Annex – 2

(Tables)

Table 1: Design rating of the Khaperkheda TPS (100 % MCR)

Sl. No.	**Particular**	**Units**	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**
01	Unit installed capacity	MW	210	210	210	210
02	Unit Capacity	MW	210	210	210	210
03	Gross over unit efficiency	%	37.81	37.81	38.49	38.49
04	Unit design heat rate	kcal/kWh	2274.70	2274.70	2234.22	2234.22
05	Station capacity (present)	MW	840			
06	Station overall efficiency	%	38.15			
07	Station heat rate	kcal/kWh	2254.45			

Table 2: Capacity and age of units

NO. OF UNITS	UNIT CAPACITY (MW)	DATE OF COMMISSIONING	MAKE		Age (years)
			BOILER	TURBINE	
(1)	(2)	(3)	(4)	(5)	(6)
Unit 1	210	26.03.1989	M / S BHEL	M / S BHEL	22
Unit 2	210	08.01.1990	M / S BHEL	M / S BHEL	21
Unit 3	210	31.05.2000	M / S BHEL	M / S BHEL	11
Unit 4	210	07.01.2001	M / S BHEL	M / S BHEL	10

Table 3: Performance against MERC targets.

Year	**Generation** (MUs)		
	Petitioned	ERC Approved	Achieved
2008-2009	5993	6166	6416.549
2009-2010	6155	5954	6006.263
2010-2011	6048	6048	5715.839
2011-2012 up to Dec-11	6124.00		4381.451

Year	**A V F** (%)			
	Petitioned	ERC Approved	Achieved as per	
			ERC	CEA
2008-2009	81.44	85.73	85.76	94.271
2009-2010	82.78	80.92	80.917	91.108
2010-2011	82.19	82.19	79.789	89.381
2011-2012 up to Dec-11	82.90		80.160	93.261

Year	**P L F** (%)			
	Petitioned	ERC Approved	Achieved as per	
			ERC	CEA
2008-2009	81.44	81.44	85.80	87.200
2009-2010	82.78	80.92	81.013	81.625
2010-2011	82.19	82.19	79.888	77.678
2011-2012 up to Dec-11	82.9		80.198	79.031

Year	**Auxiliary Consumption** (%)		
	Petitioned	ERC Approved	Achieved
2008-2009	9.000	8.500	9.179
2009-2010	9.450	9.172	9.502
2010-2011	9.950	9.740	9.764
2011-2012 up to Dec-11	9.850		9.819

Year	**Heat Rate** (kcal / kWh)		
	Petitioned	ERC Approved	Achieved
2008-2009	2644	2561/2653	2806
2009-2010	2810	2566/2612.2	2811
2010-2011	2966	2559.9	2658
2011-2012 up to Dec-11	2650		2608

Year	**Sp. Oil Consumption** (ml / kWh)		
	Petitioned	ERC Approved	Achieved
2008-2009	2.00	2.00	0.846
2009-2010	2.00	2.00	1.110
2010-2011	2.00	2.00	1.614
2011-2012 up to Dec-11	2.00		3.005

Year	**Transit Loss** in **Coal** (%)		
	Petitioned	ERC Approved	Achieved
2008-2009	1.40	0.80	1.910
2009-2010	1.68	0.80	4.000
2010-2011	2.00	0.80	0.680
2011-2012 up to Dec-11	0.80		0.330

Table 4: Classification of measures for convenience of project management.

Project Code	Project Name
P-1	To measure , monitor coal consumption and reduce coal loss
P-2	To measure , monitor water consumption and reduce water loss
P-3	To measure and monitor coal quality
P-4	To measure , monitor fuel oil consumption and reduce fuel oil loss
P-5	Improvement in monitoring of heat rate & auxillary consumption
P-6	Improvement in condition monitoring system
P-7	Improvement in purchase and procurement procedure
P-8	Improvement in maintenance procedures and decisions
P-9	Improvement in ABT and GCR
P-10	Improvement in operation procedures and decisions
P-11	Improvement in HRD training and quality circle
P-12	Upgradation & technology interventions in the system
P-13	Improvement of heat rate & auxiliary consumption
P-14	Improvement in workplace area

Table 5: KhTPS status of CPRI recommendation.

CPRI Recommendations	Total Nos.	Implemented	Balance
Immediate term – having no financial implication (NFI).	60	59	1
Immediate term – having financial implication (FI).	187	117	70
Medium term measures.	64	30	34
Long term measures.	45	24	21
Not indicated.	198	158	40
Total	554	388	166

Table 5: CPRI recommendation status.

Section	NFI			FI			MTM		
	Total	Implemented	Balance	Total	Implemented	Balance	Total	Implemented	Balance
AHP	2	2	0	2	2	0	0	0	0
AHP, Operation	5	5	0	0	0	0	0	0	0
BM	0	0	0	52	45	7	13	6	7
BM & AHP	0	0	0	0	0	0	5	2	3
BM & CHP	0	0	0	4	2	2	0	0	0
BM & EM	0	0	0	2	2	0	1	1	0
BM & Operation	1	1	0	2	2	0	0	0	0
BM & TIC	0	0	0	2	2	0	4	0	4
BM, TM, AHP	13	13	0	0	0	0	0	0	0
CGM	0	0	0	1	1	0	0	0	0
CHP	2	2	0	16	6	10	1	0	1
CHP / IT	0	0	0	2	1	1	0	0	0
CIVIL	0	0	0	3	3	0	0	0	0
CPS	1	1	0	0	0	0	0	0	0
EM	1	1	0	8	4	4	2	1	1
EM & AHP	0	0	0	2	2	0	0	0	0
GM , IT	0	0	0	0	0	0	1	1	0
HO	8	7	1	21	9	12	4	2	2
MIS & Operation	1	1	0	0	0	0	0	0	0
MIS & TSC	1	1	0	0	0	0	0	0	0
MIS / IT	3	3	0	0	0	0	1	1	0
Operation	11	11	0	1	1	0	1	1	0
OS	3	3	0	6	6	0	0	0	0
OS & CHP	1	1	0	0	0	0	0	0	0

OS & RC, HO	1	1	0	0	0	0	0	0	0
Station Head	1	1	0	0	0	0	0	0	0
TIC	3	3	0	31	7	24	17	2	15
TIC & EM	1	1	0	0	0	0	0	0	0
TIC & Operation	0	0	0	1	1	0	0	0	0
WTP	0	0	0	9	4	5	1	0	1
TIC / IT	0	0	0	1	0	1	0	0	0
TIC, Operation, CHP, IT	0	0	0	1	1	0	0	0	0
TM	0	0	0	18	15	3	10	10	0
TM & BM	0	0	0	1	1	0	0	0	0
TM & EM	0	0	0	0	0	0	3	3	0
TSC	1	1	0	0	0	0	0	0	0
WTP / IT	0	0	0	1	0	1	0	0	0
All Maint. Section	0	0	0	0	0	0	0	0	0
Operation & GM, IT	0	0	0	0	0	0	0	0	0
Operation & WTP	0	0	0	0	0	0	0	0	0
Operation,WTP,TM, BM & AHP	0	0	0	0	0	0	0	0	0
S. E. Operation	0	0	0	0	0	0	0	0	0
TM & OS	0	0	0	0	0	0	0	0	0
TIC & GM, IT	0	0	0	0	0	0	0	0	0
Total	**60**	**59**	**1**	**187**	**117**	**70**	**64**	**30**	**34**

Section	LTM			Not Indicated			Grand Total			%
AHP	Total	Implemented	Balance	Total	Implemented	Balance	Total	Implemented	Balance	
AHP, Operation	1	0	1	2	2	0	7	6	1	57
BM	0	0	0	0	0	0	5	5	0	100
BM & AHP	8	7	1	49	48	1	122	106	16	80
BM & CHP	1	0	1	0	0	0	6	2	4	67
BM & EM	0	0	0	0	0	0	4	2	2	0
BM & Operation	0	0	0	0	0	0	3	3	0	100
BM & TIC	0	0	0	0	0	0	3	3	0	100
BM, TM, AHP	2	0	2	0	0	0	8	2	6	25
CGM	0	0	0	0	0	0	13	13	0	100
CHP	0	0	0	0	0	0	1	1	0	100
CHP / IT	0	0	0	34	33	1	53	41	12	72
CIVIL	0	0	0	0	0	0	2	1	1	0
CPS	0	0	0	0	0	0	3	3	0	33
EM	0	0	0	0	0	0	1	1	0	100
EM & AHP	5	5	0	7	7	0	23	18	5	39
GM , IT	0	0	0	0	0	0	2	2	0	100
HO	0	0	0	0	0	0	1	1	0	0
MIS & Operation	0	0	0	0	0	0	33	18	15	6
MIS & TSC	0	0	0	0	0	0	1	1	0	0
MIS / IT	0	0	0	0	0	0	1	1	0	0
Operation	0	0	0	1	1	0	5	5	0	40
OS	0	0	0	27	27	0	40	40	0	95
OS & CHP	0	0	0	1	1	0	10	10	0	100
OS & RC, HO	0	0	0	0	0	0	1	1	0	100
Station Head	0	0	0	0	0	0	1	1	0	100
TIC	0	0	0	1	0	1	2	1	1	0
TIC & EM	20	5	15	46	14	32	117	31	86	15
TIC & Operation	0	0	0	0	0	0	1	1	0	100
WTP	0	0	0	0	0	0	1	1	0	100
TIC / IT	0	0	0	5	3	2	15	7	8	13
TIC, Operation, CHP, IT	0	0	0	0	0	0	1	0	1	0

TM	0	0	0	0	0	0	1	1	0	100
TM & BM	8	7	1	12	11	1	48	43	5	73
TM & EM	0	0	0	0	0	0	1	1	0	100
TSC	0	0	0	0	0	0	3	3	0	100
WTP / IT	0	0	0	2	2	0	3	3	0	100
All Maint. Section	0	0	0	0	0	0	1	0	1	0
Operation & GM, IT	0	0	0	1	1	0	1	1	0	100
Operation & WTP	0	0	0	1	1	0	1	1	0	100
Operation,WTP,TM, BM & AHP	0	0	0	5	5	0	5	5	0	80
S. E. Operation	0	0	0	1	1	0	1	1	0	100
TM & OS	0	0	0	1	0	1	1	0	1	0
TIC & GM, IT	0	0	0	1	1	0	1	1	0	0
Total	0	0	0	1	0	1	1	0	1	0
	45	**24**	**21**	**198**	**158**	**40**	**554**	**388**	**166**	**56**