

DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Annexure VI

Name of the Company:

NTPC Ltd.

Name of the Power Station:

NCTPS, Dadri

(Rs. In Lakhs)

Sl. No.	Items	2008-09	2009-10	2010-11	2011-12	2012-13
1	Consumption of stores & spares	2290.80	2861.99	2975.80	3741.43	5480.14
2	Repair & Maintenance	1843.10	1877.96	3116.94	6956.38	5444.17
3	Insurance	126.47	271.46	477.27	500.27	513.72
4	Security	999.94	1298.91	1318.73	1608.81	1913.26
5	Water Charges	44.79	39.17	64.76	277.53	351.13
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	293.34	360.73	446.17	532.82	560.88
6.3	Travelling & Conveyance	234.87	240.30	370.88	522.61	557.08
6.4	Communication Expenses	52.93	62.77	108.07	88.49	97.20
6.5	Advertising	4.67	6.21	39.35	4.28	5.98
6.6	Foundation Laying & Inaugration	0.00	0.00	0.00	0.00	0.00
6.7	Donation	0.00	0.00	0.03	0.00	0.00
6.8	Entertainment	9.98	16.22	49.18	28.94	32.25
6.9	Filing fee	2.02	16.80	34.77	36.40	72.80
	Subtotal (Administrative Expenses)	597.81	703.03	1048.45	1213.54	1326.18
7	Employee Cost					
7.1	- Salaries,Wages & Allowances	8183.28	7081.93	10736.96	11421.18	13308.76
7.2	- Staff Welfare expenses	1295.25	1455.90	1264.96	1429.68	1774.52
7.3	- Incentive	545.71	426.72	479.69	548.01	549.61
7.4	- Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
7.5	- Ex-gratia	0.00	225.33	245.14	263.25	273.07
7.6	- Performance Related Pay(PRP)	621.40	948.66	708.00	1250.37	1172.29
	Sub Total (Employee Cost)	10645.64	10138.54	13434.74	14912.49	17078.24
8	Loss of Store	-23.99	0.00	0.00	0.00	0.00
9	Provisions	78.00	116.01	71.96	46.76	11.62
10	Prior Period Expenses	0.00	0.00	0.00	0.00	0.00
11	Corporate Office expenses allocation	2095.32	1946.55	4617.21	4785.99	4683.58
12	Others					
12.1	Rates & Taxes	2.73	2.18	-1.79	1.77	2.97
12.2	Water cess	28.12	27.37	53.18	58.36	49.79
12.3	Training & recruitment expenses	54.87	24.85	104.54	71.19	126.03
12.4	Tender Expenses	35.98	59.14	96.39	85.76	39.95
12.5	Guest house expenses	36.03	42.05	66.70	74.01	57.02
12.6	Education expenses	76.27	124.90	227.38	80.41	55.84
12.7	Community Development Expenses	37.32	68.09	42.78	179.84	279.39
12.8	Ash utilisation expenses	2.55	8.37	18.83	57.91	170.84
12.9	Books & Periodicals	3.57	3.15	6.57	3.62	2.92
12.1	Professional Charges	12.20	11.97	27.60	15.42	13.68
12.11	Legal expenses	9.01	27.07	-11.11	26.06	20.49
12.12	EDP Hire & other charges	19.81	33.34	19.61	18.91	14.47
12.13	Printing & Stationery	19.17	24.97	48.71	37.67	28.56
12.14	Misc and other Expenses	329.39	199.24	1238.40	792.61	1065.27
	Sub Total (Others)	667.00	656.69	1937.79	1503.54	1927.21
13	(Total 1 to 12)	19364.87	19910.33	29063.66	35546.73	38729.26
14	Revenue / Recoveries	55.00	55.96	76.07	87.18	80.58
15	Net Expenses	19309.87	19854.37	28987.59	35459.56	38648.68
16	Capital spares consumed	261.18	114.21	335.71	564.66	873.32
	<b>Total O&amp;M Cost</b>	<b>19571.05</b>	<b>19968.57</b>	<b>29323.30</b>	<b>36024.22</b>	<b>39522.00</b>
17	Expenditure of Capital nature as per accounting practice not claimed/ disallowed in capital cost	0.00	475.43	25.07	2.35	
	<b>Total O&amp;M Cost includng SI No. 17 above</b>	<b>19571.05</b>	<b>20444.00</b>	<b>29348.37</b>	<b>36026.57</b>	<b>39522.00</b>
	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/ Methodology
1	<b>Name of Company</b>		<b>NTPC LTD</b>					
2	<b>Name of Station</b>		<b>NCTPS DADRI</b>					
3	Installed Capacity and Configuration	MW	1820 (210x4+490X2)					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Sub-critical, BHEL/KWU Design					
5	Type of BFP		Electrical Driven for 4x210MW / Steam Driven for 2x490MW					
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 =8.43 MMT(1820 MW), (FSA for 4.03 MMT signed recently) Annual requirement =10.60 MMT( 1820 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 Central Coal fields Limited (CCL)					
			Annual contracted quantity - 8.43 MMT					
			Grade of coal as per FSA is E					
8.1.2.1	FSA	MT	4.44	4.40	6.47	7.12	7.17	
8.1.2.2	Imported	MT	0.37	0.43	0.78	1.69	1.21	
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	km	1150					
8.1.4	Mode of Transport		IR					
8.1.5	Maximum Station capability to stock main fuel	Days & MT	30 days & 7.03 lac MT					
8.2	Secondary Fuel:							
8.2.1	Annual Requirement	klitre	Since NCPS is utilising two types of secondary fuel, details are given below					
8.2.2	Sources of supply		LDO (HPCL/BPCL) Delhi & HFO (IOC) ,Koyali Gujrat					
8.2.3	Transportation Distance of the station from the sources of supply	Km	LDO (Approx 80 km) & HFO (Approx 1000km)					
8.2.4	Mode of Transport		Rail/ Road					
8.2.5	Maximum Station capability to stock secondary fuels	klitre	30320	30820				
9	Cost of Spares:							
9.1	Cost of Spares capitalized in the books of accounts (St-I)	(Rs. Lakh)	406	379	351	675		2012-13 data to be submitted later
	Cost of Spares capitalized in the books of accounts (St-II)	(Rs. Lakh)		11	1395	5116		
9.2	Cost of spares included in capital cost for the purpose of tariff (St-I)	(Rs. Lakh)	0	0	0	0		
	Cost of spares included in capital cost for the purpose of tariff (St-II)	(Rs. Lakh)		11	1395	5116		
10	Generation							
10.1	Actual Gross Generation at generator terminals (Commercial Satge wise)							
10.1.1	Stage-1	MU	7311	7402	6789	6392	6363	
10.1.2	Stage-2	MU		391	5260	7832	6730	
10.2	Actual Net Generation Ex-bus	MU						
10.2.1	Stage-1	MU	6747	6791	6157	5835	5812	
10.2.2	Stage-2	MU		368	5035	7468	6406	

**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/ Methodology
<b>1</b>	<b>Name of Company</b>		<b>NTPC LTD</b>					
<b>2</b>	<b>Name of Station</b>		<b>NCTPS DADRI</b>					
10.3	Scheduled Generation Ex-bus							
10.3.1	Stage-1	MU	6645	6635	5887	5799	5936	
10.3.2	Stage-2	MU		360	4844	7555	6582	
11	Average Declared Capacity (DC)							
11.1	Stage-1	MW	774	779	758	741	755	
11.2	Stage-2	MW		259	650	923	845	
12	Actual Auxiliary Energy Consumption including colony consumption							
12.1	Stage-1 (including colony)	MU	564	604	542	484	484	
12.2	Stage-2	MU		29	315	437	392	
13	Actual Energy supplied to Colony from the station	MU	18.62	20.77	22.52	22.30	22.79	
14	Main Fuel:							
14.1	Consumption :							
14.1.1	Domestic Coal (Linked mine/ Other mines/e-auction/spot)	MT	4342472	4375172	6522017	7189692	7145202	
14.1.2	Imported Coal*	MT	277108	468928	849419	1666154	1283601	
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	6232	6216	6159	6169.83	6262	
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	3778	3845	3902	3852	3718	
14.3	Price of Coal:							
14.3.1	Weighted Average price of Domestic coal	(Rs/MT)	2308.3	2692.5	2810.7	2925.6	3341.8	
14.3.2	Weighted Average price of imported coal	(Rs/MT)	7787.5	6921.3	7987.7	9238.2	7960.0	
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)	2748.4	3159.0	3415.0	4146.5	4045.1	
14.4	Blending:	% and MT						
14.4.1	Blending ratio of imported coal with domestic coal		6.0%	9.7%	11.5%	18.8%	15.2%	Imported/ Total Coal consumption
14.4.2	Proportion of e-Auction coal in the blending							
14.4.3	Actual Average stock maintained	MT	128353	187810	312626	129368	77338	
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines							
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.							
14.5.1.3	Transit loss of imported coal							
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines		0.73%	0.76%	0.74%	0.75%	0.77%	
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.							
14.5.2.3	Transit loss of imported coal		0.37%	0.24%	0.23%	0.19%	0.18%	
15	Secondary Fuel Oil :							

**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/ Methodology
<b>1</b>	<b>Name of Company</b>		<b>NTPC LTD</b>					
<b>2</b>	<b>Name of Station</b>		<b>NCTPS DADRI</b>					
15.1	Consumption	klitre	NTPC Dadri uses two types of Secondary fuel					
15.2	Weighted Average Gross Calorific value (As received)	kCal/kg(litre)	Detail is given below (Annexure)					

**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/ Methodology
<b>1</b>	<b>Name of Company</b>		<b>NTPC LTD</b>					
<b>2</b>	<b>Name of Station</b>		<b>NCTPS DADRI</b>					
15.3	Weighted Average Price LDO	(Rs Per KL)	33199.84	37035.31	40795.35	44807.86	54625.40	
	Weighted Average Price HFO	(Rs Per KL)	39198.99	27149.58	27693.72	31298.14	36475.40	
	Weighted Average Price of all the Oils	(Rs Per KL)	37865.36	30385.11	29164.35	34450.33	41557.07	
15.4	Actual Average stock maintained	klitre						
16	Weighted average duration of outages:							
16.1	Scheduled Outages	MU	197.97	192.98	966.4	352.81	953.2	
16.2	Forced Outages	MU	69.8	264.43	462.82	585.18	381.32	
16.3	Number of trippings	No	6	21	51	35	34	
16.4	Number of start-ups :	No	25	32	72	61	64	
16.4.1	Cold Start-up	No	9	7	20	22	24	
16.4.2	Warm Start-up	No	7	2	11	5	5	
16.4.3	Hot start-up	No	9	23	41	34	35	
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>	150					
	Design value of emission- SPM (St-II)	mg/Nm <sup>3</sup>	100					
17.2	Actual emission (SPM)- St-I	mg/Nm <sup>3</sup>	75-131	68-126	77-130	74-130	72-130	
17.3	Actual emission (SOx)	mg/Nm <sup>3</sup>	420-579	417-649	489-652	348-580	433-698	
17.4	Actual emission (NOx)	mg/Nm <sup>3</sup>	184-252	152-260	202-293	215-480	215-426	
17.2	Actual emission (SPM)- St-II	mg/Nm <sup>3</sup>				78-98	70-98	
17.3	Actual emission (SOx)	mg/Nm <sup>3</sup>				465-710	461-730	
17.4	Actual emission (NOx)	mg/Nm <sup>3</sup>				219-577	230-556	
19	Detail of Ash utilization % of fly ash produced	Quantity Produced (Lakh MT)	16.23	17.39	25.5	30.1	27.44	
19.1	Conversion of value added product(Issue to Cement, RMC & Brick /block industries)	%	59.53	63.01	57.55	55.16	71.40	
19.2	For making roads & embarkment	%	0.00	15.18	13.46	5.25	0.81	
19.3	Land filling	%	14.27	11.21	11.39	14.26	14.53	
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	0.00	
19.5	Any other use , Please specify (Agriculture, Bottom ash cover etc.)	Qty. (Lakh M T) and usage	0.00	0.00	0.00	0.00	0.00	
20	Cost of spares actually consumed	Rs Lakh	2419.3	2778.7	3093.7	4087.3	6081.2	
21	Average stock of spares	Rs Lakhs	7462.5	7372.8	7561.9	9112.1	10833.6	
22	Number of employees deployed in O&M							
22.1	Executives		372	421	490	523	510	
22.2	Non Executives		585	568	555	570	559	
22.3	Corporate office		3205	3272	3298	3354	3170	Total Corporate Man Power
23	Man-MW ratio		1.14	0.74	0.57	0.6	0.59	Excluding Corporate Man Power

**Note:**

**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/ Methodology
<b>1</b>	<b>Name of Company</b>		<b>NTPC LTD</b>					
<b>2</b>	<b>Name of Station</b>		<b>NCTPS DADRI</b>					

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

**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/ Methodology
<b>1</b>	<b>Name of Company</b>		<b>NTPC LTD</b>					
<b>2</b>	<b>Name of Station</b>		<b>NCTPS DADRI</b>					

## Annexure

8.2	Secondary fuel consumption		2008-09	2009-10	2010-11	2011-12	2012-13
8.2.1	Annual Requirement						
	HFO	klitre	9933.8	6008.7	9801.2	10791.1	10761.7
	LDO	klitre	3311.3	2002.9	3267.1	3597.0	3587.2
8.2.2	Sources of supply						
	HFO		IOC Koyali Gujrat				
	LDO		HPCL/BPCL Delhi				
8.2.3	Transportation Distance of the station from the sources of supply						
	HFO	km	Approx 1000km				
	LDO	km	Approx 80 km				
8.2.4	Mode of Transport						
	HFO		Rail				
	LDO		Road				
8.2.5	Maximum Station capability to stock secondary fuels						
	HFO	klitre	30000				
	LDO	klitre	320	320	820	820	820
15	Secondary Fuel Oil :						
15.1	Consumption						
	HFO	MT	762.66	1843.4	5666.71	1756.6	2108.25
	LDO	MT	246.125	896.87	716.5	534.6	819.8
15.2	Weighted Average Gross Calorific value (As received)						
	HFO	kCal/kg(litre)	9996	9852	9801	9808	9847
	LDO	kCal/kg(litre)	9452	9539	9467	9334	9536
15.4	Actual Average stock maintained						
	HFO	klitre	2543	7827	7374	7444	5843
	LDO	klitre	159	443	656	679	649