



Unit Profile

Background: KIRLOSKAR BROTHERS LIMITED (**KBL**) is the largest Pump Manufacturer and turn key contractor in India with a consolidated turnover of 2100 Crore and a CAGR of 35% in 3 years . It is rated among the top 15 global pump manufacturers .

MANUFACTURING PLANT AT KIRLOSKARVADI



Infrastructure: Product Design , Research & Development , Foundries ,Manufacturing , Assemblies and Performance Testing under one roof . We have largest Pump Performance testing Laboratory in Asia.

- **Comprehensive Products Range**
- **Research and Engineering**
- **System Engineering**
- **Procurement**
- **Manufacturing – Pattern Shop, Foundry, Machining**
- **Testing**
- **Quality Assurance**
- **Project management**
- **Erection and Commissioning**
- **Operation and Maintenance**



Product Support

Products :

We manufacture various types of pumps like , Split Case , Multistage ,End suction , Swage handling , solid handling , Vertical Turbine and Concrete Volute.

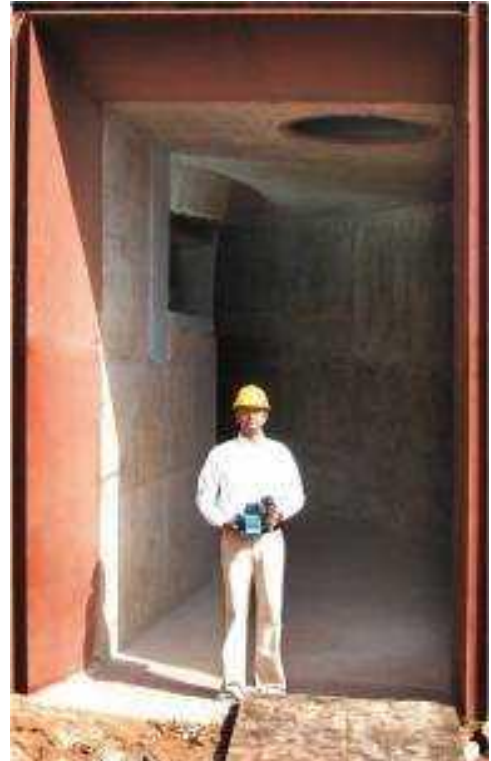
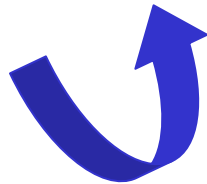
These pumps are used for sectors like , irrigation , Coal , Steel ,Building , Power , Petrochemicals , Sugar .

Pumps range from $1/10$ kW to 12,000 kW

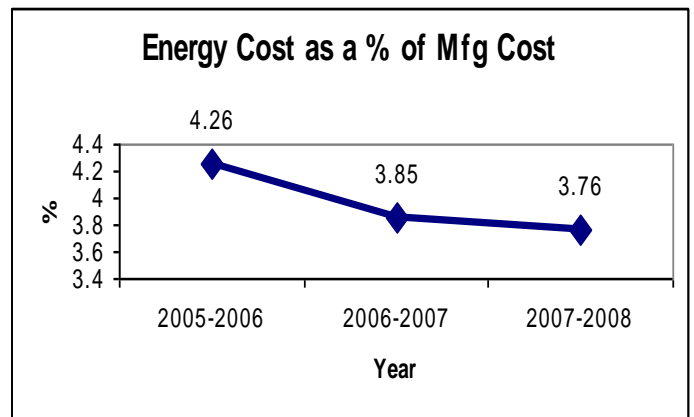
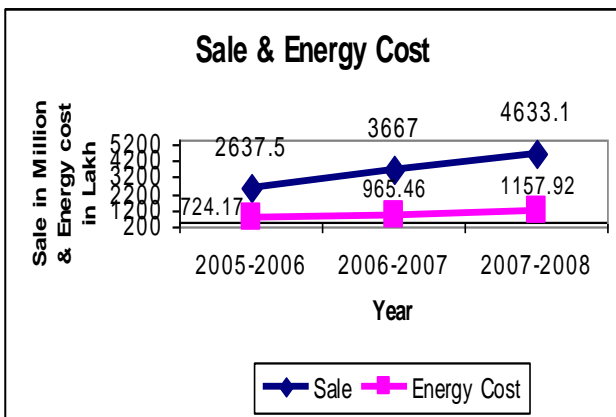
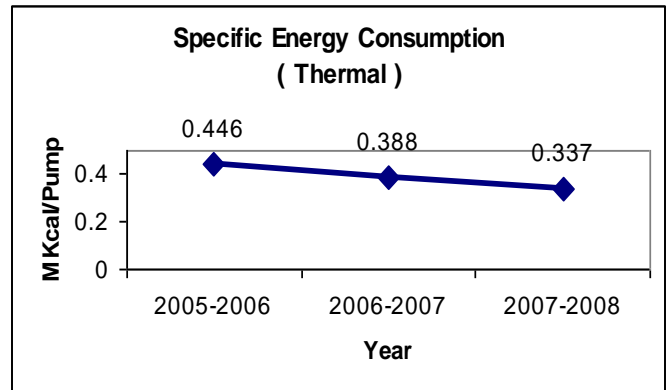
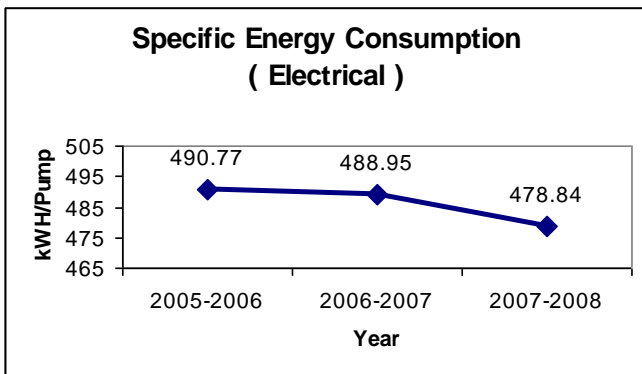
A man standing at the discharge pipe of a Concrete Volute Pump, KBL's biggest pump (126000 m³/hr), holding KBL's smallest pump (0.28 m³/hr.)



**Monobloc Domestic Pumps
Capacity up to 0.28 m³/hr.**



Specific Energy Consumption:



ENERGY POLICY



KIRLOSKAR BROTHERS LIMITED

Enriching Lives

Energy Policy

We at Kirloskar Brothers Limited , Kirloskarvadi , involved in manufacture of Pumps , Pumping systems , Turbines and application of Anti corrosion coating to pumps & piping system , are committed to optimize use of energy in our operations & bring about improvement in the energy efficiency of our processes & products. We will fulfill our commitment by,

- Striving to reduce specific energy consumption by continuously taking energy efficiency improvement measures & minimizing energy waste
- Ensuring that new appliances ,equipment & building projects are energy efficient
- Recognizing efforts of our employees in energy conservation initiatives.
- Effective dissemination of information related to energy management to all employees
- Bench mark energy consumption norms & initiating programs to achieve these norms
- Enhancing utilization of renewable energy resources , wherever feasible
- Knowledge sharing within Group companies and outside experts to bring about continuous improvement in the energy efficiency of our processes & products

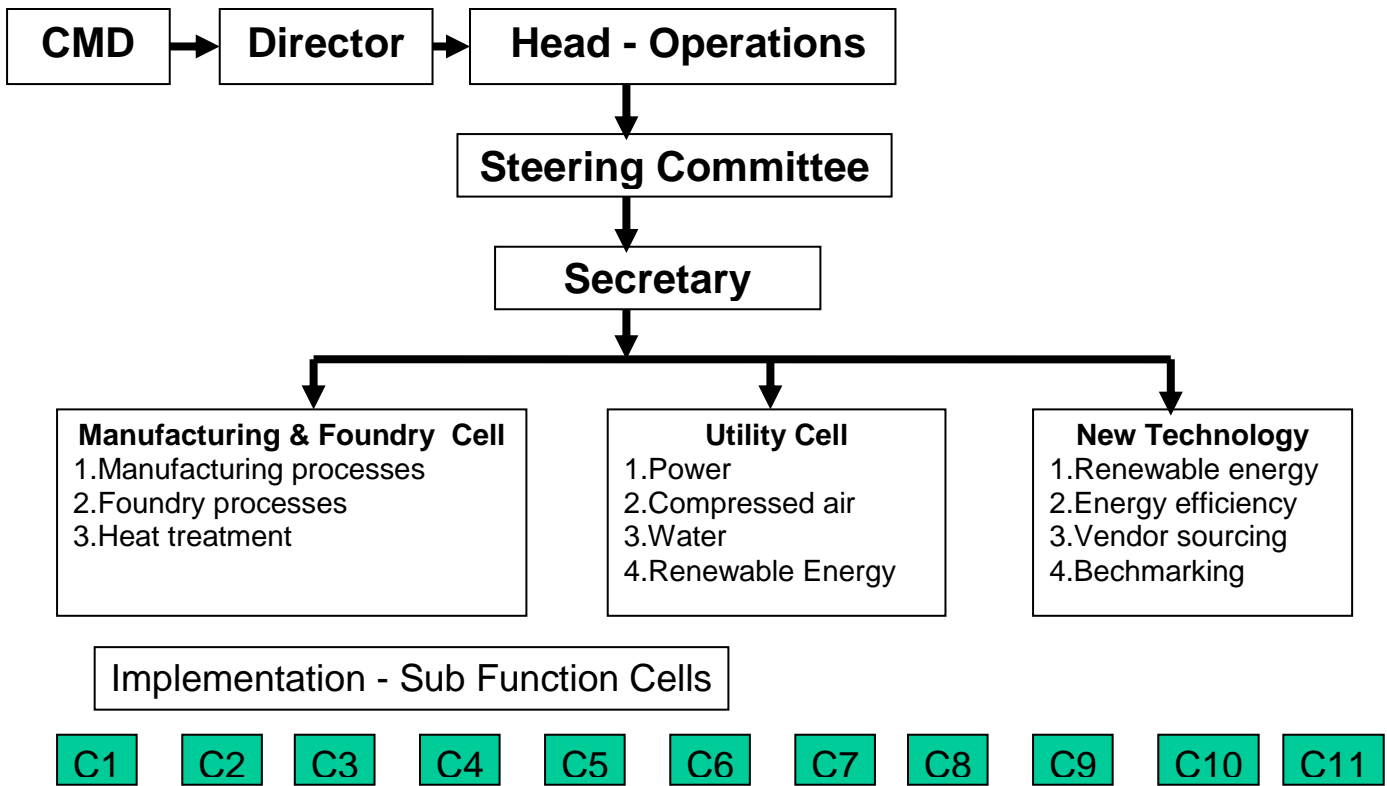


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Director & Occupier

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Energy Conservation - Cell



Roles & Responsibility of Energy Conservation Cell

ENERGY CONSERVATION

For strengthening Energy Conservation activities and reduce power and fuel cost following committees /teams are formed with immediate effect

Steering committee

Members:

1. Pradeep Korde (AVP Operations – Engineered Pumps)
2. L.Sahoo (AVP Mfg – Industrial Pumps)
3. Rajiv Deshpande (GM Mfg Services- Industrial Pumps)
4. S.S.Soman (GM Mfg services – Engineering Pumps)

Secretary:

1. G. Y. Gaikwad (Manger- Plant Engg.)

Role of committee

1. Implementation of Energy policy and preparation of Energy budget
2. Guidance for Implementation of Energy reduction projects.
3. Provide resources and support for various ENCON initiatives.

Core Team

Foundry and Manufacturing	Utility – Air, Power, Water & Others	New Technology
SVYesugade	Nitin Kulkarni	R.Pawar
H.H.Hawaladar	S.K.Sawant	Gajanan Lahe
S.P.Ruplag	S.N. Kabure	Rahul Patil
S.J.Pawar	Sarang Budale	Suresh Patil
S.S.Kulkarni	Amit Ghorpade	Pramod Shinde

Role of Core Team members

1. Identify potential saving projects in above areas
2. Visit to other organizations, if required and benchmark.
3. Discussion with Vendors and finalization of technical scope.
4. Proposal to Implementation of energy reduction projects.
5. Awareness, Measurement and monthly monitoring of energy

Consumption in respective areas.

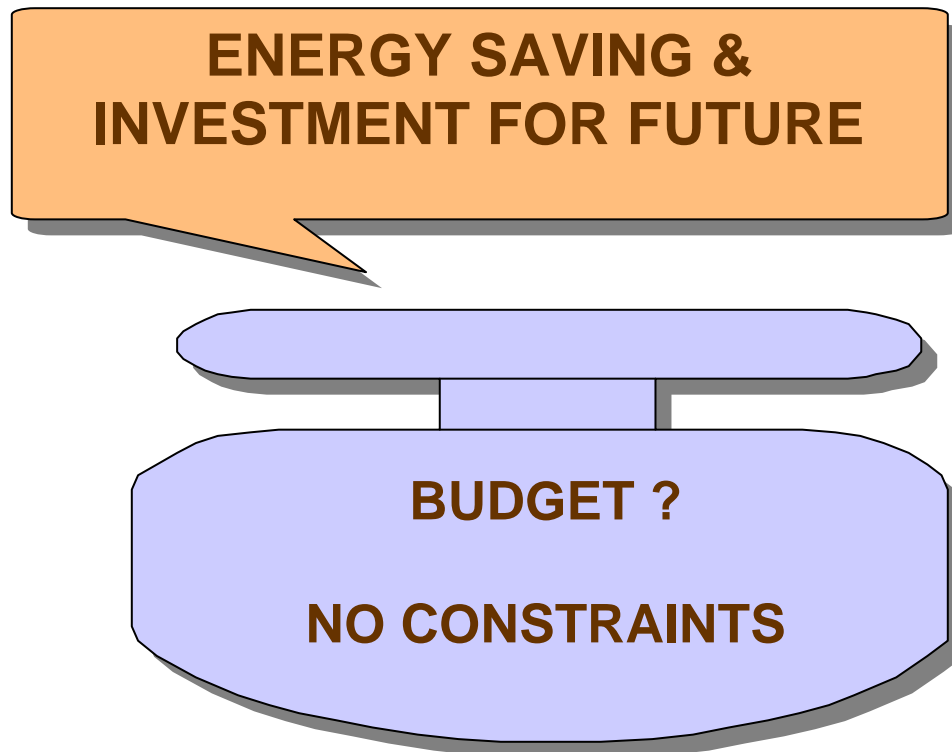
Implementation of Projects :

Separate 11 cells have been formed for implementation , measurement and monitoring of Projects

Reviews and submission of reports

1. Internal teams – Weekly; every Friday at 4.30 pm to 5.30 pm
2. Steering committee / Vice President & Manufacturing Head – Monthly;

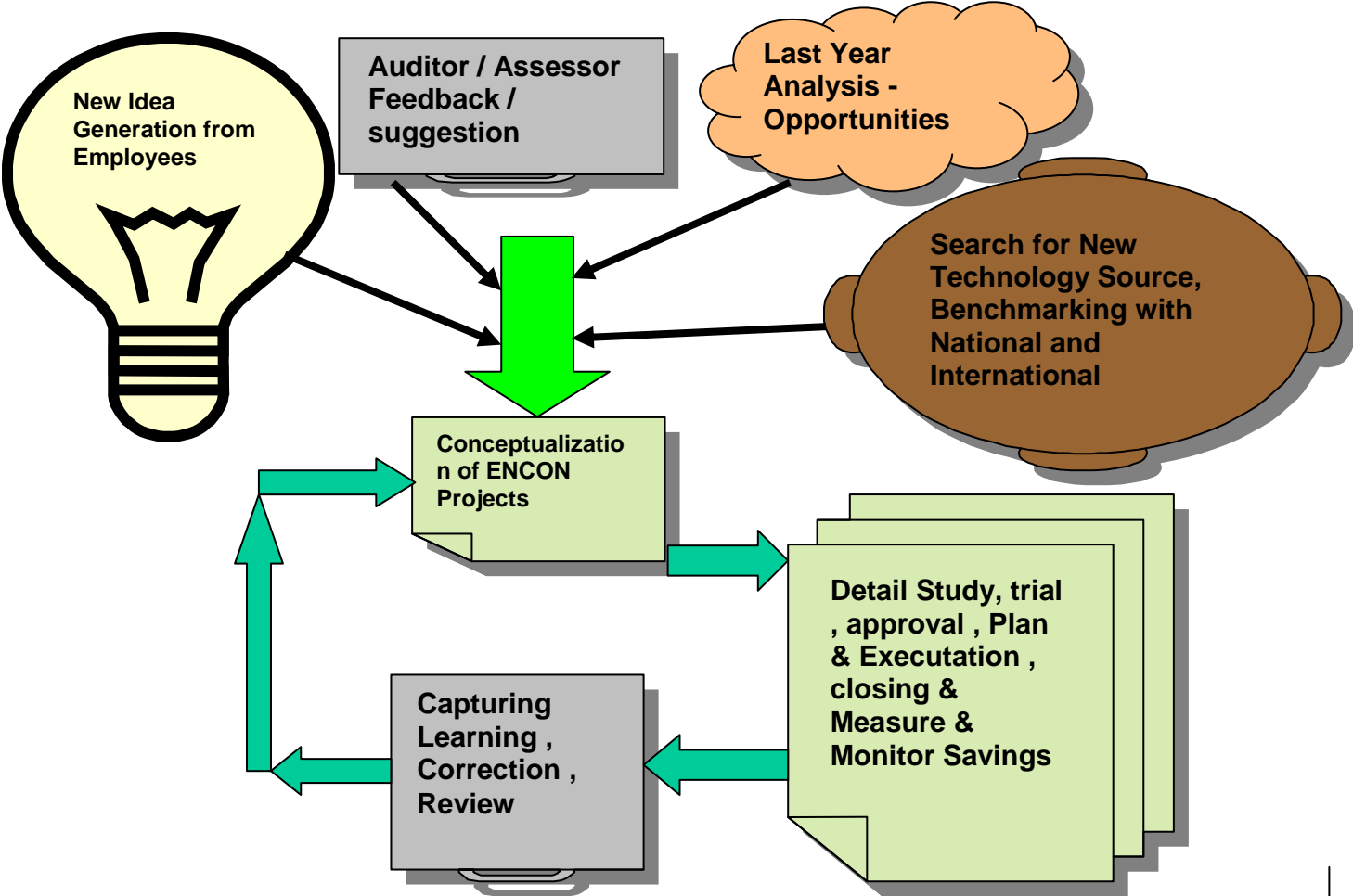
Finances



Achievement :

Detail	2005-2006	2006-2007	2007-2008	Total -3 Year
Number of Projects	27	22	56	105
Investment in Rs.Million	122.41	82.56	14.21	218.79
Annual Saving in Rs.Million	10.50	21.10	26.37	57.98
Major Investment in	Wind Mill	Wind Mill	Induction Furnace & Solar Street Light	

Strategy:



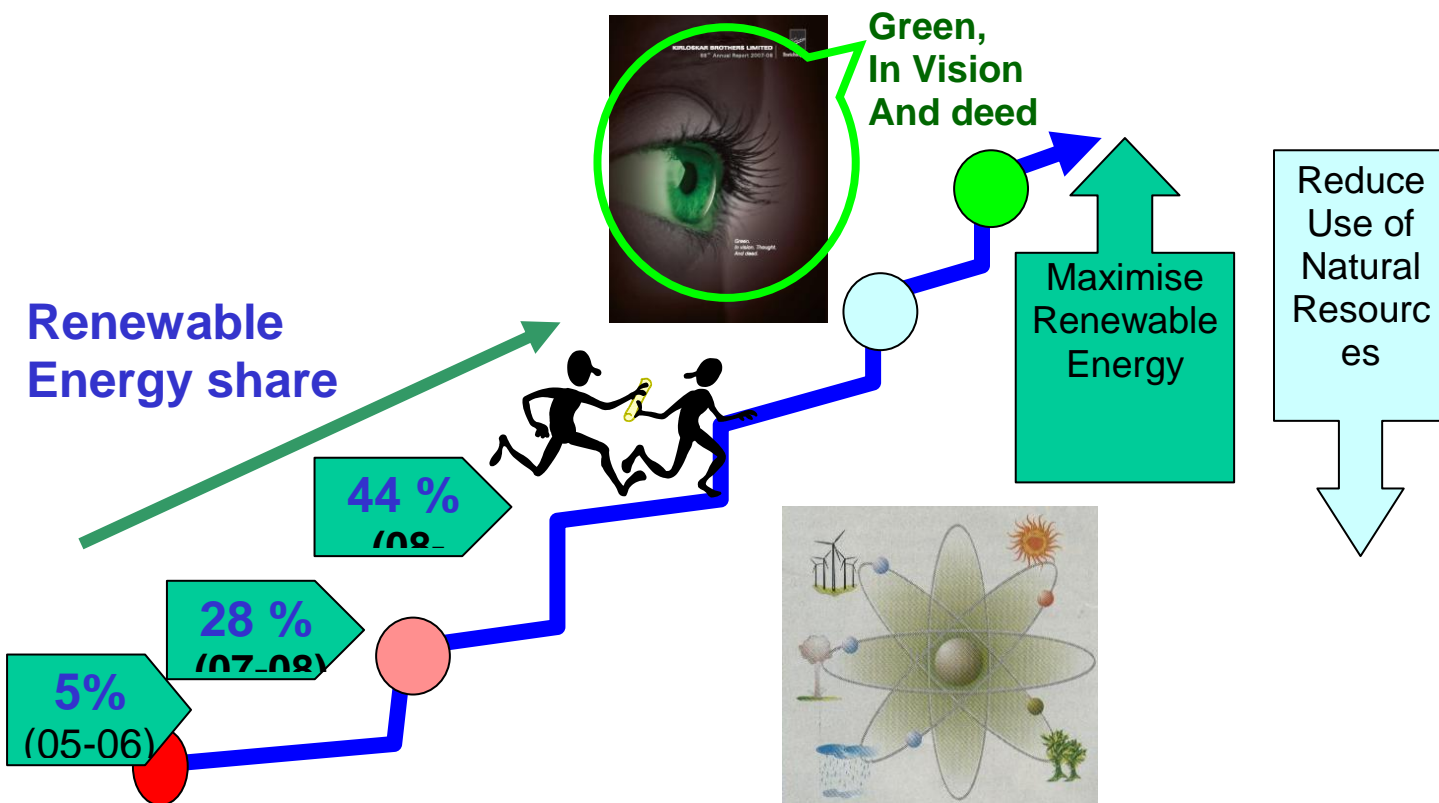
Energy Conservation projects List 2007-2008:

Sr	Project	Location	Investment in Rs	Saving is Rs
Foundry				
1	Replacement of mains frequency by medium frequency Induction furnace	CIF	9000000	7459200
2	Thermostat for furnace cooling water	CIF	1500	64831.104
3	Conveyor belt motors on star	CIF	0	9590.4
4	Sand Leakage	CIF	500	19713.6
5	Old foundry change over from facing & baking to unit sand system	CIF	0	14865.12
6	Adoption of centre core print for impellers 117 Nos	CIF	0	568260
7	Scrap sand free , adoption of lid & Melting in third shift for TOD benefit	HF	0	645199
8	Use of Billet scrap , adoption of lid and synchronization of metal to reduce energy consumption in ACS Foundry	ACS	0	62532.96
Manufacturing & Power Distribution				
1	Replacement of cooling tower	Power house	0	27172.8
2	Reduction in power consumption - Doosan and You Ji	RKB	0	173692.8
3	A.C.s off in night - control from power house	SBG-IP Office	1000	221112
4	Transformer switching off in second shift	ACS/NF	0	69690.24
5	Adoption of automatic off for pump testing	PTL	300000	131431.99
6	Adoption of capacitor panel for power factor improvement	CIF	400000	1500000
Heat Treatment				
1	Modification to Heat treatment furnace - Lining replaced	Heat treatment	450000	635290
2	Alternate fuel for heat treatment furnace - Processed oil	Heat treatment	0	324000
Compressed air				
1	Flat belt for compressor No. 4	Compressor house	15000	47552.4
2	Adoption of thermostat for compressor - cooling tower pump	Compressor house	1500	29570.4
3	Replacement of slip ring motor by squirrel cage	Compressor house	0	45863.42
4	Reconditioning of compressor No. 3	Compressor house	45000	5967.36
5	Reduction in leakages	All dept	15000	374025.6
Pumping system				
1	Reduction in power consumption - Pump	HF	0	4155.84
2	Reduction in power consumption - Pump	ACS	0	19820.16
3	Replacement of pump for Omega sand plant	ACS	2000	70009.92
4	Replacement of pump & motor set	CIF - Cupola	0	3196.8
Water & Water heating system-Solar				
1	Solar water heater	Guest houses	485000	65511.57
2	Sprinklers for lawn	guest house/1926	2500	2331
3	Adoption of water meter , replacement of tanks	Filtration plant	150000	24180
4	Distilled water - litres	SBG-IP Office	0	
5	Close loop hydro testing	PEP - Assy	100000	202500

Lighting system & Solar				
1	Solar for office lighting	PLD/Tool crib	9000	1078.92
2	Solar street light 5 nos	Business office	165000	14385.6
3	LED street light	Business office	0	10741.248
4	Replacement of tube fitting by metal halide, SV to metal halide,	CIF/HF/store/Hi-Tech	101007	79813.44
5	Replacement of 1000 W to 250 W , 500W to 150 W , Tube to CFL	Main / material/Putala gate	46318	75529.728
6	Lighting survey - reduction in tube light fitting	All dept 600 Nos	0	383616
7	Adoption of voltage stabilizer for street lighting	Street light	0	92707.20
Material Handling / Vehicle				
1	Battery operated stacker	Motor storage	456000	89244
2	Adoption of Bio Diesel for vehicle	Material handling	0	153600
3	Adoption of trolleys for material handling	PEP-Assembly	350000	5775
4	Relocation of fabrication area	PEP	0	262.5
5	Layout change - Small bore hole to composite	PEP	0	787.5
6	Pattern storage relocation	CIF	0	1575
Wind Energy				
1	Wind Mill	All	0	4214306.7
2	Replacement of exhaust fan by wind ventilator 600 dia 9 nos	CNC Pattern	81000	17049.6
Recycling of waste				
1	Vermiculture	Canteen	10000	30000
2	Recycling of paper - 27 ton	All	0	27000
Energy efficient equipments				
1	Replacement of generator welding machine by IGBT based machine - 7 Nos	NDT	750000	572866.56
2	Adoption of A.C. drive for Union HBM	PEP	0	40492.8
3	Use of VFD for H.T. Pump Testing	HRC	0	345600.72
4	Replacement of conventional choke by electronic ballst	All - 500 Nos	130000	175824
5	Replacement of transformers- 800 & 1000	ACS/Heat treatment	1150000	28771.2
7	Replacement of conventional fan regulator by electronic regulator	All dept 185 Nos		2957.04
8	VFD - K-Line pouring crane	CIF	0	1918.08
Other				
1	All H.T. Testing of pumps in A zone , TOD benefit	HRC	0	1960000
2	Power Factor Improvement	All	0	4560000
3	Availing of MSEDCL Bonus scheme	All	0	669696
Total			14217325	26376865.63

Plans & Targets

Year	Electrical	Thermal	Reduction over the year 2007-08	
			Electrical%	Thermal%
2007-08 (Base year)	478.84	0.337	-	-
2008 - 09	470	0.30	1.85%	10.87%
2009 -10	455	0.27	3.19%	10.00%



ENVIRONMENT AND SAFETY

KBL as a corporate responsible citizen is committed to protect environment by preventing pollution and conserving natural resources.

We have an ISO 9001 & 14001 Unit and we have committed to preserve environment and safety of all employees.

A) Water Effluent :

The effluent from various parts of factory is collected thru pipes and connected to one common pipe and finally goes to Effluent Treatment Plant .The coolant and paint mixed water is stored in closed barrels and transported to STP.

The treated water is used for gardening.

B) Air

We have installed dust collection systems for all foundry areas .Similarly we have incorporated stacks for paint area and proper height of stacks are maintained. We are monitoring the quality of air for various parameters as per the standard norms. All the gaseous emission is as per the state pollution control board norms.

AWARDS :

- 1. National Award for Excellence in Energy Management 2008 (CII)**
- 2. National Business Excellence Award 2007**
- 3. National Award for Excellence in Energy Management 2007 (CII)**
- 4. National Award for Excellence in Energy Management 2007 (BEE)**
- 5. Best New Fire Fighting Product 2007**
- 6. Star Performer in Export Excellence 2006**
- 7. National Award for Excellence in Energy Management 2002**