



CDM Project in Baluchistan (Pakistan)

Waste Heat Recovery and Power Generation at Attock Cement Plant

Background

The economic stability and social prosperity of developing countries like Pakistan depends upon the sustainable growth of the energy sector. However, Pakistan has been facing an unprecedented energy crisis in recent years. Its current energy demand exceeds its indigenous supplies by far, leading to a strong dependency on imported oil which places a substantial burden on the economic and climatic balance of the country. Therefore, Pakistan is seeking to promote international joint ventures for the development of energy efficiency and renewable energy CDM projects that help to secure energy supply and reduce greenhouse gas (GHG) emissions.

Project Description

UPM's Waste Heat Recovery CDM Project at the Attock Cement Pakistan Ltd. (ACPL) cement plant is one of the first to install innovative waste heat recovery and electricity generation technology in Pakistan.

The Attock Cement plant has a rated daily clinker output of 5,700 tons of clinker produced in two production lines. Line 1 has a capacity of 2,400 tons per day and Line 2 has a production capacity of 3,300 tons per day.

Instead of being vented into the atmosphere, the waste heat of these two production lines will be recovered and utilized to drive a 12 MW power plant that generates electricity for captive use of the cement plant. The average power available for consumption will be 8.1 MW. Based on the rated capacity of the two production lines (7,200 operation hours per year), the electricity consumption of the cement plant will be reduced by approximately 58.3 GWh.

The power produced by the project activity will therefore replace electricity provided by the national electricity grid owned by the Karachi Electric Supply Company (KESC). As the electricity from the KESC grid is mainly generated using fossil fuels, the replacement of 58.3 GWh originating from the project activity will result in an annual overall GHG emission reduction of approximately 35,000 t CO₂e.



The Attock cement plant is one of the largest in Pakistan.

Key Facts

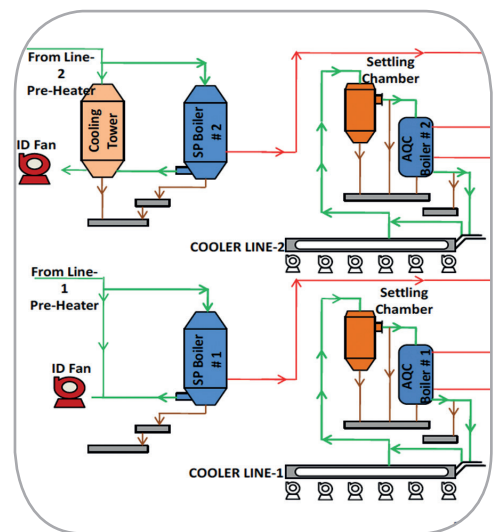
Project Type	Waste Heat Recovery (WHR)
Project Owner	Attock Cement Pakistan Ltd.
Project Developer	UPM Umwelt-Projekt-Management GmbH
Location	Pakistan, Baluchistan Province, near city of Hub Chowki, Lasbela District
Methodology	Waste energy recovery (gas/heat/pressure) projects - AMS-III.Q
Carbon Credit Standard	CDM Certified Emission Reductions (CDM CERs), CDM Ref. 6730
Validator (DOE)	Bureau Veritas Certification Holding SAS
Development Status	registered
Registration Date	26/11/2012
Date of First Credit Issuance	end of 2014 (expected)
Annual Credit Volume	approximately 35,000 CERs
Crediting Period	10 years



Sustainability Benefits

The Attock Waste Heat Recovery project activity will contribute to the local sustainable development by the following effects:

- Economic Benefits:** Pakistan is undergoing an acute energy crisis. Under this circumstance, the projected power plant will at least cut short its 8.1 MW demand of power from the national grid. This should contribute to a reduction in the number of black-outs and brown-outs experienced by other grid users, thus improving their economic performance.
- Social Benefits:** During its construction period of about 15 months, the power plant will provide jobs to about 500 people, though only temporarily. However after construction, when the plant will be fully operational, the project will foresee the permanent employment of 40 to 45 staff members.
- Environmental Benefits:** By achieving a significant reduction of greenhouse gas emissions and reducing the so-called heat-isle effect near the cement plant, the project contributes to more stabilized and better local climate and environment.
- Technological Benefits:** By making use of proven Chinese technology, the project sets the basis for transnational co-operation in the field of technology transfer and for the promotion of technological development at affordable costs.



Flow diagram detail of Attock's Waste Heat Recovery System.

Project Location

The project is located at the Attock Cement plant 16 km north-west of the city centre of Hub Chowki in the Baluchistan Province of Pakistan.

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Location of CDM Project „Attock Waste Heat Recovery“