



Strategic Biomass Storage Facilities Gelderse Vallei

Project partners

RiBo Holding

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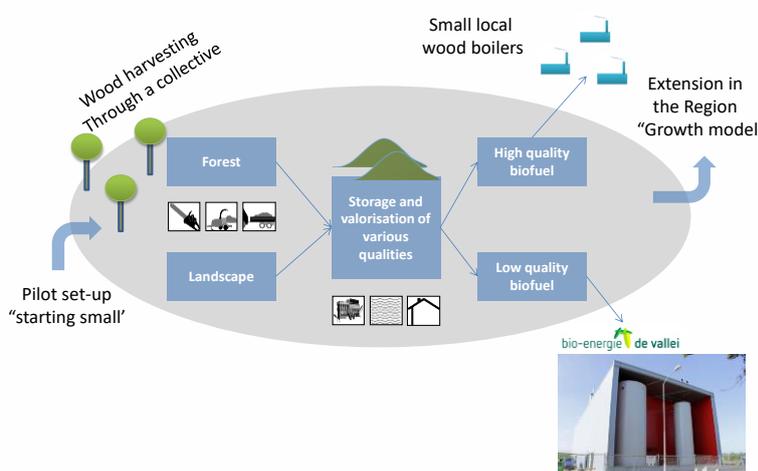
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Pilot project concept

In this project supply of biomass from landscape elements (hedgerows, single-line tree stands, small forests as well as parks and avenues) is combined in a smart manner with biomass supply from common resources (forestry). Aim is to establish a biomass terminal that can produce biomass fuel of different qualities to serve various types of users.



By storing biomass in combination with drying and sieving a regular supply of biomass is ensured. High quality wood chips with a defined moisture content and morphology can thus be supplied to smaller boilers, while lower quality fractions can be supplied to larger boilers that are more robust and can handle lower quality biomass. The pilot project was initiated based on an ongoing effort to stimulate the maintenance of landscape elements in the Gelderse Vallei.

Partners

The company Ribo Holding – the pilot project initiator – is located in the Gelderse Vallei at the location of a former animal fodder company. Other partners in the project were Borgman Beheer Advies, expert in setting up biomass fuel supply chains. Supply of the biomass and organisation of the landscape maintenance activities was carried out by the association ANV Vallei Horstee. The municipalities of Ede and Barneveld supported the pilot project.

Project partners



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Activities

The project started analysing the siting and design of the strategic storage facilities, applying lessons learned from visiting and inspecting similar facilities. An investment and operational plan for the initial phase was developed, as well as a scaling-up plan and an exploitation calculation, that consider future capacity expansion, in line with the anticipated growing availability of wood chips.

Results

The operational and investment plan was developed, describing the activities to be carried out and the required investments. Although use could be made of facilities already in place at the former animal fodder plant (like a weighing bridge), several investments/infrastructural requirements were identified, such as a retaining wall to be able to store and load wood chips at the terrain, a tarpaulin (see picture) that would allow for moisture reduction in the stored wood chips while keeping the rain out; a shovel/loader for occasional use, and a monitoring system to control the intake and supply of wood chips.

The space available for wood chips storage is 3,500 m³, which is sufficient for the first phase. There is enough additional space available on the terrain for scaling-up to about 5,000 tonne/year.

Besides determining the required investment, exploitation calculations were made. An amount of 1,200 tonne/year was calculated as the break-even point. Above this amount, the costs for intake, handing, sieving and supply of wood chips would be compensated by the higher income because of higher wood chips quality and associated prices.



Follow-up

At the moment the storage space is in use, but faces challenges acquiring enough biomass. This is on the one hand a problem of lack of local supply, and on the other hand caused by increased competition from other market players. Priority is given to intensify actions to increase the wood supply before making a decision about new investments.