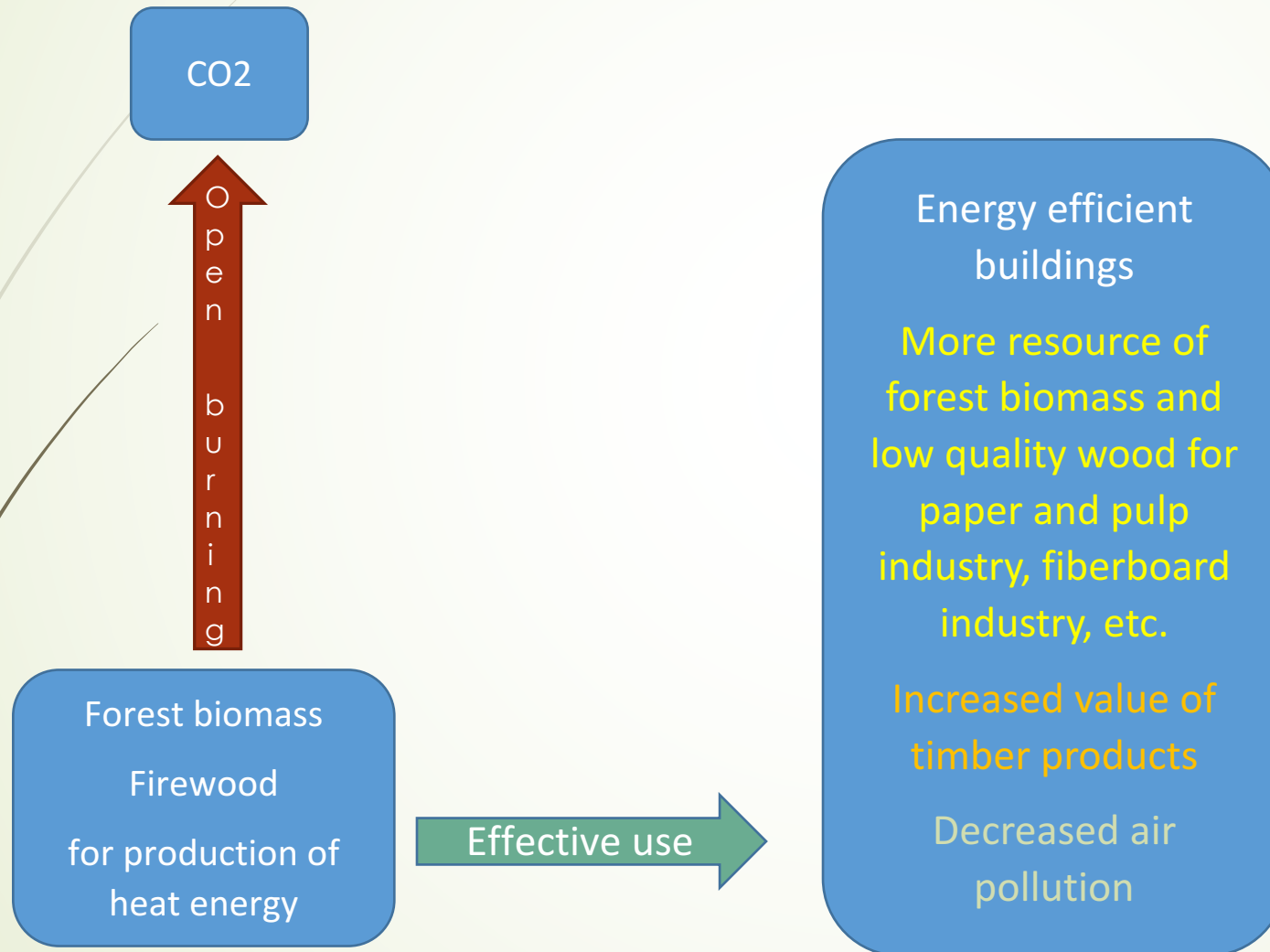




Existing problems in using forest biomass for energy purposes

- More than 1 000 000 households use forest biomass for heating (90% in the rural areas)
- ❖ Harvesting from public forests is planned with priority to meet the requirements of the local communities for firewood
- ❖ Almost all households burn wood for heating in old, low effective ovens – open burning with less than 40% effectiveness
- ❖ Weak interest in investment of modern heating installations on wood biomass, even in close to forests communities
- ❖ No experience in long-term contracts on wood and timber market to secure resource for heat energy production and support investments in industrial installations

Existing problems in using forest biomass for energy purposes



Actions to increase the effectiveness in forest biomass exploitation

➤ Forestry measures

- ❖ Investment in machinery for environmental friendly collecting of residual wood from felling/cutting sites (Forest state and municipal companies)
- ❖ Establishment of 8 experimental logistic centers – helps to close the product chain from harvesting to using residual wood as pellets and briquettes at local level
- Improvement of forest infrastructure for quick extraction of damaged wood from pests, diseases and natural disasters to be used for energy production

➤ Administrative measures

- ❖ Adoption of Ordinance on requirements for use of forest biomass for household heating – 2019
- ❖ Free of charge delivery of highly effective ovens for household heating by the municipalities to poor families – starts from the beginning of 2020



Contribution of Bio4Eco project on effective use of forest biomass in Bulgaria

- Gaining international experience in the field of policies and methods for more effective use of biomass from forests for energy purposes
- Development and adoption of the National Action Plan for energy development from forest wood biomass 2018-2027
- Participation of stakeholders in international seminars and field demonstrations organized by project partners
- Organization of several seminars at national level meeting practitioners and policy-makers to discuss best practices and search for suitable approaches for more effective use of forest biomass.





Contribution of Bio4Eco project on effective use of forest biomass in Bulgaria

➤ Operational Programme "Innovation and Competitiveness" 2014-2020

- ❖ Several meetings with the Management authority of OPIC for Bulgaria to present the problems with forest biomass exploitation and discuss the priorities and measures proposed in the National Action Plan for energy development from forest wood biomass 2018-2027 and their reflection in the next program period
- ❖ 1 meeting with the national coordinator of OPIC to help and make easier the assess for SME, with low administrative capacity for projects preparation, to information and requirements for participation with project proposals on effective use of natural resources, incl. forest biomass, in the next program period of OPIC
- ❖ Participation of Executive Forest Agency in interinstitutional working group developing elements of the circular bio economy in the Innovation Strategy for Smart Specialization, which will be the basis for defining priority areas in the next OPIC in Bulgaria.
- ❖ The team of Bio4Eco developed and submitted Fiche with proposal on possible investments in projects for more effective and circular use of forest biomass under the Priority related to effective use of natural resources in the next OPIC.



THANK YOU FOR YOUR ATTENTION

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