

Case Study: Rice Husk Cogeneration in India

This project helps to reduce reliance on fossil fuels at textile mills in India by using biomass waste to generate thermal power and electricity. At the same time, the project provides additional income for local farmers.

Textile mills in India require relatively large amounts of energy, both to produce process steam and to generate electricity to run plant equipment. In most cases, plant operators burn polluting coal or heavy fuel oil to produce heat for steam, and import electricity from India's fossil fuel-dominated transmission grid. As a result, the textile industry, while an important driver of economic development and employment across India, also contributes to India's rapidly growing carbon footprint.

This project was the first of its kind in Punjab state to use rice husks to provide thermal energy and electricity. Rice husks are produced in large quantities by local farmers, and are traditionally burned in the field. This project makes use of a locally occurring resource to fire the textile mill's boiler and produce process steam. By installing a cogeneration system, this steam also runs a turbine that generates electricity. As a result, the textile mill has been able to eliminate the use of fossil fuels and imported electricity to power its operations, reducing greenhouse gas emissions by thousands of tonnes of CO₂ per year.



Great care was taken in the project's design phase to ensure that the initiative provided broader environmental benefits beyond reducing carbon. The textile plant's environmental management system is ISO 14001 certified, and the plant meets or exceeds local environmental requirements. Precipitators have been installed to capture dust, smokestack collectors for fly ash, silencers to reduce noise pollution, and a cooling water system has been employed to minimize thermal water pollution.

Local elected representatives were included in the stakeholder consultation process and were in favour of the project because of the added income to local farmers from the sale of their rice husks.

The project owners supply clothing to the local market, as well as major international brands including The Gap, Tommy Hilfiger, and Marks & Spencer.

Carbon Clear Limited
180-186 King's Cross Road, London WC1X 9DE United Kingdom
Tel: +44 (0)845 838 7564 Fax: +44 (0)208 181 7872

www.carbon-clear.com