

Brief

Name of Project: "Waste Heat Recovery based 15MW Power Generation project Bestway Cement Limited, Chakwal, Pakistan." Version 01.

Objectives:

The main objective of the project activity is installation of 15 MW waste heat recovery power generation system to make use of waste heat from kiln preheaters and kiln clinker coolers. The generated electricity will fully displace the HFO based electricity generation and partially displace the grid electricity imports and contributes towards sustainable development.

- To help in achieving the objectives of combating climate change under UNFCCC by reducing significant amount of greenhouse gas (carbon dioxide) emissions and contributes to the regional and national sustainable development.

Date of Submission: April, 28th 2009

Submitted by: Bestway Cement Limited.

Project Sponsors: Bestway Cement Limited.

Project Development Consultants: Mitsubishi UFJ Securities Co Limited.

Detail of Total Project Cost:

S.R	Description	Amount (US \$)
1.	Cost of Land	48,780
2.	Cost of Equipment	23,595,895
3.	Other	1,135,307
4.	Contingencies	2,477,998
5.	IDC	2,346,912
	Total capital Cost (US \$ Million)	29.6

Estimated Emission Reduction:

<u>Source</u>	<u>Tons of CO₂eq/ yr</u>
Bestway Cement Limited.	35,668
Total annual reduction:	35,668

Operational Lifetime: 20 years.

Starting/Commissioning Date: 01/07/2009

Crediting/Validity Period:

- Kyoto first commitment period: 2008-12
- Estimated validity period (Including Post Kyoto period): 2008-28

Economic Viability of the Project:

In CDM there are two possibilities to prove additionality i.e. Investment and barrier analysis. In the project additionality is not based on the financial analysis but rather on the barrier analysis.

Benefits from the Project:

Activity	Revenue (US\$) million/annum
Sale of Carbon Credits (@ US\$ 20/tonnes of CO _{2eq}):	0.72
Total estimated annual revenue:	0.72

Other Qualitative Benefits:

- The Project activity is the first of its kind in Pakistan. By adopting advanced technology from developed countries, the project activity will promote important transfer of technical know how to Pakistan, and can act as a pioneer in promoting the spread of this technology to other cement plants.
- The operation and maintenance of the facilities constructed under the Project activity will create skilled employment opportunities for local people.
- The electricity produced by the plant will displace grid electricity, which is in part produced by fossil-fuel burning power plants. This can help Pakistan to reduce its overall fossil fuel consumption, thus improving energy security and improving the country's balance of payments.
- The project activity reduces the local air pollutants (such as nitrogen, sulphur oxides and volatile organic compounds).
- The electricity produced by the plant will displace grid electricity, which is in part produced by fossil-fuel burning power plants. This can help Pakistan to reduce its overall fossil fuel consumption, thus improving energy security and improving the country's balance of payments.