

BRIEF

Name of Project: "Maple Leaf Generator Change Project, Maple Leaf Cement Factory Ltd, Iskanderabad, Daud Khel, Mianwali, Pakistan." Version 1.

Objectives:

- The main objective of the project activity is to switching power generators from heavy fuel oil to natural gas 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.

Date of Submission: 5th January, 2008.

Submitted by: Factor Consulting and Management AG (Pvt. Entity) Switzerland

Project Sponsors: Maple Leaf Cement Ltd, Pakistan

Project Development Consultants: Factor Consulting and Management AG (Pvt. Entity) Switzerland.

Detail of Total Project Cost:

Items	Amount in PKR
A. Civil works building	
Civil works building PGP expansion	38,064,621.00
Civil works – RCC tunnel	21,811,944.00
Civil works- gas pipeline	9,637,754.49
B. Civil work plant and machinery	
Consultancy for grid station	1,048,857.00
Piling works grid station	206,530.00
C. Mechanical works	
Mechanical work-PGP expansion	34,023,540.50
Geotechnical investigation	340,980.00
D. Electrical works	
Electrical works-PGP expansion	89,101,983.00
E. Letter of credit- PGP expansion	
L/C 05060750 WHB 229 IMP/PG/8092	520,441,927.99
L/C 1398/01/58/366/0142	1,699,552.00
	716,377,689.98
F. Unallocated Expenditure-PGP expansion	
Traveling expenses	290,659.00
Insurance expenses	361,307.00
Legal and professional charges	30,000.00
Financial expenses	38,233,851.00
Bank charges	29,386.05
Miscellaneous expenses	796,456.00
	39,741,659.05
Total Project Cost	756,119,349.03
Total Project Cost in US\$ (million)	12.39

Estimated Emission Reduction:

<u>Source</u>	<u>Tons of CO₂eq/ yr</u>
Maple Leaf Cement Factory.	22,622
Total annual reduction:	22,622

Operational Lifetime: 20 years.

Starting/Commissioning date: Feb 2008

Crediting/Validity Period:

- Kyoto first commitment period: 2008-12
- Estimated validity period (Including Post Kyoto period): 2008-27

Economic Viability of the Project:

Internal Rate of Return (IRR):
 Without CDM benefits: **2.11%**
 With CDM benefits: **9.46%**

Benefits from the Project:

Activity	Revenue (US\$) Million
Sale of Carbon Credits (@ US\$ 12/tonnes of CO ₂ eq):	0.264
Total estimated annual revenue:	0.264

Other Qualitative Benefits:

- The project reduces local air pollutants and environmental impacts due to increased use of natural gas for power generation. This would reduce the cost for health care and climate change adaptation and benefits the local community due to improved health.
- Project activities will enhance local employment opportunities that will be created particularly for the time span of construction and operation of the plant by reducing poverty in an economically depressed region.
- Improved the skill set for local inhabitants for training and capacity building in order to grow their technical skills.
- The project contributes to a diversified energy supply in the host country.
- It encourages the use of Clean Development Mechanism (CDM) to raise finance for energy projects for power generation through fuel switch project.
- The project builds up a knowledge base about the operation of the natural gas power generation and builds up a skill set for such kind of operation.
- The Project activities will bring new equipments/machinery i.e. Gas generators, which will be imported, thus ensuring technology transfer to the country for enhancement of energy efficiency development projects.