First Prize

Thermal Power Stations
(Coal Fired Plants > 100 MW Capacity)

MEGHALAYA POWER LIMITED (CPP-2)

Distt- East Jaintaia Hills, (Meghalaya)

Unit Profile

“Meghalaya Power Ltd” is a Captive Thermal Power Plant of Star Cement group, which is a pioneer in North-East & most popular in North-East, West Bengal & Bihar. It is situated at Lumshnong - East Jaintia Hills, 100 Km away from Shillong on NH-44 Meghalaya. The power project was installed to meet the power requirements of its sister concern “Star Cement”. This is largest capacity Captive Thermal Power Plant in the state of Meghalaya. The 43MW unit was commissioned on 12th March 2013.

This is an ISO 9001, ISO 14001, ISO 18001 as well as ISO 50001 certified company. This plant is continuously growing under better leadership of CEO.

Since beginning energy management cell had been formed and working regularly for better plant performance as well as energy saving measuresThis cell is reporting directly to CEO. This group has actively participated in all energy saving related activities. They also monitor and regulate the plant operation to improve the plant efficiency so that energy consumption will be reduced.

Energy Consumption

PARAMETER	FINANCIAL YEAR	
	2013-2014	2014-2015
GENRATION (MUs)	123.442	165.89
PLANT LOAD FACTOR (%)	38.71	55.62
HEAT RATE (Kcal/kWh)	3219	2812
GROSS CALORIFIC VALUE OF COAL (Kcal/Kg)	2978	2597

Annual Energy Saving Records: -

1. Electrical Energy Saving: Auxiliary Power consumption of 13.99% achieved in current financial year (2014-2015), whereas previous year auxiliary power consumption was 15.54%.
2. Coal Energy saving: Overall station HEAT RATE achieved is 3269 Kcal/kWh in the financial year 2014-2015, whereas previous year it was 3811 Kcal/kWh. (however designed heat rate is 2800 Kcal/kWh)

Major Energy Conservation Initiatives

1. Submerged Ash Conveyer

Plant has installed submerged ash conveyer for conveying the bed ash which is generated from boiler. Previously pneumatic ash conveying system was installed which required compressed air to conveying. Due to installation of submerged ash conveyer the efficiency of bed ash cooler has been increased. Bed ash cooler is the equipment which cools down the hot bed ash from boiler. The pneumatic ash conveying was unable to convey huge amount of bed ash generated from boiler but submerged ash conveying system can handle that much of bed ash which increase the efficiency of bed ash cooler. So submerged ash conveying system reduce the usage of huge amount of compressed air as well as increase the efficiency of bed ash cooler. Due to this Boiler performance also increased and the load restriction from boiler side due to bed ash draining has been minimized.

2. CEP Auto Logic

Plant has implemented close loop control logic in condensate extraction pump (CEP). Previously plant maintain CEP discharge pressure manually through variable frequency drive (VFD). Now in auto logic CEP variable frequency drive maintain a desired discharge pressure as per required hot well level considering deaerator level and pressure. Due to this implementation company CEP power consumption is reduced and in operation point of view plant achieve its desired CEP discharge pressure.

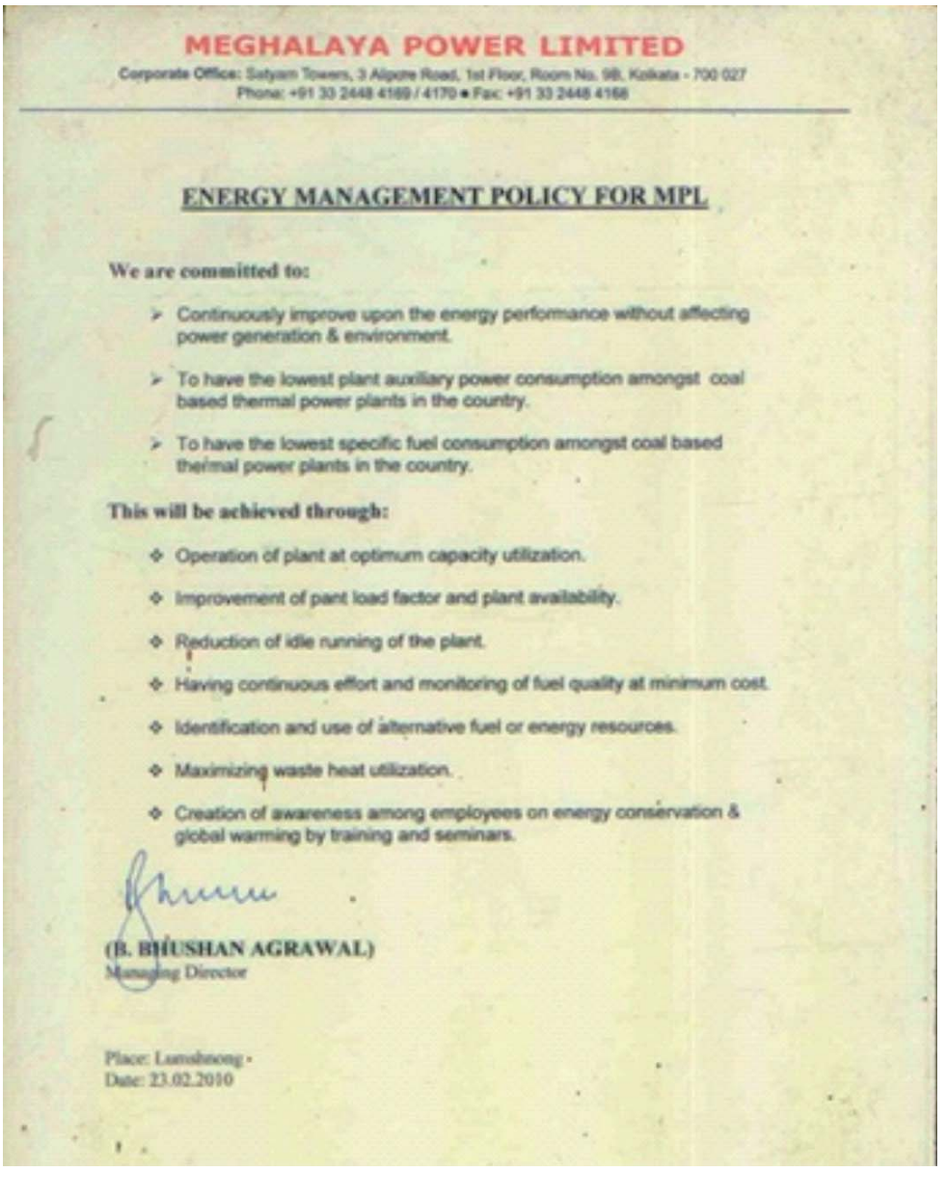
3. CHP modification

CHP power consumption has been reduced by some in house modifications. Previously in CHP both primary screen and secondary screen was in line to achieve company desired sized coal. So plant has done some modification in primary screen and in present condition the use of secondary screen has been eliminated and in stand by condition and plant is also achieving its desired sized coal for boiler.

4. Installation New coal feeding system in CHP

Plant has installed a new coal feeding system in CHP to feed coal in coal bunker. Due to this installation reliability of CHP has been improved and load restriction from CHP side due to break down and other issue has been minimized.

Energy Management Policy



MEGHALAYA POWER LIMITED

Corporate Office: Satyam Towers, 3 Alipore Road, 1st Floor, Room No. 9B, Kolkata - 700 027
Phone: +91 33 2448 4169 / 4170 • Fax: +91 33 2448 4168

ENERGY MANAGEMENT POLICY FOR MPL

We are committed to:

- Continuously improve upon the energy performance without affecting power generation & environment.
- To have the lowest plant auxiliary power consumption amongst coal based thermal power plants in the country.
- To have the lowest specific fuel consumption amongst coal based thermal power plants in the country.

This will be achieved through:

- Operation of plant at optimum capacity utilization.
- Improvement of pant load factor and plant availability.
- Reduction of idle running of the plant.
- Having continuous effort and monitoring of fuel quality at minimum cost.
- Identification and use of alternative fuel or energy resources.
- Maximizing waste heat utilization.
- Creation of awareness among employees on energy conservation & global warming by training and seminars.

(B. BHUSHAN AGRAWAL)
Managing Director

Place: Lumshnong
Date: 23.02.2010