

DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Annexure VI

Name of the Company:

NTPC Ltd.

Name of the Power Station:

Singrauli STPS

(Rs. In Lakhs)

Sr. No.	Items	2008-09	2009-10	2010-11	2011-12	2012-13
1	Consumption of stores & spares	4698.16	5775.03	5859.96	6297.05	7457.19
2	Repair & Maintenance	3226.15	3832.68	4311.85	5154.75	5873.22
3	Insurance	287.80	484.41	540.54	592.43	590.00
4	Security	977.51	1152.82	1212.93	1503.23	1685.62
5	Water Charges	717.86	770.64	770.64	770.64	770.64
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	266.63	302.09	380.71	402.73	345.58
6.3	Travelling & Conveyance	486.15	479.43	548.52	680.62	693.52
6.4	Communication Expenses	72.90	70.27	89.33	95.55	116.94
6.5	Advertising	7.92	6.05	5.09	3.64	12.99
6.6	Foundation Laying & Inauguration	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	23.64	19.04	40.61	32.50	33.57
6.9	Filing fee	0.00	40.00	40.00	40.00	80.00
	Subtotal (Administrative Expenses)	857.24	916.88	1104.26	1255.03	1282.60
7	Employee Cost					
7.1	- Salaries, Wages & Allowances	14895.68	12534.93	16320.45	15298.17	17449.83
7.2	- Staff Welfare expenses	1388.00	1667.32	1363.18	1074.74	1660.22
7.3	- Incentive	653.37	899.77	769.40	631.06	801.71
7.4	- Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
7.5	- Ex-gratia	0.00	470.40	488.41	496.93	455.65
7.6	- Performance Related Pay (PRP)	893.02	804.76	760.13	1208.53	1142.45
	Sub Total (Employee Cost)	17830.08	16377.18	19701.57	18709.43	21509.87
8	Loss of Store	0.32	0.52	0.00	0.48	0.35
9	Provisions	135.63	1.38	0.95	24.99	36.46
10	Prior Period Expenses	0.00	0.00	0.00	0.00	0.00
11	Corporate Office expenses allocation	4988.89	4527.94	5578.09	5256.63	5145.79
12	Others					
12.1	Rates & Taxes	13.25	9.07	21.42	6.59	14.63
12.2	Water cess	457.65	468.29	487.01	447.51	466.28
12.3	Training & recruitment expenses	87.29	51.52	81.93	78.05	54.50
12.4	Tender Expenses	70.07	81.67	61.95	47.55	46.48
12.5	Guest house expenses	36.04	37.76	41.32	41.55	81.34
12.6	Education expenses	149.26	154.39	148.75	12.38	29.42
12.7	Community Development Expenses	59.15	26.64	64.19	194.17	250.30
12.8	Ash utilisation expenses	1.00	5.08	4.03	0.97	9.75
12.9	Books & Periodicals	1.30	14.03	4.62	4.84	3.72
12.1	Professional Charges	6.22	20.37	39.53	20.58	40.09
12.11	Legal expenses	11.40	14.24	12.52	18.08	13.18
12.12	EDP Hire & other charges	62.38	52.95	40.64	45.71	35.02
12.13	Printing & Stationery	27.11	30.67	51.59	64.56	46.69
12.14	Misc and other Expenses	229.98	250.17	1053.62	597.44	689.88
	Sub Total (Others)	1212.10	1216.85	2113.12	1579.97	1781.29
13	(Total 1 to 12)	34931.74	35056.33	41193.91	41144.63	46133.03
14	Revenue / Recoveries	290.85	305.39	320.23	315.02	319.98
15	Net Expenses	34640.89	34750.94	40873.68	40829.60	45813.05
16	Capital spares consumed	900.94	1724.39	1250.57	1802.86	3512.72
	<b>Total O&amp;M Cost</b>	<b>35541.83</b>	<b>36475.33</b>	<b>42124.25</b>	<b>42632.46</b>	<b>49325.77</b>
17	Expenditure of Capital nature as per accounting practice not claimed/ disallowed in capital cost	536.92	1922.41	1446.52	1365.03	
	<b>Total O&amp;M Cost including SI No. 17 above</b>	<b>36078.75</b>	<b>38397.74</b>	<b>43570.76</b>	<b>43997.49</b>	<b>49325.77</b>
	No. of Employee opting for VRS	0.00	0.00	0.00	0.00	0.00

Note:

- 1) Prior period expenses have been included 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 Ltd.					
2	Name of Station		Singrauli Super Thermal Power Station					
3	Installed Capacity and Configuration	MW	2000 (200X5+500X2)					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)	Steam Parameters	200MW	130/535	500MW	170/537		
		Steam Turbine	200MW	BHEL/RUS	500MW	BHEL/KWU		
		Boiler	200MW	BHEL/CE	500MW	BHEL/CE		
5	Type of BFP		200MW: Electrical Driven / 500MW Steam Driven					
6	Circulating Water System		Open cycle					
7	Any other Site specific feature		CW Pumping distance of 1.5km; New Ash Dyke distance 20km					
8	Fuels:							
8.1	Main Fuel:		Coal					
8.1.1	Annual Allocation or/ and Requirement	MT	Annual allocation through FSA =11.00MMT (2000 MW) Annual requirement = 11.20 MMT					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 11.00 MMT (2000 MW)					
			Grade of coal as per FSA is C- E					
8.1.2.1	FSA	MT	11.47	11.10	11.79	10.92	11.39	
8.1.2.2	Imported	MT	0.00	0.00	0.33	0.19	0.00	
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	NCL- 10 KM					
8.1.4	Mode of Transport		MGR					
8.1.5	Maximum Station capability to stock main fuel	Days & MT	27 days & 8.4 Lac MT					
8.2	Secondary Fuel:		HFO Oil					
8.2.1	Annual Requirement	klitre	5000					
8.2.2	Sources of supply		IOCL					
8.2.3	supply	km	1000					
8.2.4	Mode of Transport		Rail					
8.2.5	Maximum Station capability to stock secondary fuels	klitre	17000					
9	Cost of Spares:							
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	2802	5632	2839	1854		2012-13 data to be submitted later
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)	0	0	0	0		
10	Generation							
10.1	Actual Gross Generation at generator terminals (Station Total)	MU	15893.43	16264.42	16913.15	15584.51	16193.94	
10.2	Actual Net Generation Ex-bus	MU	14762.98	15098.42	15692.62	14467.80	15035.84	
10.3	Scheduled Generation Ex-bus	MU	14662.76	14979.28	15514.67	14336.46	15003.95	Based on REA
11	Average Declared Capacity (DC)	MU	14693.06	15021.97	15816.88	14590.91	15283.36	Based on REA
11.1	Average Declared Capacity (DC)	MW	1677.29	1714.84	1805.58	1661.08	1744.68	

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12	Actual Auxiliary Energy Consumption including colony consumption	MU	1130.45	1166.00	1220.53	1116.71	1158.10	
13	Actual Energy supplied to Colony from the station	MU	24.02	25.25	25.12	25.01	26.11	
14	Main Fuel:		Coal	Coal	Coal	Coal	Coal	
14.1	Consumption :		11313300	11298712	12006983	11031140.05	11313665	
14.1.1	Domestic Coal (Linked mine/ Other mines/e-auction/spot)	MT	11313300	11298712	11684866	10844821	11313665	
14.1.2	Imported Coal	MT	0	0	322117	186319	0	
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			6264	6039		
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	3358	3441	3367	3371	3418	
14.3	Price of Coal:							
14.3.1	Weighted Average price of Domestic coal	(Rs/MT)	1192.23	1344.67	1519.8	1546.79	1429.69	
14.3.2	Weighted Average price of imported coal	(Rs/MT)	NIL	NIL	8825.37	6088.32	NIL	
14.3.3	Weighted Average price of spot market/ e-auction coal	(Rs/MT)	NIL	NIL	NIL	NIL	NIL	
14.3.4	Weighted Average price of all the Coals (as received)	(Rs/MT)	1192.23	1344.67	1710.44	1680	1429.69	
14.4	Blending:	% and MT						
14.4.1	Blending ratio of imported coal with domestic coal	%	0.00%	0.00%	2.68%	1.69%	0.00%	Imported/ Total coal Consumption
14.4.2	Proportion of e-Auction coal in the blending							
14.4.3	Actual Average stock maintained	MT	218155.1	565995.2	191940.2	384415.5	341148.0	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	MT	0.12%	0.14%	0.19%	0.02%	0.20%	
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	MT						
14.5.1.3	Transit loss of imported coal	MT			0.18%	0.12%		
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines	MT						
14.5.2.2	Transit loss from non-linked mines including e-auction coal mine	MT						
14.5.2.3	Transit loss of imported coal	MT						
15	Secondary Fuel Oil :							
15.1	Consumption	klitre	4682	3850	4098	10177	3381	
15.2	Weighted Average Gross Calorific value (As received)	kCal/kg(litre)	9979	9980	9978	9980	9981	
15.3	Weighted Average Price	Rs/ KI	36006	30552	31347	41904	44120	
15.4	Actual Average stock maintained	k litre	3485	3366	3270	3070	3802	Average of monthly closing stock
16	Weighted average duration of outages							
16.1	Scheduled Outages	MU	1021.1	1066.7	533.0	1050.7	1159.1	
16.2	Forced Outages	MU	881.4	617.7	366.5	736.8	425.5	

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16.3	Number of trippings	No	20	21	13	34	28
16.4	Number of start-ups :	No	52	60	45	71	59
16.4.1	Cold Start-up	No	31	42	37	50	31
16.4.2	Warm Start-up	No	8	3	4	4	10

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16.4.3	Hot start-up	No	13	15	4	17	18
17	NOx , SOx ,and other particulate emission in :						
17.1	Design value of emission- NOx	mg/Nm <sup>3</sup>	NA				No norm; not considered in design
	Design value of emission- SOx	mg/Nm <sup>3</sup>	NA				No norm; not considered in design
	Design value of emission- SPM (St-I)	mg/Nm <sup>3</sup>	300				
	Design value of emission- SPM (St-II)	mg/Nm <sup>3</sup>	367.5				
17.2	Actual emission (SPM)-St-I	mg/Nm <sup>3</sup>	99-136	116-137	119-138	112-134	120-137
17.3	Actual emission (SOx)	mg/Nm <sup>3</sup>	711-860	703-829	703-829	705-780	700-763
17.4	Actual emission (NOx)	mg/Nm <sup>3</sup>	402-465	401-450	318-442	401-443	400-467
17.2	Actual emission (SPM)- St-II	mg/Nm <sup>3</sup>	120-143	118-141	123-139	118-139	123-139
17.3	Actual emission (SOx)	mg/Nm <sup>3</sup>	745-893	707-805	708-838	707-776	707-770
17.4	Actual emission (NOx)	mg/Nm <sup>3</sup>	409-508	389-439	310-486	412-449	400-436
19	Detail of Ash utilization % of fly ash produced	Quantity Produced (Lakh MT)	37.29	35.84	40.49	37.93	37.77
19.1	Conversion of value added product(Issue to Cement, RMC & Brick /block industries)	%	8.92	10.25	9.22	8.24	8.70
19.2	For making roads & embarkment	%	0.00	0.00	0.00	0.00	0.00
19.3	Land filling	%	6.57	39.17	32.15	26.59	0.38
19.4	Used in plant site in one or other form or used in some other site (Mine filling & Ash dyke raising)	%	0.00	9.17	0.00	0.66	33.53
19.5	Any other use , Please specify (Agriculture, Bottom ash cover etc.)	Qty. (Lakh MT) and usage	1.68	5.16	7.55	9.78	6.57
20	Cost of spares actually consumed	Rs Lakh	5487.31	7366.00	6478.26	7959.55	10784.02
21	Average stock of spares	Rs Lakh	14664	15093	13553	13493	13875
22	Number of employees deployed in O&M						
22.1	Executives		474	472	480	484	477
22.2	Non Executives		1142	1097	1033	972	875
22.3	Corporate office		3205	3272	3298	3354	3170
23	Man-MW ratio		0.81	0.78	0.76	0.73	0.68
							Total Corporate Man Power
							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