

Case study from Ukraine (№2)

Full utilization of sawmill and wood processing residues by wood processing company VGSM

VGSM Ltd is based in the small town of Velyky Bychkiv, in the Rakhiv district in the Carpathian mountain side. Rakhiv district is the only area in Zakarpattia not using gas, but instead mostly using firewood for heating. Coal and electricity make up only a small share (up to 10%). An average household uses about 8 m³ of firewood per year. The price for firewood has been ever increasing over the last few years, and for many households it is the major cost element in the family budget. In addition, local supply of firewood is not sufficient due to many factors limiting sustainable harvesting of firewood, such as vast areas of protected forests, low accessibility of many mountain forest plots, and an increased demand from both households and businesses.

What has been done

Therefore, the combined effort of local authorities and wood-based industry of the region is to secure the stable and affordable supply of firewood to the population. VGSM contributes to this aim by developing a solution to fully use all sawmill and wood processing wastes generated not only by VGSM, but also by neighboring companies.

VGSM manufactures chairs, parts of chairs, furniture panels, with IKEA as the major client. It processes up to 50 000 m³ of round timber annually. Wood residues are used by the company for its own drying kilns, of the remains, the company produces 6 types of fuel. The assortment of fuel is ranged and structured by price:

- dry short firewood
- briquettes
- lump residues from boards
- lump residues from logs
- residues from wood processing shops
- and a fuel mixture that includes bark, chips, sawdust and lump waste



Photo: types of fuel: to the left -residues from wood processing shops, to the right - dry lump residues from boards

The company sells 10 000 m³ of firewood annually to the population. Briquettes are more expensive and are often sold to small businesses (like bakeries) and about 500 households. The unsorted fuel mixture is cheap, only 30 UAH (1 EUR) per m³ without delivery - it burns perfectly and has a high heat output. Yet, one must pack it and organize storage for it at home. An average 100m³ house needs 2-3 trucks of this fuel mix per season.

As a social contribution, the VGSM company supplies the fuel mix for free to the city hospital, maternity home and local schools (as an addition to low-calorie coal). Annually, during the heating season, VGSM supplies approximately 100 tons of such mixture to budget institutions.

Rakhiv district - which has the highest forest coverage in Ukraine of 68% - has lots of small sawmills which process estimated 300 000 m³ of wood annually. By nature, sawmills generate a lot of wastes – up to 30 000 m³ of sawdust are estimated to be produced in the district every year. It is partially burned or recycled, but part of it contaminates the area and is dumped in the mountain valleys. As part of the solution to wood waste management and

Photo: fuel briquettes



improving the environmental situation of the area, VGSM came up with the proposal to partner with other small sawmills. The idea is to establish a system to collect waste sawdust from sawmills, clean it from soil, stones and dirt and use it to either produce briquettes or for heating in houses. In the moment, the company is testing the technological solutions (there are two technical possibilities) and the model of cooperation or clustering among the companies.

Outputs and potential for replication

The innovation of this practice is connected to the fact that the amount of waste is enormous, and small companies are concerned about their economic activities and not about the region's environment. The proposed practice will result in a creative waste management, continuous supply of fuel combined with potentially additional profits in the supply value chain and of course cleaner surroundings.

This is a good example of how the company can diversify its profits, and at the same time efficiently use natural resources and be socially responsible.

Sources:

VGSM Ltd

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