

DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Annexure VI

Name of the Company:

NTPC Ltd.

Name of the Power Station:

Rihand STPS

(Rs. In Lakhs)

Sl. No.	Items	2008-09	2009-10	2010-11	2011-12	2012-13
1	Consumption of stores & spares	5553.52	6404.64	4669.67	5762.97	7688.62
2	Repair & Maintenance	3252.41	3353.35	5049.21	4213.74	7935.81
3	Insurance	395.89	644.97	692.97	733.18	781.64
4	Security	866.10	983.07	886.19	1112.04	1209.15
5	Water Charges	711.44	764.41	765.47	765.41	835.61
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	199.57	131.27	213.81	243.95	191.16
6.3	Travelling & Conveyance	502.30	481.13	476.11	555.84	593.27
6.4	Communication Expenses	87.87	89.16	90.50	111.45	114.41
6.5	Advertising	8.42	12.32	4.57	7.62	5.51
6.6	Foundation Laying & Inaugration	0.00	0.00	0.00	0.00	0.00
6.7	Donation	0.00	0.00	0.00	0.00	0.00
6.8	Entertainment	29.71	29.33	26.60	28.76	38.06
6.9	Filing fee	3.76	40.00	40.00	40.00	93.81
	Subtotal (Administrative Expenses)	831.63	783.22	851.57	987.63	1036.22
7	Employee Cost					
7.1	- Salaries,Wages & Allowances	9125.74	7987.49	10870.16	9862.99	12076.90
7.2	- Staff Welfare expenses	1241.84	927.49	857.94	1071.01	1266.80
7.3	- Incentive	495.81	508.43	410.72	469.18	452.09
7.4	- Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
7.5	- Ex-gratia	0.00	230.76	245.65	246.21	243.35
7.6	- Performance Related Pay(PRP)	590.41	688.93	663.11	1053.73	1008.82
	Sub Total (Employee Cost)	11453.79	10343.11	13047.58	12703.12	15047.96
8	Loss of Store	0.88	0.00	0.37	2.03	1.25
9	Provisions	39.96	27.11	17.26	21.25	6.02
10	Prior Period Expenses	0.00	0.00	0.00	0.00	0.00
11	Corporate Office expenses allocation	4988.90	4527.94	5576.26	5256.63	5318.15
12	Others					
12.1	Rates & Taxes	9.74	7.69	13.32	12.78	6.86
12.2	Water cess	283.89	301.45	266.74	283.08	248.45
12.3	Training & recruitment expenses	108.54	36.77	108.27	88.70	89.11
12.4	Tender Expenses	158.67	191.87	108.45	102.02	68.87
12.5	Guest house expenses	36.89	48.63	43.73	51.62	51.57
12.6	Education expenses	188.09	257.87	276.94	144.98	114.71
12.7	Community Development Expenses	88.10	73.68	117.86	293.76	355.20
12.8	Ash utilisation expenses	26.21	74.25	0.00	0.00	0.74
12.9	Books & Periodicals	9.51	1.33	2.38	1.07	2.73
12.1	Professional Charges	43.60	52.67	29.84	20.40	66.36
12.11	Legal expenses	5.85	4.95	6.51	11.17	10.35
12.12	EDP Hire & other charges	33.99	49.55	44.96	48.24	28.90
12.13	Printing & Stationery	29.53	33.25	34.01	47.28	36.77
12.14	Misc and other Expenses	513.56	667.50	1484.86	1049.77	1010.29
	Sub Total (Others)	1536.17	1801.46	2537.87	2154.85	2090.93
13	(Total 1 to 12)	29630.68	29633.28	34094.42	33712.87	41951.34
14	Revenue / Recoveries	83.34	81.49	87.94	132.15	135.76
15	Net Expenses	29547.34	29551.79	34006.48	33580.72	41815.58
16	Capital spares consumed	459.00	377.85	529.16	731.53	345.00
	Total O&M Cost	30006.34	29929.64	34535.64	34312.25	42160.58
17	Expenditure of Capital nature as per accounting practice not claimed/ disallowed in capital cost	30.88	1595.20	2270.09	699.03	
	Total O&M Cost includng SI No. 17 above	30037.22	31524.84	36805.73	35011.28	42160.58
	No. of Employee opting for VRS	0.00	0.00	0.00	0.00	0.00

Note:

- 1) Prior period expenses have been inculed in their natural head
- 2) Ex gratia has been included in PRP for the year 2008-09
- 3) Employee cost includes arrears
- 4) For 2012-13, data in respect of SI No.17 shall be submitted later

ANNEXURE-I

Pro-forma furnishing Actual annual performance/operational data for the coal /lignite based thermal generating stations for the 5 year period from 2008-09 to 2012-2013

	Particulars	Units	2008-09	2009-10	2010-11	2011-12	2012-13	Basis of information/ methodology
1	Name of Company		NTPC LIMITED					
2	Name of Station		RIHAND SUPER THERMAL POWER STATION					
3	Installed Capacity and Configuration	MW	2500					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Stage 1 (2x500MW) NEI Design & Stage 2 & 3 (3x500MW) BHEL design, sub-critical pressure units					
5	Type of BFP		Electrical Driven for Stage-I & Steam Driven for Stage-2 & 3					
6	Circulating Water System		St-1 OPEN, St-2 & 3 CLOSED					
7	Any other Site specific feature		CHP CONV. SYSTEM					
8	Fuels:							
8.1	Main Fuel:		Coal					
8.1.1	Annual Allocation or/ and Requirement	MT	Annual allocation through FSA =10.50MMT (2000 MW), & LOA is 3.36 MMT (1000 MW)					Requirement has been worked out for 90% PLF
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Northern Coal fields Limited(NCL) Annual contracted quantity of 10.50 MMT(2000 MW) Grade of coal as per FSA is C- E					
8.1.2.1	FSA	MT	10.66	10.54	9.89	10.38	10.99	
8.1.2.2	Imported	MT	0.39	0.35	0.50	0.43	0.10	
8.1.2.3	Spot Market/e auction	MT	0	0	0	0	0	
8.1.3	Transportation Distance of the station from the sources	km	NCL-40					
8.1.4	Mode of Transport		MGR					
8.1.5	Maximum Station capability to stock main fuel	Days & MT	20 days & 8.9 Lac MT					
8.2	Secondary Fuel:		FO + LDO					
8.2.1	Annual Requirement	klitre	19710					
8.2.2	Sources of supply		IOCL					
8.2.3	Transportation Distance of the station from the sources of supply	Km	Around 1000 Km					
8.2.4	Mode of Transport		Rail/ Road					
8.2.5	Maximum Station capability to stock secondary fuels	klitre	22750					
9	Cost of Spares:							
9.1	Cost of Spares capitalized in the books of accounts (St-I)	(Rs. Lakh)	353	149	423	3916		2012-13 data to be submitted later
9.1	Cost of Spares capitalized in the books of accounts (St-II)	(Rs. Lakh)	0	139	347	407		2012-13 data to be submitted later
9.2	Cost of spares included in capital cost for the purpose of tariff (St-I)	(Rs. Lakh)	0	0	0	0		
9.2	Cost of spares included in capital cost for the purpose of tariff (St-II)	(Rs. Lakh)	0	0	0	0		
10	Generation							
10.1	Actual Gross Generation at generator terminals (Commercial Satge wise)	MU	17035.4	16743.4	16318.8	16183.3	16417.7	
10.1.1	Stage-1	MU	8275.83	8771.00	7760.15	8241.25	6950.09	
10.1.2	Stage-2	MU	8759.52	7972.00	8558.63	7942.10	8511.88	

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10.1.3	Stage-3	MU					955.70	
10.2	Actual Net Generation Ex-bus	MU	15945.76	15636.00	15211.01	15060.13	15252.85	
10.2.1	Stage-1	MU	7656.01	8100.00	7143.77	7585.62	6381.65	
10.2.2	Stage-2	MU	8289.75	7536.00	8067.24	7474.51	7981.99	
10.2.3	Stage-3	MU					889.20	
10.3	Scheduled Generation Ex-bus	MU	15842.30	15554.00	14920.65	14882.08	15216.72	Based on REA
10.3.1	Stage-1	MU	7607.01	8061.55	7015.15	7499.27	6368.13	
10.3.2	Stage-2	MU	8235.29	7492.45	7905.50	7382.81	7953.39	
10.3.3	Stage-3	MU					895.20	
11	Average Declared Capacity (DC)	MW	1813.89	1775.57	1772.66	1755.99	1802.62	Based on REA
11.1	Stage-1	MW	870.82	920.31	833.24	891.53	750.79	
11.2	Stage-2	MW	943.07	855.25	939.42	864.46	945.09	
11.3	Stage-3	MW					106.73	
12	Actual Auxiliary Energy Consumption including colony consumption	MU	1085.00	1100.00	1079.37	1061.02	1088.39	
12.1	Stage-1	MU	617.00	665.00	576.69	607.83	514.74	
12.2	Stage-2	MU	468.00	435.00	502.69	453.19	507.10	
12.3	Stage-3	MU					66.55	
13	Actual Energy supplied to Colony from the station	MU	16.98	14.01	15.53	16.21	16.55	
14	Main Fuel:							
14.1	Consumption :							
14.1.1	Domestic Coal (Linked mine/ Other mines/e-auction/spot)	MT	10573775	10490400	9940210	10393517	11167481	
14.1.2	Imported Coal	MT	322476	399956	455424	473834	85759	
14.2	Gross Calorific Value (GCV):							
14.2.1	Domestic Coal (As received)	kCal/kg						
	(As fired)	kCal/kg						
14.2.2	Imported Coal (As received)	kCal/kg	5463	5772	5611	5392.7	5682.6	
14.2.3	Spot market/e-auction coal (As received)	kCal/kg						
14.2.4	Weighted Average Gross Calorific value (As received)	kCal/kg						
14.2.5	Weighted Average Gross Calorific value (As fired)	kCal/kg	3667	3605	3680	3496	3431	
14.3	Price of Coal:							
14.3.1	Weighted Average price of Domestic coal	(Rs/MT)	1353.1	1403.7	1541.1	1599.6	1452.9	
14.3.2	Weighted Average price of imported coal	(Rs/MT)	7416.6	6715.9	8656.5	9552.1	7869.5	
14.3.3	Weighted Average price of spot market/ e-auction coal	(Rs/MT)	-	-	-	-	-	
14.3.4	Weighted Average price of all the Coals (as received)	(Rs/MT)	1565.3	1600.2	1934.4	2128.7	1550.6	
14.4	Blending:	% and MT						
14.4.1	Blending ratio of imported coal with domestic coal	%	2.96%	3.67%	4.38%	4.36%	0.76%	Imported / Total Coal Consumption
14.4.2	Proportion of e-Auction coal in the blending							
14.4.3	Actual Average stock maintained	MT	204010	539544	359779	402036	338291	Average of monthly closing stock
14.5	Actual Transit & Handling Losses for coal/Lignite	%						
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.16%	0.10%	0.10%	0.10%	0.11%	
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%						

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14.5.1.3	Transit loss of imported coal	%	0.06%	0.01%	0.01%	0.00%	0.01%	
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines							
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.							
14.5.2.3	Transit loss of imported coal							
15	Secondary Fuel Oil :							
15.1	Consumption	k litre	2719.3	3407.5	3346.1	4066.9	8312.1	
15.2	Weighted Average Gross Calorific value (As received)	kCal/kg(litre)	9650	9650	9650	9817	9742	
15.3	Weighted Average Price- HFO	Rs/ Kl	38732	33510	36948	44190	52740	
	Weighted Average Price- LDO	Rs/ Kl	48057	44028	50518	47574	63666	
15.4	Actual Average stock maintained	k litre	2269	2088	2841	3085	5370	Average of monthly closing stock
16	Weighted average duration of outages							
16.1	Scheduled Outages	MU	443.5	810.6	951.0	753.2	996.5	
16.2	Forced Outages	MU	325.2	545.6	365.8	347.3	835.0	
16.3	Number of trippings	No	24	31	28	29	68	
16.4	Number of start-ups :	No	24	31	28	29	68	
16.4.1	Cold Start-up	No	8	18	13	11	17	
16.4.2	Warm Start-up	No	7	4	3	11	21	
16.4.3	Hot start-up	No	9	9	12	7	30	
17	NOx , SOx ,and other particulate emission in :							
17.1	Design value of emission- Nox	mg/Nm ³			NA			No norm; not considered in design
	Design value of emission- Sox	mg/Nm ³			NA			No norm; not considered in design
	Design value of emission- SPM (St-I)	mg/Nm ³			100			
	Design value of emission- SPM (St-II)	mg/Nm ³			50			
17.2	Actual emission (SPM)-St-I	mg/Nm ³	110-130	120-141	123-140	105-135	110-142	
17.3	Actual emission (SOx)	mg/Nm ³	550-620	540-670	570-640	531-709	618-720	
17.4	Actual emission (NOx)	mg/Nm ³	272-318	281-340	242-357	191-346	301-382	
17.2	Actual emission (SPM)-St-II	mg/Nm ³	40-60	50-90	54-94	62-98	56-92	
17.3	Actual emission (SOx)	mg/Nm ³						
17.4	Actual emission (NOx)	mg/Nm ³						
19	Detail of Ash utilization % of fly ash produced	Quantity Produced (Lakh MT)	28.76	28.56	29.05	31.19	34.89	
19.1	Conversion of value added product(Issue to Cement, RMC & Brick /block industries)	%	15.85	12.95	2.06	2.69	3.12	
19.2	For making roads & embarkment	%	0.00	0.00	0.00	0.00	0.07	
19.3	Land filling	%	40.99	60.54	58.45	48.59	38.33	
19.4	Used in plant site in one or other form or used in some other site (Mine filling & Ash dyke raising)	%	10.36	0.04	0.00	9.39	14.97	
19.5	Any other use , Please specify (Agriculture, Bottom ash cover etc.)	Qty. (Lakh MT) and usage	0.00	0.00	0.00	0.00	0.00	

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20	Cost of spares actually consumed	Rs Lakh	6276.5	5909.8	3891.4	5449.7	6088.8	
21	Average stock of spares	Rs Lakh	14375.3	14321.7	13461.6	13830.8	14826.1	
22	Number of employees deployed in O&M							
22.1	Executives		404	407	437	458	491	
22.2	Non Executives		589	556	528	519	494	
22.3	Corporate office		3205	3272	3298	3354	3170	Total Corporate Man Power
23	Man-MW ratio		0.5	0.48	0.48	0.49	0.39	Excluding Corporate Man Power

Note:

From Oct/ Nov 2012 onwards payment to coal companies is being made on the basis of GCV as received at plant boundary. As per FSA, payment is to be made as per the quality assessed at mine end . Accordingly substantial amount billed by Coal companies are yet to be paid. Prices indicated above reflect the payment being made to Coal Companies.

GCV of Domestic Coal as received is being measured only from Oct/Nov 2012