

CDM Yicheng Biomass Cogeneration Project in Hubei Province, China

Project type:

Biomass cogeneration

Estimated annual emissions reductions: 43,033 tCO2e

Technology

Biomass direct burning technology

Main impact:

This project reduces CO2 and CH4 emissions, improves air quality in the region, and creates meaningful employment opportunities.



Location Yicheng City, Hubei Province, China









The Project

Much of the power supplied to the Central China Power Grid comes from burning coal, which emits high volumes of CO2 and other greenhouse gases (GHG). At the same time, a huge amount of biomass goes to waste in places like Hubei Province, decaying under uncontrolled conditions and leading to even more emissions. Using biomass sources that would otherwise go to waste to generate power displaces the use of fossil fuels and reduces emissions significantly. This project, situated in Yicheng City and the surrounding province collects, transports, and stores biomass, as well as uses it as a much cleaner power source. The project collects and consumes approximately 231,303 tons of surplus biomass every year. Excess biomass, in this case, comprises rice straw, rape stalk, and cotton stalk from local towns around Yicheng City. Building and operating the project harnesses biomass to provide clean energy to the region. As biomass is quite abundant in the area, the project is able to generate ample quantities of power, which comes with a variety of social and economic benefits. Using two biomass boilers, two 12 MW steam turbines, and two generators, the project supplies the grid with 141,960 MWh of electricity.

"Using biomass resources safeguards the environment from pollutants and improves the region's access to clean, safe power."





The Impact

By using biomass installations as opposed to more polluting sources, the project helps to reduce the current dominance of fossil fuel-fired power plants in China. This reduces CO2 and GHG emissions, including SO2 and NOx, while also lowering CH4 emissions via the more sustainable use of biomass. Using biomass resources more effectively safeguards the surrounding environment from pollutants that lower air quality. It also augments the region's access to safe power, which will accelerate local economic development. As well, many people from local communities have been brought on to construct and operate the biomass installations. Job creation linked to the project boosts local economies and helps to accelerate renewable development in the region. Additionally, the effective use of biomass resources supports recycling initiatives. Overall, the success of the project signals to developers and investors the viability of biomass and renewable energy generation technologies and helps local communities in the immediate and long term.





"This project promotes business development and creates employment opportunities."



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