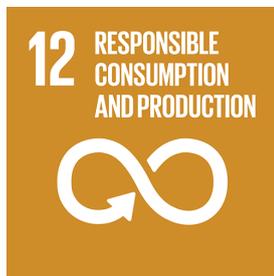
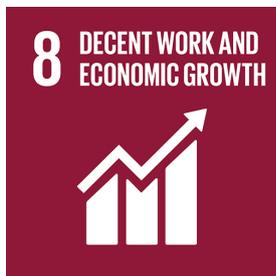


# Wood-Based Biomass Instead of Gas Boiler in Brazil



Melhoramentos Papeis' biomass boiler at their pulp and paper mill in Caieiras, Sao Paulo, Brazil.

**This project decreases CO<sub>2</sub> emissions by installing a biomass boiler instead of a gas boiler to meet the heat demands of a new paper machine at a pulp and paper mill in Caieiras, Sao Paulo, Brazil. With the project, the use of ash as fertilizer in agriculture and forestry as well as the implementation of alternative ways to give value to biomass residues such as sludge from the pulp and paper production are being promoted, and local jobs are being created.**



**730**

**GWh electricity produced**

**46**

**jobs created**

**80**

**million m<sup>3</sup> natural gas avoided**

The mill produces around 100,000 tonnes of tissue paper articles such as hygienic paper, paper handkerchiefs, paper towels and napkins per year. Heat is a vital part of every pulp and paper production process and therefore a constant heat supply is essential for the mill to remain competitive.

The biomass boiler will be fed with renewable biomass and biomass

## Project type:

Biomass

## Project location:

Caieiras, Brazil

## Project status:

In operation, credits available

## Annual CO<sub>2</sub> reduction:

48,544 t

## Situation without project

Natural gas plants that emit CO<sub>2</sub> emissions

## Project standard

**Gold Standard<sup>®</sup>**

VER

## Impressions



Stockpiled sawdust (in the back) and wood logs ready to be chipped and mixed with the biomass residues in order to be fed into the biomass boiler.



Stockpiled biomass residues from forestry activities (background) and sludge from the mill's processes ready to be mixed and then sent to the biomass boiler.

residues from external agriculture, forestry and related industries, and with biomass residues from the mill's own production process, some which are otherwise stockpiled.

The project helps with the promotion and use of innovative clean and efficient technologies as it is a show case for the rest of Brazil. It generates local income and promotion of employment opportunities in local communities due to the construction and maintenance of the plant; the collection, transport and sale of biomass residues; and services associated with the management of biomass residues. Moreover it helps to valorize regional biomass excess thereby helping avoid emissions from uncontrolled burning of these residues and also reducing the risk of forest fires.

The additional money from carbon finance is required as the project can be considered as first-of-its-kind since it is the first boiler that is able to burn sludge from the pulp and paper industry in Brazil. This has significant impacts on the design of the boiler, the required maintenance, the emission treatment system (enhanced) and the handling and mixing of the biomass fuel mix and it means that it has a higher probability of malfunctioning in comparison with a standard biomass boiler. Carbon finance will also be used for the building of a renewable energies educational center at the mill available to employees and community members.



Biomass residues from forestry activities mixed with sludge from the mill's own production process.



Entry point of mixed biomass into the biomass boiler.

## This project contributes to 6 SDGs:



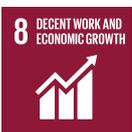
R\$ 172,329 Carbon Income for social development



102 people trained



730 GWh thermal electricity produced



46 jobs generated



80,494.044 m<sup>3</sup> of natural gas avoided



CO<sub>2</sub> reduction



Investment in the project