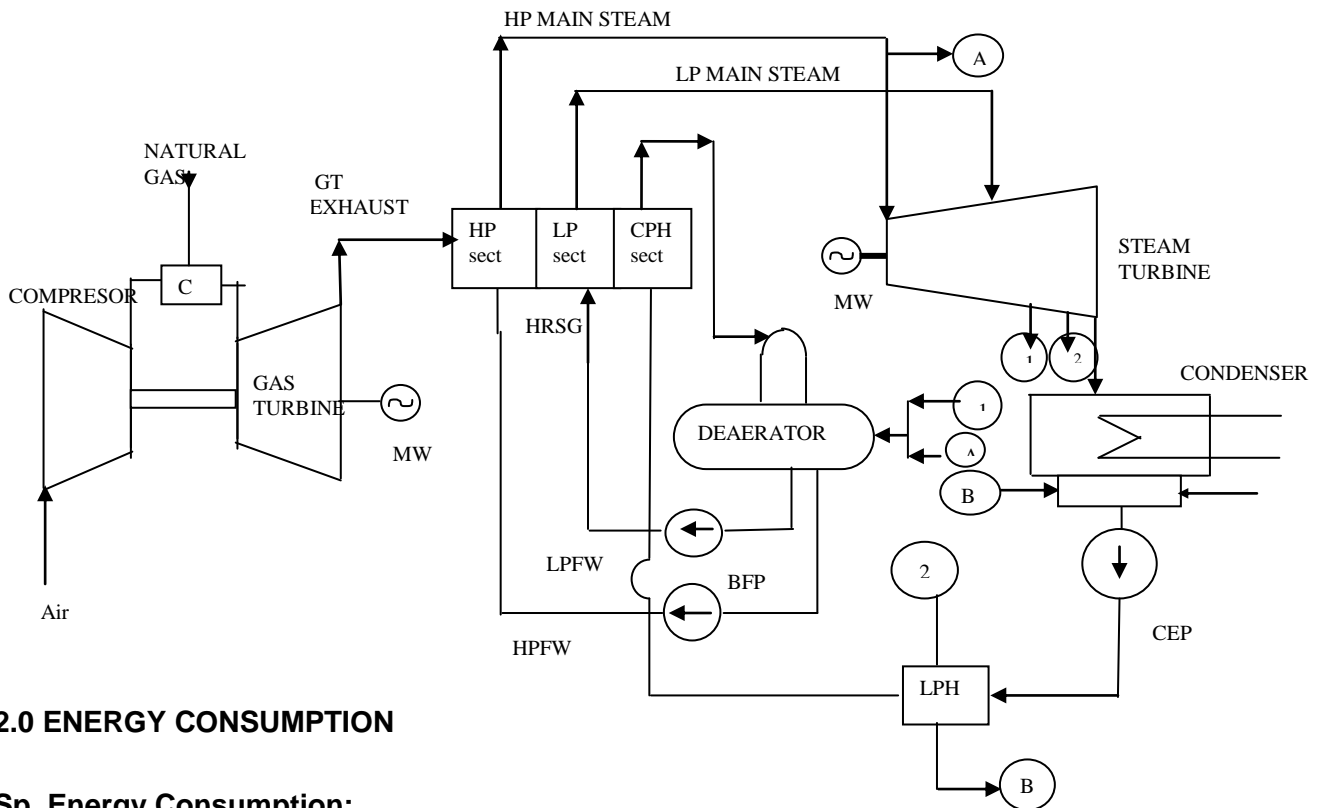


**220 MW SAMALKOT POWER STATION
RELIANCE INFRASTRUCTURE LTD., INDIA**

1.0 UNIT PROFILE

Reliance Infrastructure Limited is a part of the Anil Dhirubhai Ambani Group (ADAG), which is one of India’s leading corporate houses and business conglomerates. Samalkot Power Station is one of the generating units of Reliance Infrastructure Limited. The 220MW samalkot combined cycle power plant consists of heavy-duty industrial V94.2 gas turbine equipped with dual fuel hybrid burner. The power plant uses Natural Gas as the primary fuel and Naphtha as an alternate fuel to produce power. Gas Authority of India Limited (GAIL) supplies Natural Gas. The exhaust gas to the turbine is led to Heat Recovery Steam Generator. The Dual pressure steam generated is fed to the steam turbine. SPS has necessary Power Purchase Agreement with APTRANSCO for Power evacuation at 220KV level. Its state-of-the-art power generating facility is supported by a digital control and safety mechanisms covering all aspects of its operations. It has a Continuous Emission Monitoring System facility. The Company is equipped with a modern in-house Environment Analysis Laboratory, to monitor quality parameters related to water, steam, fuel and oil. In the year 2004, the company was awarded with “Green Tech Environmental Excellence Silver Award”. SPS has developed an Integrated Management System in 2006 which is based on the requirements specified in ISO 9001:2000, ISO 14001:2004, OHSAS 18001:1999, SA8000:2001 SAMS and ISO/IEC 27001:2005 ISMS.



2.0 ENERGY CONSUMPTION

Sp. Energy Consumption:

Description	Unit	2005-2006	2006-2007	2007-2008
Annual Generation	Lakhs KWh	8740.52	9741.96	11712.51
Total Electrical Energy Consumption	Lakhs KWh / year	326.18	344.40*	342.04
Specific Energy Consumption - Electrical	KWh / KWh	0.0373	0.0354	0.0292
Total Thermal (Fuel) Consumption	Million Kcal / year	1910479	2107314	2441902
Specific Energy Consumption - Thermal	Kcal / KWh	2186	2163	2085

*The increase in Aux consumption during 2006-07 is due to increased in Mix fuel operation 374.6 Hrs (956.8 Hrs in FY 2007-08). (During Mix fuel additional aux power is 550units/Hr)

Year	Electricity		Thermal	
	Consumption (Lakhs KWh)	% Reduction (saving achieved / cons. of Prev. Year)	Consumption (Million Kcal)	% Reduction (saving achieved / cons. of Prev. Year)
2005-2006	326.18	--	1910479	--
2006-2007	344.40	0.916	2109172	1.036**
2007-2008	342.04	2.733	2439377	3.618**

**% Specific Energy Consumption Reduction over Previous Year.

3.0 Energy Commitment, Policy and Set Up:

SPS considers energy conservation as its major objective to achieve cost effective power generation. Monthly review meeting on Energy conservation projects is being conducted in the presence of Unit Head. Reward & Recognition scheme at corporate level to motivate Employees in view of Energy Conservation.

During the period several best practice initiatives were undertaken for overall improvement in all round performance.

1. Improve the Heat Rate.
2. Reduce the Auxiliary power consumption
3. Reduction in consumption of Resources (i.e. Water, process chemicals)

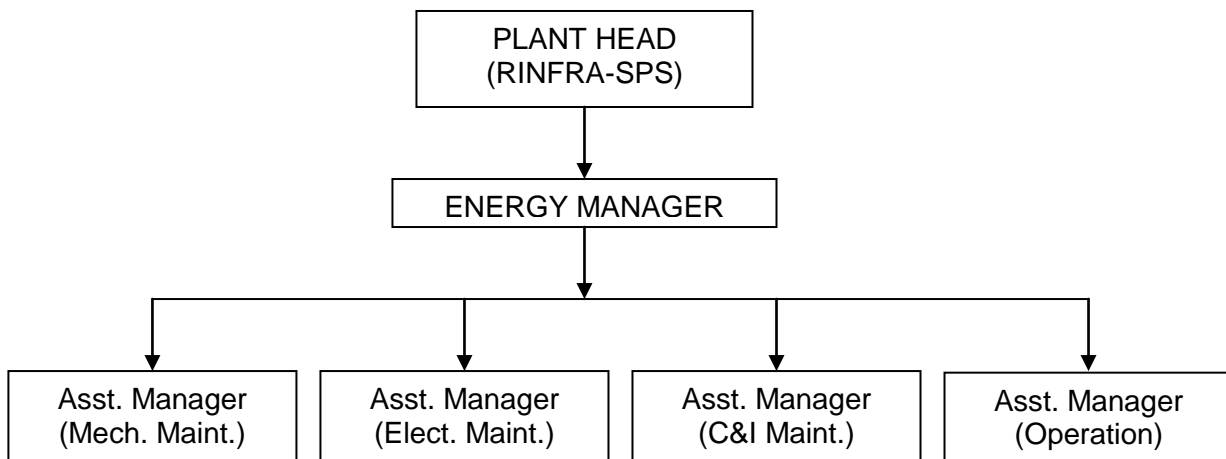
ENERGY MANAGEMENT POLICY

Reliance Infrastructure Ltd. is committed to be one of the most energy efficient utility. Our mission is to use all energy resources efficiently and thereby minimizing the impact of our operations on environment and conserving the scarce natural resources.

This we plan to achieve by,

- ✓ Adopting appropriate energy efficient and clean technologies in process design, procurement, implementation and also continually upgrade our performance
- ✓ Managing efficient use of all forms of energy by adopting industry wide best practices
- ✓ Continually benchmarking our energy performance against the best in the world and improving our competitiveness by training and knowledge sharing.
- ✓ Creating awareness about efficient use of energy and conservation methods amongst all our stakeholders
- ✓ Carrying out regular energy audits to identify areas for improvement
- ✓ Complying with all relevant state regulatory and statutory requirements on energy management.


ENERGY CONSERVATION CELL



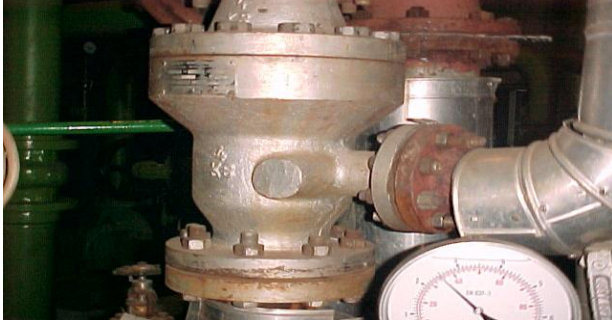
4.0 Energy Conservation Achievements:

During the period 2007 - 2008, Annual savings of Rs. 28.9 lakhs was achieved with an investment of Rs. 17.7 lakhs under Energy Conservation activities. Major projects implemented for Energy conservation during 2007-08:


1. Increase of COC from 10 to 12, thereby implementing water & energy conservation.

	<p>Increase of COC from 10 to 12, thereby 116364M³/year water saved. In addition to the energy saving achieved, the consumption of Chlorine, acid & alkali used for chemical treatment also has reduced.</p> <p>Power Saving : 0.174 lakh kwh per annum Investment : Rs. Nil Saving (including water & Chemical saving) : Rs. 2.8 lakh per annum</p>
---	--

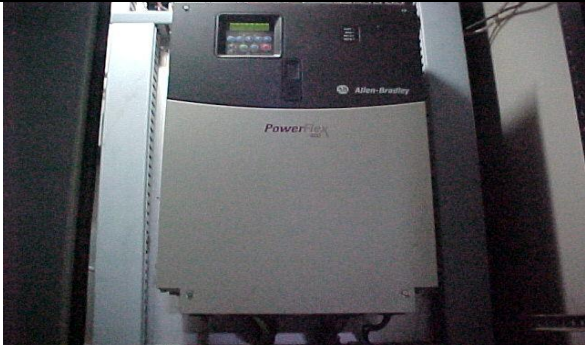
2. Overhauling of Recirculation Valve of LPBFP-1 to reduce power consumption.

	<p>After detail study, Maintenance of Recirculation Valve of LPBFP-1 carried out. After LPBFP-1 ARV overhauling, Power consumption reduced by 3KW.</p> <p>Power Saving : 0.176 lakh kwh per annum Investment : Nil Saving : Rs. 0.49 lakh per annum</p>
--	--


3. Fluglide coating for anti-corrosion & energy saving in CW pump

	<p>Fluglide coating (Corrocoating) of CW pump-3 had been done to improve pump efficiency, which results in reduction in power consumption & protection against corrosion & erosion. After corrocoating 36 KW/hr Energy saving achieved.</p> <p>Power Saving : 2.09 lakh kwh per annum Investment : Rs. 3.98 lakh per annum Saving : Rs. 5.81 lakh per annum</p>
---	--

4. Installation of Variable Frequency Drive In Low Pressure Boiler Feed Pump.

	<p>Low Pressure Boiler Feed Pump-2 operated on VFD mode upto 42Hz without any abnormality & power saving achieved by 17 KW/hr.</p> <p>Power Saving : 0.22 lakh kwh per annum Investment : Rs. 4.5 lakh per annum Saving : Rs. 0.6 lakh per annum</p>
---	---


5. Bypassing of LP Heater & Condensate Preheater Pump.

	<p>Study was conducted on bypassing the LPH & stopping of CPH & reduction of the deaerator pressure set point affect on the ST load & exit flue gas temperature, maintaining GT load at 60 MW with NG operation. Found ST Load Increased By 230 KW.</p> <p>Power Saving : 6.22 lakh kwh per annum Investment : Nil Saving : Rs. 17.3 lakh per annum</p>
---	--


6. Condensate Extraction Pump-1 Destaging.

	<p>After CEP-1 one stage removed, Power Consumption reduced by 67KW per Hr.</p> <p>Power Saving : 0.4 lakh kwh per annum Investment : Rs. 1.16 lakh per annum Saving : Rs. 1.11 lakh per annum</p>
---	---

7. Energy saver installed in MLDB.

	<p>Energy Saver has been installed and commissioned in March2008 for the Power Block MLDB, net savings per day found 203 KWh.</p> <p>Power Saving : 0.03 lakh kwh per annum Investment : Rs. 1.43 lakh per annum Saving : Rs. 0.1 lakh per annum</p>
---	---

5. Bypassing of Pretreatment Plant

	<p>On the basis of continuous monitoring of water quality, Clarifier bypass was done, due to which Auxiliary power consumption 36KWh per day and chemical consumption saved.</p> <p>Power Saving : 0.02 lakh kwh per annum Investment : Nil Saving : Rs. 0.45 lakh per annum</p>
---	---

5.0 Energy Conservation Plans & Targets:

S No.	Description	Saving in Lakh KWh / year	Saving in Rs. Lakh / year	Approx. Investment (Rs. In Lakh)	Target / Completion date
1	Steam & Water Analysis	0.01	0.56	0.16	May-08

	System (SWAS) drain water recovery to reserve feed water tank.		(including water & Chemical saving)		(Completed)
2	CW pump-1 Fluiglride Polymer Coating	3.12	8.68	3.98	Jun-08 (Completed)
3	Attending leakages of Compressed air system	0.56	1.56	0.00	Jul-08 (Completed)
4	Draining Of Abnormal sump Water by gravity to common monitoring basin.	0.09	0.24	0.00	Jul-08 (Completed)
5	Diverter damper hydraulic oil pump auto cut-off logic modified	0.68	1.89	0.00	Aug-08 (Completed)
6	VFD installation for one HP BFP	45.52	126.54	111.83	Sep-08
7	CEP # 2 de-staging	2.17	6.03	1.16	Sep-08
8	Activities identified under External energy audit	1.20	3.34	3.00	Dec-08
9	Installation of Wind Spin turbo ventilator at CW Pump House	2.22	6.18	3.65	Mar-09
10	Thermal Insulation Correction	5.65	15.70	3.00	Apr-09
11	Installation of solar street lights	0.02	0.05	7.00	Apr-09
12	Addition of Two No's of Cooling Tower cell for performance improvement	69.36	192.82	250.00	Jul-09
13	Vapor Absorption Machine for GT I/L air Cooling	0.08	0.21	150.00	subjected to gas availability & feasibility
14	For Fuel gas preheating by waste heat from stack / solar panel.	Study U/P		Study U/P	subjected to gas availability & feasibility

6.0 Environment & Safety:

Reliance Infrastructure believes in sustainable development and aims at preservation and promotion of environment in all its activities. SPS has qualified ISO14001 & OHSAS 18001 since Dec'2005 & committed to follow all the guidelines as per ISO standards. Following major improvements have been made during last three years:

- Zero discharge is continuing since May 2006.
- Water Consumption & Chemical Consumption reduced by Maintaining COC up to 12 and bypassing the Clarifloculator in summer days.
- Continuous monitoring Stack Emission through CEMS & modern in-house Environment Analysis Laboratory and confirm Air, water, emission, hazardous waste, noise parameter within target limit.
- Annual Third party Safety audit against naphtha leakage, fire, lightening arrester completed in Aug'08.
- SPS has got distinction for longest accident free period of **84330 days** from April 2004 till end of FY2007-08.