

DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Annexure VI

Name of the Company:

NTPC Ltd.

Name of the Power Station:

Sipat

(Rs. In Lakhs)

Sl. No.	Items	2008-09	2009-10	2010-11	2011-12	2012-13
1	Consumption of stores & spares	822.23	2260.68	2915.05	3500.09	5995.31
2	Repair & Maintenance	295.28	1209.05	2030.23	3057.51	4603.92
3	Insurance	98.31	408.61	452.66	561.68	840.15
4	Security	114.76	1036.10	856.60	946.07	1538.46
5	Water Charges	463.62	1359.40	2418.00	3832.50	9187.59
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	13.06	157.31	121.98	125.64	167.64
6.3	Travelling & Conveyance	178.36	366.79	445.00	458.19	664.59
6.4	Communication Expenses	68.06	78.14	84.50	94.70	118.46
6.5	Advertising	4.20	8.52	12.67	12.93	24.29
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	21.66	35.89	29.31	45.32	49.88
6.9	Filing fee	0.00	20.00	20.00	20.00	112.60
	Subtotal (Administrative Expenses)	285.35	666.65	713.46	756.78	1137.46
7	Employee Cost					
7.1	- Salaries,Wages & Allowances	2981.17	6366.59	6799.55	7409.69	11214.15
7.2	- Staff Welfare expenses	448.29	667.00	889.00	724.39	1074.23
7.3	- Incentive	113.94	289.07	294.83	360.07	408.37
7.4	- Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
7.5	- Ex-gratia	0.00	88.72	101.64	131.35	160.34
7.6	- Performance Related Pay(PRP)	262.38	677.95	588.73	1025.60	952.33
	Sub Total (Employee Cost)	3805.77	8089.33	8673.75	9651.11	13809.42
8	Loss of Store	0.01	0.00	0.00	0.00	0.34
9	Provisions	57.34	0.06	21.73	0.00	0.00
10	Prior Period Expenses	0.00	0.00	0.00	0.00	0.00
11	Corporate Office expenses allocation	1284.81	2264.81	2789.19	3032.75	6101.27
12	Others					
12.1	Rates & Taxes	35.55	196.94	193.42	190.75	189.81
12.2	Water cess	35.13	44.84	54.41	27.01	74.54
12.3	Training & recruitment expenses	36.65	21.69	41.95	94.34	74.02
12.4	Tender Expenses	21.39	20.99	16.55	39.18	94.17
12.5	Guest house expenses	18.63	29.56	45.37	55.48	60.94
12.6	Education expenses	16.85	28.48	32.36	46.12	74.06
12.7	Community Development Expenses	19.29	99.10	9.39	3.78	0.85
12.8	Ash utilisation expenses	9.36	0.00	0.19	5.58	22.76
12.9	Books & Periodicals	1.15	6.92	0.49	9.72	13.50
12.1	Professional Charges	15.62	19.85	11.82	23.36	55.51
12.11	Legal expenses	15.45	3.61	5.85	2.80	-0.64
12.12	EDP Hire & other charges	40.87	53.51	52.51	42.78	39.64
12.13	Printing & Stationery	21.13	44.27	59.56	47.17	48.57
12.14	Misc and other Expenses	44.67	307.83	620.37	576.03	951.65
	Sub Total (Others)	331.72	877.59	1144.24	1164.10	1699.39
13	(Total 1 to 12)	7559.19	18172.28	22014.91	26502.59	44913.30
14	Revenue / Recoveries	7.83	13.86	14.88	16.80	24.54
15	Net Expenses	7551.36	18158.42	22000.03	26485.79	44888.77
16	Capital spares consumed	46.00	71.00	2.00	771.72	1309.23
	Total O&M Cost	7597.36	18229.42	22002.03	27257.51	46198.00
17	Expenditure of Capital nature as per accounting practice not claimed/ disallowed in capital cost	0.00	0.00	0.00	0.00	
	Total O&M Cost includng SI No. 17 above	7597.36	18229.42	22002.03	27257.51	46198.00
	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								
	Particulars	Units	2008-09	2009-10	2010-11	2011-12	2012-13	Basis of information/ methodology
1	Name of Company		NTPC					
2	Name of Station		SIPAT SUPER THERMAL POWER STATION					
3	Installed Capacity and Configuration	MW	INSTALLED CAPACITY 2980 MW (660X3 + 500X2)					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		660 MW: Boiler -Once through,super critical, two pass Turbine-LMZ (Four cylinders Reheat condensing type) Steam Parameters 660 MW: MS Flow/Temp/ Pr 2024 TPH/540 Deg C /255 kg/cm2, HRH-1741.82 TPH/568Deg C/44.08 kg/cm2 500 MW: Boiler -Controlled Circulation With Rifled Tubing, Turbine-KWU (Three cylinders Reheat Condensing Type) Steam Parameters: MS-1498.5 TPH/540 Deg C /178 kg/cm2, HRH-1335.1 TPH /540 Deg C/41.9 kg/cm2					
5	Type of BFP		Normal: Steam Driven, Emergency : Electrical Driven					
6	Circulating Water System		Closed cycle					
7	Any other Site specific feature							
8	Fuels:							
8.1	Main Fuel:		Coal					
8.1.1	Annual Allocation or/ and Requirement	MT	Annual allocation through FSA =5.80MMT(1000 MW), LOA-9.16 MMT (1980 MW) Annual requirement =15.83 MMT(2980 MW)					Requirement has been worked out for 90% PLF
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		FSA signed with South Eastern Coal fields Limited					
			Annual contracted quantity of 6.712 MMT (FSA: 5.80 MMT (1000 MW). MOU* signed against LOA is 0.912					
			Grade of coal as per FSA is All Grades					
8.1.2.1	FSA	MT	3.00	5.91	5.93	7.58	10.19	
8.1.2.2	Imported	MT	0.00	0.11	0.10	0.08	0.98	
8.1.2.3	Spot Market/e auction	MT	0.00	0.00	0.00	0.00	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	km	30					
8.1.4	Mode of Transport		MGR					
8.1.5	Maximum Station capability to stock main fuel	Days & MT	18 days & 7.59 Lac MT					
8.2	Secondary Fuel:							
8.2.1	Annual Requirement	klitre	23494					
8.2.2	Sources of supply		IOCL,BPCL,HPCL					
8.2.3	Transportation Distance of the station from the sources of supply	Km	500					
8.2.4	Mode of Transport		Rail/ Road					
8.2.5	Maximum Station capability to stock secondary fuels	kilo llitre	9100					
9	Cost of Spares:							
9.1	Cost of Spares capitalized in the books of accounts (St-I)	(Rs. Lakh)				1402		2012-13 data to be submitted later
	Cost of Spares capitalized in the books of accounts (St-II)	(Rs. Lakh)	1118	721.05	2626	4539		

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9.2	Cost of spares included in capital cost for the purpose of tariff (St-I)	(Rs. Lakh)				order reserved		
	Cost of spares included in capital cost for the purpose of tariff (St-II)	(Rs. Lakh)	1118	721.05	2626	4539		
10	Generation							
10.1	Actual Gross Generation at generator terminals (Commercial Satge wise)							
10.1.1	Stage-1	MU	0	0	0	2063.6	10646.5	
10.1.2	Stage-2	MU	4258.5	8175.3	8456.2	8684.8	6908.3	
10.2	Actual Net Generation Ex-bus	MU						
10.2.1	Stage-1	MU				1944.5	9969.7	
10.2.2	Stage-2	MU	4043.7	7715.7	7982.0	8177.9	6475.6	
10.3	Scheduled Generation Ex-bus							Based on REA
10.3.1	Stage-1	MU				1923.4	10006.2	
10.3.2	Stage-2	MU	4023.5	7663.5	7928.6	8107.2	6455.6	
11	Average Declared Capacity (DC)							Based on REA
11.1	Stage-1	MW	0.0	0.0	0.0	438.1	1164.0	
11.2	Stage-2	MW	588.6	875.0	906.5	923.7	742.8	
12	Actual Auxiliary Energy Consumption including colony consumption							
12.1	Stage-1	MU				119.1	673.8	
12.2	Stage-2	MU	214.8	459.6	474.2	506.8	436.1	
13	Actual Energy supplied to Colony from the station	MU	0.4	1.9	7.1	7.6	7.0	
14	Main Fuel:							
14.1	Consumption :							
14.1.1	Domestic Coal (Linked miine/ Other mines/e-auction/spot)	MT	2873690	5508596	5671654	7011525	10198640	
14.1.2	Imported Coal	MT	0	117640	120939	80351	954472	
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	6138	6113.4	6135	6148	6287	
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	3491	3411	3426	3545	3681	
14.3	Price of Coal:							
14.3.1	Weighted Average price of Domestic coal	(Rs/MT)	926.0	959.3	1056.0	1283.5	1518.4	
14.3.2	Weighted Average price of imported coal	(Rs/MT)	0.0	7085.1	8178.1	9638.6	7352.9	
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)	926.0	1103.7	1171.4	1374.6	2017.7	
14.4	Blending:	% and MT						
14.4.1	Blending ratio of imported coal with domestic coal	%	0.0%	2.1%	2.1%	1.1%	8.6%	Imported/ Total Coal Consumption
14.4.2	Proportion of e-Auction coal in the blending							
14.4.3	Actual Average stock maintained	MT	62128	127035	338024	349350	177885	Average of monthly closing stock
14.5	Actual Transit & Handling Losses for coal/Lignite	%						

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14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	MT	0.28%	0.34%	0.09%	0.12%	0.12%	
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.							
14.5.1.3	Transit loss of imported coal	MT		0.37%	0.08%	0.17%	0.24%	
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 HFO	Kilo litre	1865.1	949.1	1544.1	899.9	7386.0	
	Consumption LDO	Kilo litre	396.8	659.7	195.3	235.2	1474.0	
15.2	Weighted Average Gross Calorific value (As received) HFO	KCal/kg(litre)	9935.3	10076.0	10125.0	10127.2	10130.0	
	Weighted Average Gross Calorific value (As received) LDO	KCal/kg(litre)	10133.1	10206.2	10217.5	10235.2	10225.0	
15.3	Weighted Average Price (HFO)	Rs/ Kl	33087.6	29299.4	29194.8	33472.6	52176.5	
	Weighted Average Price (LDO)	Rs/ Kl	41374.7	38241.8	41797.4	35282.9	69514.6	
15.4	Actual Average stock maintained HFO	Kilo litre	2450.7	2310.4	3598.0	5086.4	4137.0	Average of monthly closing stock
	Actual Average stock maintained LDO	Kilo litre	449.3	601.7	640.9	825.9	737.6	
16	Weighted average duration of outages							
16.1	Scheduled Outages	MU	0	303.66	333.7	262.9	566.9	
16.2	Forced Outages	MU	161.8	312.5	190.0	877.3	2140.6	
16.3	Number of trippings	No	20	7	10	9	36	
16.4	Number of start-ups :	No	24	17	20	16	74	
16.4.1	Cold Start-up	No	0	6	2	4	11	
16.4.2	Warm Start-up	No	6	5	11	8	41	
16.4.3	Hot start-up	No	18	6	7	4	22	
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			50			
	Design value of emission- SPM (St-II)	mg/Nm ³			50			
17.2	Actual emission (SPM)- St-I	mg/Nm ³	--	--	--	37-44	37-48	
17.3	Actual emission (SOx)	mg/Nm ³	--	--	--	457-693	604-714	
17.4	Actual emission (NOx)	mg/Nm ³	--	--	--	262-442	306-432	
17.2	Actual emission (SPM)- St-II	mg/Nm ³	42-49	35-48	33-44	39-47	40-47	
17.3	Actual emission (SOx)	mg/Nm ³	772-816	772-875	556-865	510-581	564-640	
17.4	Actual emission (NOx)	mg/Nm ³	336-366	270-330	252-327	273-338	275-382	
19	Detail of Ash utilization % of fly ash produced	Quantity Produced (Lakh MT)	Unit just commissioned	21.43	22.09	26.15	41.76	
19.1	Conversion of value added product(Issue to Cement, RMC & Brick /block industries)	%	0.00	0.64	10.34	12.14	12.52	
19.2	For making roads & embarkment	%	0.00	0.00	0.00	0.00	0.00	

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19.3	Land filling	%	0.00	0.32	0.17	0.16	0.58
19.4	Used in plant site in one or other form or used in some other site (Mine filling & Ash dyke raising)	%	0.00	0.00	0.00	0.00	7.53
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
20.0	Cost of spares actually consumed	Rs Lakhs	579.0	2002.1	2290.9	3603.3	5972.8
21.0	Average stock of spares	Rs Lakhs	680.5	2773.7	5907.9	8989.5	15083.0
22.0	Number of employees deployed in O&M						
22.1	Executives		397	433	479	503	506
22.2	Non Executives		287	324	349	383	469
22.3	Corporate office		3205	3272	3298	3354	3170
23	Man-MW ratio		0.68	0.76	0.83	0.38	0.33
							Total Corporate Man Power
							Excluding Corporate Man Power

Note:

Pending finalisation of FSA for units commissioned after 2009 ,coal is being supplied through MOU against LOA as per the quantity allotted by CEA on year to year basis

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