

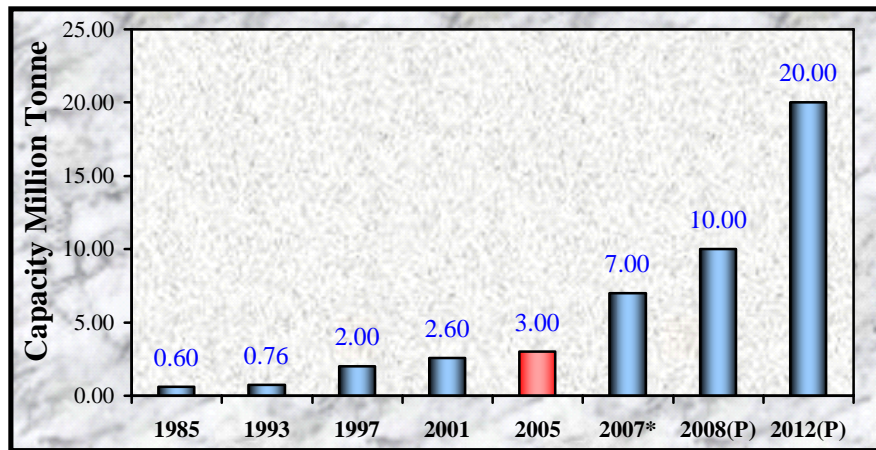
SHREE CEMENT LTD UNIT II

1) **UNIT PROFILE:** Shree Cement is energy conscious and environment friendly sustainable business organization. Company is accredited with ISO 9001-2000, Quality Management System; ISO 14001, Environment Management System, OHSAS 18001 Occupational Health and Safety Management System certifications and **SA 8000, Social Accountability** has been awarded.



Under benchmarking studies, Shree Cement is consistently highest rating company by Whitehopleman, UK. Taking a proactive stance towards sustainability,

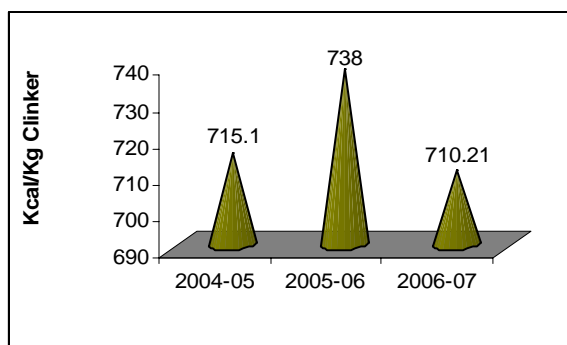
Unit II was commissioned in 1997 with installed capacity of 1.24 million tons/annum. **It has track record of 100% capacity utilization since inception.** In 2006-07, it registered production of 20.23 lacs tons of 126% capacity utilization against industry average 95%. Shree Cement Ltd is marking ahead with vision of 20 million ton by 2012.



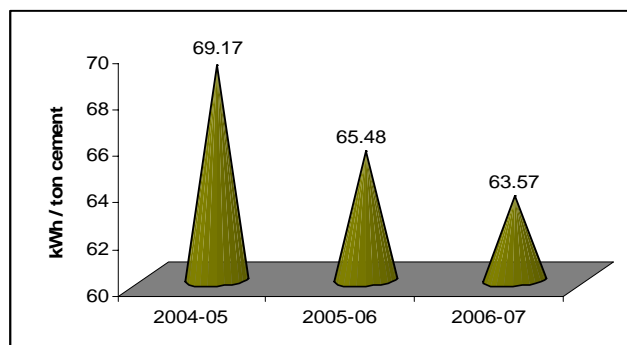
Shree became the first Indian Cement Company to join Cement Sustainability Initiative (CSI), World Business Council for Sustainable development (WBCSD) and published its Corporate Sustainability Report (CSR). Apart from this, Shree Cement has developed three successful CDM under Kyoto mechanism of UNFCCC. **Shree cement has become the first company to have CER issued for 'Optimal utilization of Clinker' project.**

2) **Energy Consumption:** The specific electrical energy consumption of Unit II has shown continuous reduction over the years. This became possible with sustained efforts by

optimization, debottlenecking and modernization measures adopted at plant. Company played key role in resource conservation and cost reduction. With sheer dedication of resource conservation through waste utilization and process modifications, Shree has greatly reduced both coal and power consumption.



Specific Power Consumption



Specific thermal energy Consumption

Shree R&D centre efforts and manpower training have helped in achieving new heights in reducing energy consumption and use of alternate fuel which is considered to be a difficult task for cement industry. These efforts have resulted in reduced power consumption.. Efforts have been recognized by various National & International agencies.

DESCRIPTION	UNIT	2004-05	2005-06	2006-07
Electrical Energy	kWh/Ton Cement	69.17	65.48	63.57
Thermal Energy	Kcal/kg Clinker	715.10	738	710.21
Total Manufacturing Cost	Rs Lakh	19293.83	19800	24619.9
Energy as %age of Total Cost of Production	%	30.32	25.30	22.67

3) ENERGY CONSERVATION, COMMITMENT, POLICY AND ORGANISATION SETUP

A clear-cut energy policy has also been formulated by the company in order to give more inputs on energy conservation. The statement of the policy is written on hard boards and displayed at various locations of the company Shree firmly believes that its employees are its most important, vital & valuable asset.



ENERGY POLICY

To reduce to the maximum extent possible the consumption of energy without impairing productivity which should help in:

- *Increase in the profitability of the company*
- *Conservation of Energy*
- *Reduction in Environmental pollution at energy producing areas*

Since Energy is Blood of Industry, It is the responsibility of all of us to utilize energy effectively and efficiently

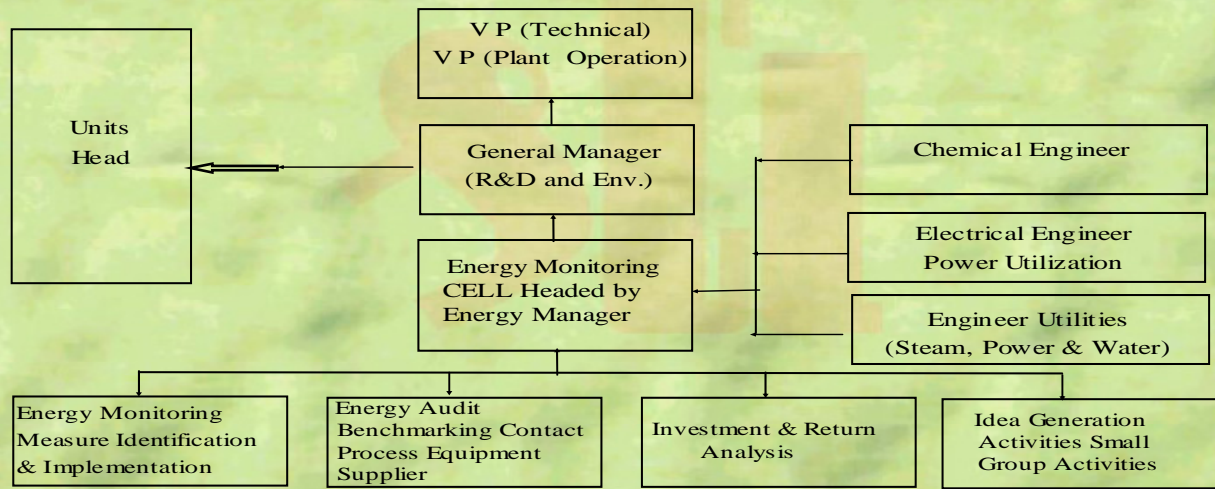
ENERGY SAVED IS ENERGY PRODUCED

The potential of Human Capital is optimally utilized by providing cohesive & creative work environment. Due attention is paid for development of this resource & sharpening of the skill through continuous Training & Development for developing competencies as well as providing avenues for self & organizational development. Shree provides ample opportunity of growth both vertically & horizontally to self-drivers & gives freedom for taking initiatives for modification in plant, machinery, equipments & work procedures. Shree Cement Limited considers Energy Saving as a multi disciplinary approach. Even the smallest cost reduction is going to add directly to its profits in bottom line. For this purpose Shree Cement Limited has an Energy Conservation (EC) cell. The organization set-up is given here:

Energy management practices in SCL



A. Energy Monitoring and Reporting System



An Energy & Environment Conscious Sustainable Organisation

28

3) ENERGY CONSERVATION ACHIEVEMENTS

During 2004-2007 Shree has implemented several number energy saving project at unit-II, which resulted reduction of specific energy consumption from 69.17kWh/ton cement to 63.57 kWh/ ton cement. The increasing consciousness for energy conservation and steps taken towards effective monitoring, better operational control and process optimization in addition in addition to various modifications/ retrofitting of energy efficient equipments have contributed greatly in energy conservation. The abstract of various project executed during the reference year are given below:

1. Energy saving in various Dust collectors by energy efficiency fan

Energy consumption is reduced from 146.4 kW/hr to 92.7 kW/hr by replacing 16 nos. low efficient fans with high efficient fans in dust collectors.

Total investment: 22.17 Lakh /annum
Total saving: 19.13 Lakh/annum



2. **Power saving in GCT water pump by installing high efficiency motor and pump**



After replacement with energy efficient pump, motor load also reduced from 60 kW/hr to 40 kW/hr and annual Power saving in GCT water pump of Unit-II is achieved to 1.44 Lac unit.

Previous loading: 60 kw/hr
Present loading: 40KW/hr

Saving: 6.48 Lac
Investment: 3 Lac

3. **Energy saving by installation of energy saving controller**



A) Power saving in RBL-12 by using 'NN-planner'
Energy saving = 3.51 Lac annum.

Investment = 2.60 Lac

B) Energy saver controller (Power boss) at mines crusher seal air fan and RBL-3

Energy saving = 1.01 Lac

Investment = 1.79 Lac



4. Installation of silo at power plant for increasing blended cement



Construction of another fly ash silo has helped to increase the production of blended cement (PPC) .

Equivalent energy saving 30.33 lac unit.

Total saving = 136.47 Lac

Investment = 448 Lac

5) Energy Conservation Plans and Targets:-The company is consistently engaged in marching ahead for further reduction of electrical as well as thermal energy consumption in plant because we believe the key of the success in cement business is minimum input energy (electrical, thermal and human) with maximization production of good quality. With quest for excellence the company ahead to achieve lower energy consumption in the plant. The energy conservation plans and targets for achieving lower energy consumption are:

Energy Consumption Plans:

Energy Conservation Measures (Planned)	Anticipated savings in		Approx. investmen t (Rs. Lakhs)	Project commencement & completion year
	Energy Value (specify units)	Rs. Lakhs		
Installation of high efficiency fan in raw mill ESP Fan UII	11.56	52	115.27	2007-08
Installation of high efficiency fan in Raw mill UII	9.4	42.41	58.07	2007-08
Installation of high efficiency PH fan at UII	3.4	15.7	28.47	2007-08
Installation of high efficiency dynamic separator (LVT) in coal mill II		Being estimated	62.90	2007-08
Incorporation of pond ash dryer at cooler II		Being estimated	500	2007-08
Transfer of coarse material from bucket elevator no.3 of Cement mill(CM)-I to CM –II outlet elevator	Increases out put of Cement mill II	-	20	2007-08
Use of 100% SEPAX reject material of CM-I to inlet of CM-II	Increases out put of Cement mill II	-	16	2007-08

Energy Conservation Targets:

Planned Specific Energy Consumption Target for the year 2006-07 & 2007-08				
Year	Electrical* kWh/ton of Cement	Thermal* Kcal/Kg of Clinker	Reduction over the year 2006-07	
			Electrical %	Thermal %
2006-07 (Base year)	63.57	710.21	-	-
2007-08	63.4	705	0.26	0.73
2008-2009	63.3	703	0.15	0.28

Energy audit will be conducted in 2008 under the project diagnostics by Japan under the umbrella of APP-6(Asia Pacific Partnership). APP-6 is a formation of six governments USA, Australia, Japan, China, Korea and India. The partnership is important initiatives that engage the key greenhouse gas emitting economics in the Asia Pacific region on practical clean development and climate action.

ENVIRONMENT AND SAFETY

Environment:

The company's policies (energy policy, water policy, environment policy, human resource policy, etc.) and the hunger for sustainable development demonstrate the inclination of management towards environment. Development of an Integrated Management System (ISO 14001, OHSAS 18001 and ISO 9001), bold decisions of management on its 6R philosophy which includes:

Reduce	-	Consumption
Raise	-	Production
Release	-	Less GHGs
Replace	-	Conventional fuels & raw material
Research & Records	-	Proper documentation
Restore	-	To nature what you take

Shree Cement is inculcating the concept of Sustainable Development which has become a driving force in obtaining objectives and making it the first Indian company to join Cement Sustainability Initiative of World Business Council for Sustainable Development. The commitment towards low carbon economy has resulted the company in gaining carbon credits for Optimal Utilisation of Clinker first time in the world. In view of energy and environment friendly polices of Shree Cement Ltd., has been continuously publishing Corporate Sustainability Report as per GRI guidelines and its cost of production is one of the lowest in India. Shree has become a member of Asia Pacific Partnership (APP). The Asia-Pacific Partnership on Clean Development and Climate is an innovative new effort to accelerate the development and deployment of clean energy technologies.

Safety:

Safety of employee is never compromised at Shree: Shree Cement is committed for providing the safe working environment of its employees and to work within rules and procedures that facilitate their protection. There is a complete system of tracking near misses, accidents and causes of such accidents. Shree Cement has separate health and safety committee comprising of workers and management representatives for cement plant, mines and power plant. The key responsibility of safety committee is to create safety awareness among all workers suggesting ways and means to avoid reoccurrence of accidents and discussion of recommendations made in safety audit reports and ways to implement them. Various hazardous areas like coal yard, packing bag godown, oil storage areas and gas storage rooms are classified as 'no match box areas'. All electrical fitting and installations like pump and motors are of flame proof type in hazardous areas. Equipments, pipelines and tanks are properly grounded.

Shree Cement is recipient of following Awards in the area of Environment and Safety:



- Medallian Mines Award for best safety practices for last three years in continuity.
- Safety Award for longest accident free period.
- Environment Award 2003-2004 by the Energy and Resource Institute.
- 6th Golden Peacock Environment management Award
- 8th Golden Peacock Environment management Award
- Green Tech Award 2007 for excellence in Environment Management
- 9th Golden Peacock Award for Environment management Excellence -2007