

Case Summary**Suez Cement Group
Helwan Cement Company****Company Information:**

Contact Person:	Eng/ Mohamed Ayman
Position:	Corporate Environment Manager
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Sector:	Private
Project Title:	Fuel Switch of Pre-calciners and Kilns of Plant 2 (Dry Process) from Mazout to Natural Gas.
Type of Project:	Air pollution reduction

1. Basic Information:**1.1 Main Product:**

Product	Ton/year
Clinker (Intermediate)	3328000
Cement	4240531

1.2 Raw Material:

Raw Materials:	
Limestone	4893180 t/y
Clay	1606320 t/y
Pyrite	30136 t/y
Gypsum	396378 t/y
Energy:	
Mazot	180456 t/y
Natural Gas	208389000 t/y
Electricity:	
From outside grid	504961155 kwh
Water:	
Municipal	2520000 m3/year

1.3 Project Location:

Kafr El-Elwa near Nile river – Helwan Governorate, P.O.Box 16, Cairo, EGYPT

1.4 **Project Objectives:**

- Reduction of the gas emissions of (SO_x, CO₂, NO_x, CO) to comply with the Environmental law 4/1994 and other environmental regulation.
- Emission load before and after implementation the project will be:

Parameters	Before the project (t/y)	After the project (t/y)	Reduction %
Sulphur Dioxide (SO ₂)	948.1	200	78.9
Carbon Monoxide (CO)	1862.8	600	67.7
Smoke	2675.6	550	79.4

- The company will still use Mazout (10% of the needed heat content) in the kilns after major maintenance or after emergency shut downs, as result some of CO and SO₂ will be emitted.

1.5 **Project Description:**

The sub-project consists of the following (switching the fuel use of both the pre-calciner and kiln of line 1 & 2 of plant 2 from Mazout into Natural Gas (NG)):

- Upgrading the existing external & internal network by replacing the piping by larger Diameter ones to coop with the new NG flow rate.
- Replacing the gas reduction station with new one to handle the increase consumes of NG from 50000 m³/hr to 90000 m³/hr
- The burners installed are a duel system to operate with NG and Mazout in case of gas Shortage.

Note:

Installing and operating burners for the pre-calciners of line 1 & 2 (will not be financed by EPAP II).

1.6 **Project Components:**

No	Item name	Cost, as read out
1	Internal N.G Pipeline	15138200 L.E
2	External N.G Pipeline	655582 L.E

1.7 **Actual Project Cost:**

Total project cost US\$ 3.8 M with US\$ 2.5 M Financed from EPAPII

No	Item name	Cost, as read out
1	Internal N.G Pipeline	15138200 L.E
2	External N.G Pipeline	655582 L.E
3	Deposit of consumption for 2 menthes (Unrefundable)	50000000 L.E

4	Gas Burner	686000 €equivalent to 5,350,000 L.E
Total		71,143,782 L.E

1.8 **EPAP Technical Support:**

EPAP II TA prepared:

- Environmental audit.
- Compliance Action Plane (CAP)

EPAP II PMU prepared :

- Technical agreement

2. **Eligibility Criteria**

2.1 **Environmental:**

- By switching from mazout to natural gas it is expected that it will become compliant with Law 4 for the Environment with an estimated reduction in pollution loads as follows:
 - 78.9% reduction of SO2
 - 67.7% reduction of CO
 - 79.4% reduction of smoke

2.2 **Financial:**

- The project costs less than US\$ 8 million
- The payback period of the project is 5 months

3. **Current status of project procedures:**

3.1 **Steering committee approval:** **Approved**

3.2 **Co-financers approval:** **Previous no-objection for all Fuel switching projects**

3.3 **Technical Procedures:**

Technical Document	submitted	Approved	Date
Environmental Assessment	Y	Y	July 2009
Compliance Action Plan (CAP)	Y	Y	July 2009
Environmental Impact Assessment (EIA)	Y	Y	May 2009
Technical Agreement	Y	Y	Jan 2009

3.4 **Implementation Procedures:**

3.4.1 **Procurement procedures:**

- According to previous no-objection for all fuel switching project, direct contract for internal & external piping

3.4.2 **Status of Implementation:**

Technical Document	submitted	Date	
		Achieved	Planned
Credit worthiness certificate	Y	Aug. 2006	
Sub-loan Agreement	Y	17-3-2010	Oct 2009
Awarding & Contracting			
Direct contract (Internal Piping)	Y	16/4/2007	
Direct contract (External Piping)	Y	24/3/2008	
Installation and Commissioning - Internal piping - External piping	Y	Installed September 2009	
Startup	Y	Dec 2009	Oct 2009
Monitoring: Q1:	Y	Mar 2010	Jan. 2010
Q2:	Y	June 2010	
Q3:	Y	August 2010	
Q4:	Y	October 2010	