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Project 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 CO_2 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 to major international brands including The Gap, Tommy Hilfiger, and Marks & Spencer.

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Project Summary: Rice Husk Cogeneration in India

Project Name	**Rice Husk Cogeneration in India**
Description of project	Use of rice husks to generate power and steam at a textile plant, replacing grid electricity and petroleum-based fuel oil.
Project location	The project is located in Jalalpur village (near Lalru) in Dappar PO, Shibzada Ajit Singh Nagar (Mohali) district, Punjab, India.
Direct provider of carbon finance	Carbon Clear Limited, 180-186 King's Cross Road, London WC1X 9DE, United Kingdom.
Project proponent	Nahar Industrial Enterprises Limited
Credit type	Pre-CDM VERs. Meets Voluntary Carbon Standard v1.0 requirements.
Total emission reductions	90,000 tCO2e VERs
Additionality Test	Established using the CDM additionality tool. Project was the first of its kind in the region's textile sector. The use of an unfamiliar technology and financial costs of business interruption meant that management would not have gone ahead with the project without the expectation of carbon finance.
Social and environmental considerations	The textile plant's environmental management system is ISO 14001 certified. The plant meets or exceeds local environmental requirements, with precipitators to capture dust, collectors for fly ash, silencers to reduce noise pollution, and a cooling water system 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.
Current status of project	Underway
Commencement of project operation	2002