



**ENERGY CONSERVATION
ACTIVITY CARRIED OUT
AT KHAPERKHEDA
THERMAL POWER
STATION**

Energy Conservation Activities Carried out in 2009-10

Measures Implemented	Investment made (in Rs. Lakhs)	Saving achieved (in Rs. Lakhs)
Use of Timers & Power Saver Electronic Ballast (Timers : 20 Nos. & Ballast : 200 Nos.)	0.81	0.03 (2009-10)
Preservation of U-1 & U-3 CDS Tubes	6.00	35.61
Optimization of Stage – I CW system	Nil	26.04
Optimization of Stage – II CW & Compressed Air system	Nil	89.74
Replacement of CT Fan GRP Blades by FRP Blades (CT Fan No 5)	2.90	2.11 (2009-10)
Saving of fuel oil due to less consumption than benchmarked target	Nil	1696.62
Replacement of LP Pump (50Kw) at Ash Handling plant by lower Capacity (11Kw) pump	0.22	6.83

Energy Conservation activities carried out

Measures Implemented	Investment made (in Rs. Lakhs)	Saving achieved (in Rs. Lakhs)
Up gradation of H.P. Heater No. 6 Unit -1 with S.S. tube heaters	350	73 (per year)
Adopting Refrigerated Air Dryer System at unit 1 & 2	27	7.8
Refrigerated Air Dryer System	14	3.9
Replacement of cartridge of BFP 3A (reconditioned)	13.50	16.00
Total Saving in lakhs	400.43	1953.78

Energy Conservation activity adopted by Operation Staff

- Run the Boiler with four coal cycle at full load condition.
- Switch off Lights in boiler & turbine area whenever necessary.
- Ensure, only one CW pump should be in service during start up.
- In winter season 3 CW pumps are kept in service for Stage-I.
- CT fans should be made on/off as and when required, by monitoring CW inlet temperature & vacuum in condenser.
- Elimination of wastage of compressed air should be eliminated.
- During boiler start up only one air cycle, taken in service.

Proposed Energy Conservation Activities

Measures to be implemented	Energy saving in Units
Use of non conventional Energy Sources A) Solar Water Heater 800 (LPD) for chummery (1 No.) B) Solar Light : 11Watt (CFL) for Waregaon, Intake Pump House, Colony & TPS Main Gate (6 No.)	34128
Air Conditioner, Water Cooler with 35% Power Saving Refrigerators (Eco Friendly Gas) (2 no. each qty.)	1800
Installing LED Lighting fixtures on Ram-mandir road in colony. (10 No.)	5184
Replacement of existing Street Lighting HPMV & HPSV lamps with CFL 80W (50 Nos.)	15120
Total Saving in Rs.	74732.00

Energy Conservation measures

- Use of Vapor Absorption System in place of Vapor Compression System .
- Energy Efficient Motors to be opted in future for replacement of old ones
- Possibility for installation of Occupancy Sensors at Cabins, Toilets etc. to be explored. Office wiring modification to be done for light & fan circuits.



Thank you