

RENOVATION AND MODERNISATION PROGRAMME

GAS TURBINE POWER STATION

Name of Scheme	Estimated Cost (RsLacs)	Amount Of Expenditure (Rs Lacs)			Remarks/Benefits
		Expenditure 2004-05	Expenditure 05-06	Anticipated expenditure 2006-07	
1. Up gradation of GTs.	6000	1250	-	1300	HPP Brush seals installed in GT # 3 & 5. This has improved compressor discharge pressure and machine output. Materials worth Rs. 1100 lacs installed in spare Rotor during repair viz compressor & turbine blades etc.
2. Repair of GT#1Rotor	300	193	Nil	Nil	Spare Rotor shall be used in GT #3 during Major inspection (Sept. 06). This shall help in reducing down time of the Machine.
3. Installation of Gas Flow meters	100	18	Nil	Nil	Gas flow Meters shall help in Performance monitoring of individual machines.
4. New CO ₂ based fire protection system.	100	-	-	50	Upgradation of the old fire fighting system by installing latest system
5. Revamping of GT compressors.	300			300	Compressor of Rotor removed from GT#3 in Sept/oct, 06 shall be rebladed. This shall improve Compressor discharge and machine efficiency/output.
6. Cooling of GTs.	100	18	-	72	Off base radiators of GT # 2 & 4 have been replaced and order of procurement of radiators for GT # 1,3,5 & 6 has been released. Delivery expected by May 2006. Upgradation of plate type heat exchangers shall also be taken up. This has helped in maintaining lube oil Temp. and atomizing air temperature.
7. Procurement of GT generator rotor.	800		67	733	Rs 67.00 lacs released to ALSTOM as advance in 2005-06. Availability of spare rotor at site shall reduce down time of the machines during overhauling / repair activities. Major O/H,inspection of GT# 3&5 is to be taken up in 06-07.
8. Renovation of 66KV switchyard	50		17.32	32.68	Isolaters, LAs and higher accuracy CTs (0.2 accuracy) worth 17.32 lacs have been installed. Balance materials expected to be purchased and installed in 06-07. Reliability and Accuracy of system shall improve.

9. New blading of GT Compressors	1100				The material for GT#6 rotor shall be purchased in 07-08 for major O/H in March 08.
10. Installation of DAS	100	40	Nil	Nil	1. The system is making data acquisition and Analysis easier and unnecessary unit trips are being avoided. 2. Display of past and present trends of various parameters is available for analysis. 3. Operation and control of drives through the system from control room is possible.
11. Procurement of steam turbine rotor, guide blade carriers-I & II and inner casing	1350	Nil	1200	Nil	Rs 107.00 lacs were released to BHEL as advance in March, 04. Material received at site and payment released. Availability of spare rotor and associated item shall reduce down time of the machines during overhauling/ repair activity. O/H of steam turbine of WHRU# 3 shall be taken up in 06-07.
12. Replacement of boiler tubes.	300	Nil	100	200	Tubes worth Rs. 100 lacs received at site during 05-06, more materials expected in 06-07. Retubing work in WHRU# 5 to be taken up in 06-07. This will enhance reliability of HRSG and output from WHRU.
13. Renovation in C&I systems.	200	nil	70	50	New instruments / Control valve/actuators/transmitters/turbovisiary system spares etc have improved the control and monitoring system.
14. New 2 X 100 MVA Power Transformer.	350			* 25	Arrangement of installation of 160 MVA, 220 KV / 66KV Transformers is being made by DTL. Expected to be executed in 06-07. However up gradation of switch gears and termination on 66KV side is being taken up by IPGCL. This will increase capacity to transfer power on 220KV system and enable GTPS to generate to maximum capacity even during off peak hrs and shall improve station PLF. * In view of the fact that transformer are being replaced by DTL, the expenditure to be incurred by IPGCL will be to the tune of Rs.25 lacs.
15. Up gradation of Water Treatment Plant.	200	Nil	12.50	187.50	Cooling water treatment has improved cooling efficiency. Enhancement of water treatment plant shall help in meeting the DM water requirements independently.
16. Renovation of DDC.	500	Nil	200	100	New cards have improved various controls viz. AVR, DDC etc. More cards are under procurement.

