

BIOMASS STEAM FOR PRODUCTION (BSP)



Project developer Nam Thai Nguyen Ltd.
Location: Phu Tho province, Vietnam
Technology: Biomass (waste-wood)
Project Cost: 307,890 Euro
EEP Contribution: 150,000 Euro (49% of project value)
Duration: June 2016 – December 2017



Project Description

The project aims at introducing an industrial boiler system using Acacia waste-wood as biomass fuel for steam generation in the pulp & paper industry. The project developer, Nam Thai Nguyen Company, has a partnership with Mr. Wolfgang Mostert, Danish business development consultant, Viet Tri Paper Factory and SEDCC, a Vietnamese consultancy firm.

Focus of the project is on thermal energy production from biomass rather than electricity generation, since the efficiency of the boiler system for thermal energy (steam) production is higher as compared to power generation. In addition, the price of thermal energy (steam) in Vietnam is market-driven and based on international coal prices while the feed-in-tariff for biomass based electricity generation is low in Vietnam.

Acacia plantations are numerous in Vietnam and are an important source of income for small-holders in the mountainous areas of Vietnam. However, only half of Vietnam's annual acacia production can be used for the production of saw logs and pulpwood, the remains are waste-wood by-products, which is presently not used. The biomass boiler project, which will be installed and operated at Viet Tri Paper Factory in Phu Tho province,

will utilise these by-products for steam generation. Local smallholders will benefit from the project through the sale of waste-wood to the paper factory.

Result-Based Financing (RBF)

Based on milestones and results to be achieved by the project, disbursement of the EEP Mekong funds is given by installments.

The first instalment is disbursed after signature of purchase contract for supply and installation of the boiler system between Viet Tri Paper Factory and the project developer. The second instalment is provided after installation and successful commissioning of the boiler system including establishment of the waste-wood supply chain. The third disbursement will be made after development of three business plans for up scaling of the project, i.e. replication of the biomass based boiler system at other industries. The final disbursement is made after completion of the dissemination workshop and financial audit report at the end of the project.

Social and Environmental Impacts

The introduced biomass based boiler system will

reduce 25,810 tons of CO₂ emission until the end of its lifespan (12 years) by replacing fossil fuel with biomass (waste-wood by-products). The project will generate incomes for the local population from selling waste-wood to the pulp & paper factory.

Sustainability and Scaling Up

The project developer will formulate business plans for replication of the biomass based boiler system in other pulp & paper mills and industries in Vietnam.

In cooperation with the Vietnam Pulp and Paper Association (VPPA) the project developer will organize workshops in Vietnam to disseminate the impacts and benefits achieved by the project. Similar dissemination activities will be carried out for other industrial sectors such as tobacco, foodstuff, and textile.

Dissemination of Impact Achieved

The project will be a Vietnamese showcase to promote application of biomass for industrial steam generation. The project will demonstrate the effectiveness and techno-economic viability of biomass application for industrial steam generation.

The project will disseminate an innovative technology as well as a business model for further replication of 'bio-mass steam' in different industrial sectors in Vietnam.

For more information, please contact:

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