



Fact sheet (2016): Woody energy market in Croatia

Framework conditions

In Croatia biomass accounts for approximately 11% of the total primary energy supply, while the majority of fuelwood is consumed in households for heating. The total capacity of industrial biomass heating plants is estimated at 515 MW.¹

Even though in the last few years a number of projects related to the installation of biomass boilers were initiated and some completed, the development of a woody biomass market for energy purposes is still in the early stages.

The main barriers for further development are:

- Lack of favorable national policies;
- Lack of incentive schemes and subsidies;
- Lack of medium and large scale applications of bioenergy production such as district heating, combined heating and power (CHP) utilities;
- Insufficient organizational setting of private forest associations and difficult socio-economic situation of forest owners;
- Lack of knowledge and technologies for domestic market uptake.

The basic data on forests in Croatia are presented in the table below.²

Forest area	2.688.687 ha	47% of total land area
Forest Ownership	2.106.917 ha state forests	78% is state owned
	581.770 ha private forests	22% is privately owned

There are approximately 600 thousand private forest owners in Croatia and privately owned forests are often linked with a lack of professional knowledge in forest management. Additionally, there are no strong private forest associations, through which the forest owners would exchange knowledge and experience, and coordinate forestry interventions. This blocks participation on the market. Parts of private forests are degraded and require high investments for rehabilitation.

Currently in Croatia three biomass heating plants are utilized for the heating of buildings. Two of them are owned and operated by the state forest management company Hrvatske

¹ Source: Energija u Hrvatskoj / Energy in Croatia 2014, published by the Ministry of Economy, available at: http://www.mingo.hr/public/energetika/EuHR_2014_finalna.pdf

² Source: Hrvatske šume d.o.o. (Croatian Forests Ltd.), data available at: <http://portal.hrsume.hr/index.php/hr/ume/opcenito/sumeuhry>





Sume Ltd. (in cities of Gospić and Ogulin), while the third is owned by the municipality of Pokupsko.

Market and supply chain development

At the moment several biomass district heating plants for buildings in cities and municipalities are in the planning phase. Wood chips are produced with mobile wood chippers at the forest or roadside and are almost always exported to neighbour countries.

There is a lack of financial incentives for investing in wood pellets heating and biomass district heating, but woodchips and pellets are gaining popularity based on accessibility of cheap biomass boilers from domestic production and development of local pellet production.

Even with these unfavorable conditions, pellet production in Croatia has experienced significant growth in the last couple of years with installed capacity of 260.000 tons per year³ in nine pellet production companies. Production of wood pellets started in 2006/07 as a result of fossil fuels prices growth and increased demand for pellets in EU market. Approximately 95% are exported to EU market mostly in Slovenia, Italy, Germany and Austria.

The market for firewood is much more developed and this has traditionally been used as a source for heat in households in rural parts of Croatia.

So far one BLTC located in the municipality of Jasenovac is operational, which was established in 2011 by the private company Ante Mijić Quercus Ltd (www.quercus-am.hr).

Sustainability and quality assurance schemes

The Croatian state forests are Forest Stewardship Council (FSC) certified which is very important for the exportation of wood to neighboring EU member states. The annual supply potential for the total wood supply from certified forests is almost 6 million m³ per year.

At present quality control and quality assurance standards for processed firewood are not used. The only wood fuel where standards, certification and quality labels are commonly used are wood pellets. This is due to the industrial production process and the market demand for these in export markets, where approximately 95 percent of the national production is exported. Several Croatian producers have obtained quality labels (ENPlus) addressing needs for constant assured quality by the EU customers.



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³ According to EPC data