

Carbon Offset Project Profile

INDIAN BIOMASS: BAGASSE BASED CO-GENERATION POWER PROJECT

Environmental problems in India are growing rapidly. The increasing economic development and a rapidly growing population that has taken the country from 300 million people in 1947 to more than one billion people today is putting a strain on the environment, infrastructure, and the country's natural resources.

India's air pollution is exacerbated by its heavy reliance on coal for power generation. Coal supplies more than half of the country's energy needs and is used for nearly three-quarters of electricity generation. While India is fortunate to have abundant reserves of coal to power economic development, the burning of this resource, especially given the high ash content of India's coal, has come at a cost in terms of public health risk and environmental degradation.

Biomass projects are implemented in small or large industrial plants. Their aim is to utilize agricultural waste or other non-renewable biomass residues as fuel to generate power and to lower the plants' dependence on the local grid for electricity. To meet the rising energy demands in production, Gangakhed Sugar & Energy Private Ltd (GSEPL) have developed an Integrated Cane Processing Plant (ICPP) in order to tap the sugarcane potential and also aid in the sustainable development of the region. As a part of the project they have installed a 30 MW Bagasse Based Cogeneration Plant which utilises leftover sugarcane pulp to generate energy.



Key Facts:

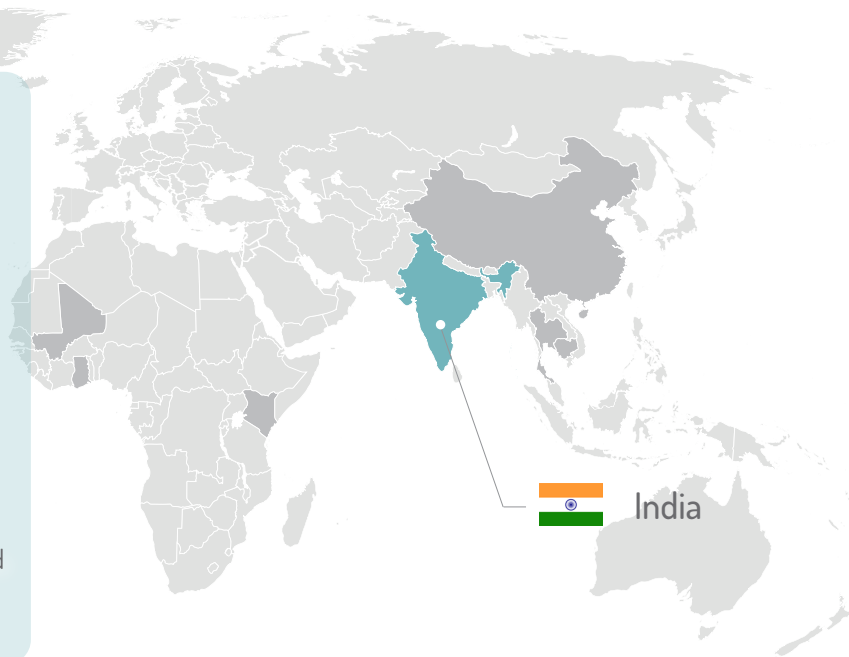
Location: Maharashtra, India

Project type: Biomass

Project standard:
Verified Carbon Standard

Estimated Annual Emission reductions:
64,480 tCO₂e

Validator:
EPIC Sustainability Services Private Limited





TECHNOLOGY BRIEF – HOW IT WORKS

Biomass refers to biological material derived from organic matter such as wood and organic wastes. Biomass may be grown especially for the purpose of generating heat or power, but in the case of this project, the biomass is from locally available agricultural waste (i.e. sugar cane pulp). The use of agricultural residues is particularly sensible because clean energy is sourced from materials that would otherwise have been left to decay, generating methane. Also, before the implementation of the project, the electricity needs of such plants were met by power from a coal dominated grid.

SUSTAINABILITY BENEFITS

These projects contribute further to local sustainable development, beyond the reduction of greenhouse gas emissions::

- Biomass power generation plants stimulate the local economy. Additional income is being generated for companies in the biomass supply chain, e.g. in the biomass transport, processing and storage sector.
- Biomass is a particularly labour intensive form of energy. Some power plants create employment positions during construction and operation period. The project owners provide professional training to workers, which improves the skills of the local employees. In addition, local residents have been employed as local biomass collection managers.
- In the absence of such projects, agricultural waste would have been burnt in the field or left to decay. The decay of biomass can emit substantial amounts of methane into the atmosphere. This additional benefit has not been considered in the emission reduction calculations though.
- Biomass power generation plants improve electricity supply and electricity access in the area.

