

Annexure-I

**Pro-forma for furnishing Actual annual performance/operational data for the coal/lignite based thermal generating stations for the 5-year period
from 2012-13 to 2016-17**

SI.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
1	Name of Company		NTPC Ltd.					
2	Name of Station/ Pit head or Non- Pit head		Sipat Super Thermal Power Station Stage-I (pit-head)					
3	Installed Capacity and Configuration	MW	3 X 660 = 1980 MW					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Parameter at HP turbine inlet 247 KG/CM2(g) and Temperature 537 Degree C. Boiler: Water tube Supercritical, Pulverised Fuel, Tilting Tangential Corner Fired Balanced Turbine: LMZ Turbine condensing type					
5	Type of BFP		Electric Driven (02 Nos; 30%) + Steam Driven (02 nos; 60%)					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
8	Fuels :							
8.1	Primary Fuel :		Coal/ Lignite					
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 12.09.2009 with SECL for Sipat - 5.8 MMT Annual allocation through FSA dated 01.09.2013 with SECL for Sipat - 9.156 MMT Allocation through MOU dated 09.10.2014 with ECL - 5.0 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT					
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		SECL, ECL, NCL					For the Station (2980 MW)
			5.80	14.96	14.96	14.96	14.96	
			CCL: All Grades					
8.1.2.1	FSA	LOA MoU	9.91	10.13	11.58	13.23	13.90	
		MMT	0.00	0.23	0.61	0.00	0.00	
8.1.2.2	Imported	MMT	0.982	1.07	1.32	0.12	0.00	
8.1.2.3	Spot Market/e-auction	MMT	0.084	0.97	0.05	0.13	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	KM	SECL: Min. 99 Km (Manikpur colly sdng), Max. 323 Km (JAI NAGAR colly sdng- I & II)					
8.1.4	Mode of Transport		Rail/MGR					
8.1.5	Maximum Station capability to stock primary fuel	Days & MT	30 / 0.99					
8.1.6	Maximum stock maintained for primary fuel	MT	672657	629093	497000	894838	730439	
8.1.7	Minimum Stock maintained for primary fuel	MT	0	45861	0	515424	50000	
8.1.8	Average stock maintained for primary fuel	MT	147258	353543	115179	667336	402843	
8.2	Secondary Fuel :							
8.2.1	Annual Allocation/ Requirement	KL	11747					
8.2.2	Sources of supply		Oil Marketing Company					

8.2.3	Transportation Distance of the station from the sources of	KM	Varies from the source 400- 2500						
8.2.4	Mode of Transport		Road / Rail						
8.2.5	Maximum Station capability to stock secondary fuels	KL	8000 (HFO) / 1100 (LDO)						
8.2.6	Maximum Stock of secondary oil actually maintained	KL	7785	6630	6567	5484	6426	For the Station (2980 MW)	
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1967	3618	3639	2371	3489		
8.2.8	Average Stock of secondary oil actually maintained	KL	4988	5179	5175	4076	4529		
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts	Rs. Lakhs	5313.31	5432.14	9907.14	11261.33	2572.85	For the Station (2980 MW)	
9.2	Cost of spares included in capital cost for the purpose of tariff	Rs. Cr,	26.97	41.88	127.00	0	0		
10	Generation :								
10.1	-Actual Gross Generation at generator terminals	MU	10646.51	12477.10	14339.55	14355.05	15648.56		
10.2	-Actual Net Generation Ex-bus	MU	9969.67	11743.32	13584.32	13587.35	14833.10		
10.3	-Scheduled Generation Ex-bus	MU	10006.23	11844.32	13511.79	13495.27	14806.65		
11	Average Declared Capacity (DC)	MW	1491.06	1659.30	1661.04	1639.47	1733.94		
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	660.86	723.37	750.49	764.35	812.52		
13	Actual Energy supplied to Colony from the station	MU	12.96	10.41	4.62	3.50	3.20		
14	Primary Fuel :								
14.1	Consumption :	MT	6777126	7877227	8578544	8925635	9445035		
14.1.1	Domestic coal	From linked mines	MT	6095018	7219152	7784316	8674674	9445005	
		Non-linked mines	MT	NA	NA	NA	NA	NA	
14.1.2	Imported coal	MT	682108	658075	794228	250961	30		
14.1.3	Spot market/e-auction coal	MT	NA	NA	NA	NA	NA		
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal	(As Billed) (Eq. Basis)	kCal/kg	NA	NA	4156	4116	4187	
		(As Received) (TM Basis)	kCal/kg	NA	NA	3599	3604	3751	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	NA	NA	5698	5640	NA	
		(As Received) (AD Basis)	kCal/kg	NA	NA	5950	5632	5539	
14.2.3	Spot market/e-auction coal	(As Billed)	kCal/kg	NA	NA	NA	NA	NA	
		(As Received)	kCal/kg	NA	NA	NA	NA	NA	

14.2.4	Weighted Average Gross Calorific value (As Billed)	kCal/kg	NA	NA	4308	4131	4187	
14.2.5	Weighted Average Gross Calorific value (As Received)	kCal/kg	NA	NA	3817	3661	3751	
14.2.6	Weighted Average Gross Calorific value (As Fired)	kCal/kg	3650	3659	NA	NA	NA	
14.3	Price of coal :							
14.3.1	Weighted Average Landed price of Domestic coal	Rs/MT	1442.13	1425.26	1700.98	1621.62	2017.66	
14.3.2	Weighted Average Landed Price of Imported coal	Rs/MT	7339.59	4866.45	6546.52	6235.24	0.00	
14.3.3	Weighted Average Landed Price of Spot market/e-auction	Rs/MT	5670.14	4933.81	4391.64	4694.81	0.00	
14.3.4	Weighted Average Landed Price of all the Coals	Rs/MT	1976.19	2256.51	2194.08	1690.04	2017.66	
14.4	Blending :	% and MT (of the total coal consumed)	10.06	8.35	9.26	2.81	0.00	
14.4.1	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal						
14.4.2	Proportion of e-auction coal in the blending							
14.5	Actual Average Coal stock maintained	MT	147258	353543	115179	667336	402843	
		Days	5.02	12.05	3.93	22.74	13.73	
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.12	0.12	0.12	0.14	0.12	
14.5.1.2	Transit loss from non-linked mines including e-auction coal							
14.5.1.3	Transit loss of imported coal		0.23	0.18	0.09	0.13	0.14	
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines (MGR/ Rail)	MT %						
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 : (If more than one fuel used then give details of all the fuels							
15.1	Consumption	HFO LDO	KL KL	5621 1065	3139 256	1846 31	4282 3	2349 0
15.2	Weighted Average Gross Calorific value (As received)	HFO LDO	Kcal/Ltr Kcal/Ltr	10130 10224	10130 10225	10130 10225	10108 10230	10084 NA
15.3	Weighted Average Price	HFO LDO	Rs/KL Rs/KL	50606 68081	53725 79296	49071 0	28621 0	25238 0
15.4	Actual Average Stock maintained	HFO LDO	KL KL	4296 692	4482 697	4502 673	3437 639	3896 633
16	Weighted average duration of outages(unit-wise details):							

For the Station (2980 MW)

For the Station (2980 MW)

16.1	Planned Outages	Days	0.00	11.31	31.75	26.41	10.47		
16.2	Forced Outages	Days	36.17	32.66	4.80	23.47	15.34		
16.3	Number of tripping	Nos	52	28	18	31	20		
16.4	Number of start-ups:	Nos	53	28	19	32	20		
16.4.1	Cold Start-up	Nos	5	6	2	4	3		
16.4.2	Warm Start-up	Nos	37	13	10	20	10		
16.4.3	Hot start-up	Nos	11	9	7	8	7		
17	NOx , SOx ,and other particulate matter emission in :								
17.1	Design value of emission control equipment	mg/Nm3							
17.2	Actual emission (Stage-I)	SPM	mg/Nm3	44	43	43	42	39	
		SOX	mg/Nm3	622	639	628	541	654	
		NOX	mg/Nm3	358	368	357	345	372	
19	Detail of Ash utilization % of fly ash produced		%	20.64	21.26	31.19	15.20	22.87	
19.1	Conversion of value added product	%	12.52	19.83	30.00	12.75	12.68	For the Station (2980 MW)	
19.2	For making roads & embarkment	%	0.00	0.00	0.10	0.00	0.05		
19.3	Land filling	%	0.58	1.21	0.19	0.84	4.70		
19.4	Used in plant site in one or other form or used in some other	%	7.53	0.22	0.91	1.60	5.43		
19.5	Any other use , Please specify	%	0.00	0.00	0.00	0.00	0.00		
20	Cost of spares actually consumed		Rs. Lakhs	5995.31	5275.82	5980.99	7165.25	8674.96	For the Station (2980 MW)
21	Average stock of spares		Rs. Lakhs	15082.97	22229.74	26402.24	30119.26	31408.10	
22	Number of employees deployed in O&M								Man- power as on last day of FY. Man MW ratio computed for 2980 MW
22.1	- Executives			572	558	513	492	442	
22.2	- Non Executives			489	507	560	569	553	
22.3	- Corporate office			3170	3051	2916	2973	2787	
23	Man-MW ratio			0.36	0.36	0.36	0.36	0.33	

Note: Allocation of stations attached at Appendix-I

Man-MW ratio computed excluding Corporate Employees

Average Coal stock computed based on monthly closing stock

Annexure-I

**Pro-forma for furnishing Actual annual performance/operational data for the coal/lignite based thermal generating stations for the 5-year period
from 2012-13 to 2016-17**

Sl.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
1	Name of Company		NTPC Ltd.					
2	Name of Station/ Pit head or Non- Pit head		Sipat Super Thermal Power Station Stage-II (pit-head)					
3	Installed Capacity and Configuration	MW	2 X 500 = 1000 MW					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Steam parameter at HP turbine inlet 170 KG/CM2(g) / 537 Degree C. Boiler: Water tube Subcritical, controlled circulation,Pulverised Fuel,Tilting Tangential Corner Fired Balanced Turbine:500 MW Turbine condensing type					
5	Type of BFP		Electric Driven (01 Nos) + Steam Driven (02 nos)					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
8	Fuels :							
8.1	Primary Fuel :		Coal/ Lignite					
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 12.09.2009 with SECL for Sipat - 5.8 MMT Annual allocation through FSA dated 01.09.2013 with SECL for Sipat - 9.156 MMT Allocation through MOU dated 09.10.2014 with ECL - 5.0 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT					
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		SECL, ECL,NCL					For the Station (2980 MW) Requirement has been worked out at 90% PLF
			5.80	14.96	14.96	14.96	14.96	
			CCL: All Grades					
8.1.2.1	FSA	LOA	9.91	10.13	11.58	13.23	13.90	
		MoU	0.00	0.23	0.61	0.00	0.00	
8.1.2.2	Imported	MMT	0.982	1.07	1.32	0.12	0.00	
8.1.2.3	Spot Market/e-auction	MMT	0.084	0.97	0.05	0.13	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	KM	SECL: Min. 99 Km (Manikpur colly sdng), Max. 323 Km (JAI NAGAR colly sdng- I & II)					For the Station (2980 MW)
8.1.4	Mode of Transport		Rail/MGR					
8.1.5	Maximum Station capability to stock primary fuel	Days & MT	20.3 / .75					
8.1.6	Maximum stock maintained for primary fuel	MT	672657	629093	497000	894838	730439	
8.1.7	Minimum Stock maintained for primary fuel	MT	0	45861	0	515424	50000	
8.1.8	Average stock maintained for primary fuel	MT	147258	353543	115179	667336	402843	
8.2	Secondary Fuel :							
8.2.1	Annual Allocation/ Requirement	KL	11747					
8.2.2	Sources of supply		Oil Marketing Company					
8.2.3	Transportation Distance of the station from the sources of supply		Varies from the source 400- 2500					
8.2.4	Mode of Transport	KM	Road / Rail					

Sl.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks	
8.2.5	Maximum Station capability to stock secondary fuels	KL	8000 (HFO) / 1100 (LDO)						For the Station (2980 MW)
8.2.6	Maximum Stock of secondary oil actually maintained	KL	7785	6630	6567	5484	6426		
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1967	3618	3639	2371	3489		
8.2.8	Average Stock of secondary oil actually maintained	KL	4988	5179	5175	4076	4529		
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts	Rs. Lakhs	5313.31	5432.14	9907.14	11261.33	2572.85	For the Station (2980 MW)	
9.2	Cost of spares included in capital cost for the purpose of tariff	Rs. Lakhs	1184.56	0.00	0.00	0.00	0.00		
10	Generation :								
10.1	-Actual Gross Generation at generator terminals	MU	6908.26	6692.33	7433.53	7929.79	8130.37		
10.2	-Actual Net Generation Ex-bus	MU	6475.58	6290.00	7018.67	7490.60	7687.98		
10.3	-Scheduled Generation Ex-bus	MU	6455.59	6309.69	6979.90	7428.61	7674.39		
11	Average Declared Capacity (DC)	MW	801.21	883.77	853.39	906.04	906.52		
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	429.54	397.08	412.64	437.27	439.21		
13	Actual Energy supplied to Colony from the station	MU	6.54	5.26	2.33	1.77	1.62		
14	Primary Fuel :								
14.1	Consumption :	MT	4375986	4403232	4631064	5100699	5029031		
14.1.1	Domestic coal	From linked mines	MT	4103621	4030933	4326188	4987588	5028995	
		Non-linked mines	MT	NA	NA	NA	NA	NA	
14.1.2	Imported coal	MT	272365	372299	304876	113111	36		
14.1.3	Spot market/e-auction coal	MT	0	0	0	0	0		
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal	(As Billed) (Eq. Basis)	kCal/kg	NA	NA	4156	4116	4187	
		(As Received) (TM Basis)	kCal/kg	NA	NA	3623	3615	3784	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	NA	NA	NA	NA	NA	
		(As Received) (AD Basis)	kCal/kg	6000	6000	5950	5632	5539	
14.2.3	Spot market/e-auction coal	(As Billed)	kCal/kg	NA	NA	NA	NA	NA	
		(As Received)	kCal/kg	NA	NA	NA	NA	NA	

Sl.No.	Particulars			Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
14.2.4	Weighted	Average	Gross Calorific value (As Billed)	kCal/kg	NA	NA	4308	4131	4187	
14.2.5	Weighted Received)	Average	Gross Calorific value (As	kCal/kg	NA	NA	3776	3660	3784	
14.2.6	Weighted	Average	Gross Calorific value (As Fired)	kCal/kg	3730	3619	NA	NA	NA	
14.3	Price of coal :									
14.3.1	Weighted Average Landed price of Domestic coal				1442.13	1425.26	1700.98	1621.62	2017.66	
14.3.2	Weighted Average Landed Price of Imported coal				7339.59	4866.45	6546.52	6235.24	0.00	
14.3.3	Weighted Average Landed Price of Spot market/e-auction				5670.14	4933.81	4391.64	4694.81	0.00	
14.3.4	Weighted Average Landed Price of all the Coals				1976.19	2256.51	2194.08	1690.04	2017.66	
14.4	Blending :			% and MT (of the total coal consumed)	6.22	8.46	6.58	2.22	0.00	
14.4.1	Blending ratio of imported coal with domestic coal			Equivalent to domestic coal						
14.4.2	Proportion of e-auction coal in the blending									
14.5	Actual Average Coal stock maintained			MT	147258	353543	115179	667336	402843	
				Days	5.02	12.05	3.93	22.74	13.73	
14.5	Actual Transit & Handling Losses for coal/Lignite									
14.5.1	Pit- Head Station									
14.5.1.1	Transit loss from linked mines			%	0.12	0.12	0.12	0.14	0.12	For the Station (2980 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal				NA	NA	NA	NA	NA	
14.5.1.3	Transit loss of imported coal				0.23	0.18	0.09	0.13	0.14	
14.5.2	Non-Pit Head station									
14.5.2.1	Transit loss from linked mines (MGR/ Rail)			MT %						
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 : (If more than one fuel used then give details of all the fuels									
15.1	Consumption		HFO	KL	1765	1196	1235	1310	1152	
			LDO	KL	409	59	22	15	0	
15.2	Weighted Average Gross Calorific value (As received)		HFO	Kcal/Ltr	10130	10130	10130	10117	10084	For the Station (2980 MW)
			LDO	Kcal/Ltr	10225	10225	10225	10227	NA	
15.3	Weighted Average Price		HFO	Rs/KL	50606	53725	49071	28621	25238	
			LDO	Rs/KL	68081	79296	0	0	0	

Sl.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
15.4	Actual Average Stock maintained	KL	4296	4482	4502	3437	3896	
16	Weighted average duration of outages(unit-wise details):							
16.1	Planned Outages	Days	23.62	0.00	23.00	16.87	12.06	
16.2	Forced Outages	Days	17.58	26.30	4.91	4.47	3.61	
16.3	Number of tripping	Nos	9	5	3	0	3	
16.4	Number of start-ups:	Nos	21	12	11	4	9	
16.4.1	Cold Start-up	Nos	2	3	1	1	1	
16.4.2	Warm Start-up	Nos	17	6	6	3	7	
16.4.3	Hot start-up	Nos	2	3	4	0	1	
17	NOx , SOx ,and other particulate matter emission in :							
17.1	Design value of emission control equipment	mg/Nm3						
17.2	Actual emission (Stage-I)	SPM	42	43	43	44	43	
		SOX	654	676	656	575	650	
		NOX	377	373	384	401	374	
19	Detail of Ash utilization % of fly ash produced	%	20.64	21.26	31.19	15.20	22.87	
19.1	Conversion of value added product	%	12.52	19.83	30.00	12.75	12.68	For the Station (2980 MW)
19.2	For making roads & embarkment	%	0.00	0.00	0.10	0.00	0.05	
19.3	Land filling	%	0.58	1.21	0.19	0.84	4.70	
19.4	Used in plant site in one or other form or used in some other	%	7.53	0.22	0.91	1.60	5.43	
19.5	Any other use , Please specify	%	0.00	0.00	0.00	0.00	0.00	
20	Cost of spares actually consumed	Rs. Lakhs	5995.31	5275.82	5980.99	7165.25	8674.96	For the Station (2980 MW)
21	Average stock of spares	Rs. Lakhs	15082.97	22229.74	26402.24	30119.26	31408.10	
22	Number of employees deployed in O&M							
22.1	- Executives		572	558	513	492	442	Man- power as on last day of FY. Man MW ratio computed for 2980 MW
22.2	- Non Executives		489	507	560	569	553	
22.3	- Corporate office		3170	3051	2916	2973	2787	
23	Man-MW ratio		0.36	0.36	0.36	0.36	0.33	

Note: Allocation of stations attached at Appendix-I
Man-MW ratio computed excluding Corporate Employees
Average Coal stock computed based on monthly closing stock

Annexure-VI (A)

DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Name of the Company:

NTPC Ltd.

Name of the Power Station:

Sipat Super Thermal Power Station (2980 MW)

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
1	Consumption of stores & spares	5995.31	5275.82	5980.99	7165.25	8674.96
2	Repair & Maintenance	4603.92	6029.97	7707.48	9223.63	9218.22
3	Insurance	840.15	983.19	1016.36	849.54	904.09
4	Security	1538.46	1561.94	1663.65	2247.10	2351.35
5	Water Charges	9187.59	11376.90	13086.00	13367.08	15537.72
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	167.64	183.08	166.77	121.84	109.88
6.3	Travelling & Conveyance	664.59	682.31	677.13	662.08	617.48
6.4	Communication Expenses	118.46	124.13	96.73	129.44	143.56
6.5	Advertising	24.29	123.21	23.08	17.94	20.88
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	49.88	54.03	57.82	54.29	62.69
6.9	Filing fee	112.60	131.12	131.12	131.12	131.12
	Subtotal (Administrative Expenses)	1137.46	1297.88	1152.65	1116.71	1085.61
7.0	Employee Cost					
7.1.1	Salaries, Wages & Allowances	9173.69	9917.68	10257.54	10319.60	12196.76
7.1.2	Pension	68.98	2318.92	913.45	953.66	923.07
7.1.3	Gratuity	293.40	112.56	-46.54	-29.36	1608.84
7.1.4	Provident Fund	743.56	824.87	817.72	815.63	852.04
7.1.5	Leave Encashment	1014.70	951.93	993.93	1056.53	1556.96
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on superannuated employees	9.81	15.85	27.14	31.55	0.00
7.2.2	-Medical expenses on regular employees & others	697.11	731.40	884.79	1077.07	535.32
7.2.3	-Uniform/Livries & safety equipment	82.97	253.66	217.69	212.45	294.23
7.2.4	-Canteen expenses	163.54	180.77	204.39	181.92	196.02
7.2.5	-Other staff welfare expenses	130.04	153.02	165.23	177.84	292.33
	Subtotal (Staff welfare Expenses)	1083.47	1334.71	1499.24	1680.83	1317.91
7.3	Productivity linked Incentive	429.64	327.34	152.92	106.17	0.01
7.4	Expenditure on VRS	0.00	0.00	190.97	2.72	0.00
7.5	Ex-gratia	231.34	241.58	475.80	317.71	311.97
7.6	Performance Related Pay (PRP)	770.63	517.32	742.56	880.82	1109.52
	Sub Total (Employee Cost)	13809.42	16546.91	15997.60	16104.31	19877.07
8	Loss of Store	0.34	0.12	0.00	0.79	0.37
9	Provisions	690.32	147.10	147.95	169.62	271.00
10	Prior Period Expenses	0.00	0.00	0.00	0.00	0.00
11	Corporate Office expenses allocation	6101.27	7746.57	8245.07	8485.18	8675.16
12	Others					
12.1	Rates & Taxes	189.81	189.89	187.30	259.48	188.42
12.2	Water cess	74.54	51.26	54.24	65.45	55.67
12.3	Training & recruitment expenses	74.02	44.43	52.56	97.09	62.26
12.4	Tender Expenses	94.17	124.28	78.63	145.98	142.43

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
12.5	Guest house expenses	60.94	68.68	49.08	78.60	70.95
12.6	Education expenses	74.06	89.79	82.55	63.09	83.46
12.7	Community Development Expenses	0.85	199.07	981.06	1267.22	1045.68
12.8	Ash utilisation expenses	22.76	0.00	-11.12	-4.98	-5.74
12.9	Books & Periodicals	13.50	10.26	0.39	0.49	0.36
12.10	Professional Charges	55.51	35.15	35.46	47.25	69.57
12.11	Legal expenses	-0.64	4.67	6.65	4.96	3.51
12.12	EDP Hire & other charges	39.64	57.95	36.70	44.60	57.69
12.13	Printing & Stationery	48.57	58.10	30.34	49.67	63.06
12.14	Misc Expenses	802.13	1377.68	1039.46	695.85	844.04
	Sub Total (Others)	1549.87	2311.23	2623.31	2814.75	2681.35
13	(Total 1 to 12)	45454.10	53277.62	57621.06	61543.96	69276.90
14	Revenue / Recoveries	-24.54	-24.47	-24.91	-33.72	-47.21
15	Net Expenses	45429.56	53253.15	57596.15	61510.24	69229.69
16	Capital spares consumed	177.55	623.71	594.74	1283.74	969.55
	Total O&M Cost	45607.12	53876.86	58190.89	62793.98	70199.24
	No. of Emp. Applied for VRS	5	No. VRS scheme was in operational			

DETAILS OF WATER CHARGES

Name of the Company: NTPC Ltd.

Name of the Power Station and Stage/Phase: Sipat Super Thermal Power Station (2980 MW)

(Rs. In Lakhs)

Sl.No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7
(A)	Plant					
1	Type of Plant	Coal Fired Thermal Power Plant				
2	Type of Cooling Tower	IDCT				
3	Type of Cooling Water System	Closed system				
4	Any Special Features which may increase/reduce water consumption	Ash Water Re-circulation System				
(B)	Quantum of Water : (Cubic Meter)					
5	Contracted Quantum	120000000				
6	Allocation of Water	120000000				
7	Actual water Consumption	78663920	74069726	68817986	89880379	84387226
8	Rate of Water Charges Rs/ cum	9.26	10.65	12.25	12.25	12.25
9	Other charges/Fees , if paid as part of Water Charges Rs lakhs	NIL	NIL	NIL	NIL	NIL
	Total water Charges Paid Rs lakhs	9187.59	11376.90	13086.00	13367.08	15537.72

Annexure-VI (D)**Details of capital Spares****Name of Company**
Name of Power station**NTPC LIMITED**
Sipat Super Thermal Power Station

Sl . No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
(A)	Details of capital spares in Opening stock	13495.77	18631.53	23439.96	32752.36	44834.55
(B)	Details of capital spares procured during the year	5313.31	5432.14	9907.14	11261.33	2572.85
(C)	Details of capital spares consumed during the year	177.55	623.71	594.74	1283.74	969.55
(D)	Details of capital spares closing at the end of the year	18631.53	23439.96	32752.36	42729.94	46437.85

Note: Details of spares being provided in soft copy as voluminous

Annexure-XIX

Name of the Utility: NTPC Ltd																
Name of the Generating Station: Sipat STPS Stage-I																
Station/ Stage/ Unit: 3X660																
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal																
Capacity of Plant (MW): 1980 MW																
COD : 01.08.2012																
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 (1.10.11- 31.3.12)	2012-13 (1.4.12- 24.5.12)	2012-13 (25.5.12- 31.7.12)	2012-13 (01.08.12 to 31.03.13)	2013-14	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)								71.00			80.54	89.62	89.03	87.85	92.92
2	Plant Load Factors (PLF) (%)								71.19			73.14	71.94	82.67	82.54	90.22
3	Scheduled Energy (MU)															
4	Scheduled Generation (MU)								1923.41			10006.23	11844.32	13511.79	13495.27	14806.65
5	Actual Generation (MU)								1944.52			9969.67	11743.32	13584.32	13587.35	14833.10
6	Quantum of coal consumption (MT)								1316137			6777126	7877227	8578544	8925635	9445035
7	Value of coal (Rs. Lakh)								18092			133929	177750	188220	150847	190569
8	Specific Coal Consumption (kg/kwh)								0.64			0.64	0.63	0.60	0.62	0.60
9	Gross Calorific Value of Coal (Kcal/ Kg)								3602.91			3649.57	3658.95	3816.62	3660.67	3751.06
10	Heat Contribution of Coal (Kcal/ kwh)								2297.90			2323.48	2310.02	2283.27	2276.12	2264.04
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$															
12	Quantum of Oil Consumption (KL)								337.00			6686.00	3395.00	1877.00	4285.00	
13	Value of Oil (Rs. lakh)															
14	Gross calorific value of oil (kcal/lit)								10177.00			10145.10	10137.16	10131.57	10102.18	10084.00
15	Specific Oil Consumption (ml/ kwh)								0.16			0.63	0.27	0.13	0.30	0.15
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$															
17	Heat Contribution of Oil (Kcal/ kwh)								1.66			6.37	2.76	1.33	3.02	1.51
18	Station Heat Rate (kcal/kwh)								2300			2330	2313	2285	2279	2266
19	Auxiliary Energy Consumption (%)								5.77			6.33	5.88	5.24	5.32	5.19
20	Debt at the end of the year (Rs. Cr)								2563.23	2640.87	4115.13	5507.74	5240.08	5005.41	4594.73	4141.30
21	Equity (Rs. Cr - (Average) #								1125.77	1162.44	1836.68	2505.89	2596.48	2680.14	2738.45	2752.50
22	Working Capital (Rs. Cr) – finally admitted by CERC								295.80	300.35	532.32	944.10	957.84	879.67	889.18	892.19
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #								3752.56	3874.79	6122.28	8352.97	8654.93	8933.81	9128.18	9175.01
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr								787.27	809.43	1348.68	1890.76	1949.44	1833.26	1855.51	1849.60
	(a) Return on equity – post tax (admitted by CERC) for 2004-09 & pre tax (admitted by CERC) for 2009-17 \$															
	Absolute value (in Rs. Cr)								258.30	266.71	421.41	574.95	609.68	525.58	539.61	542.38
	Rate (%)								22.9440	22.9440	22.9440	22.9440	23.4810	19.6100	19.7050	19.7050
	(b) Interest on Loan															
	Absolute value (in Rs Cr)								197.44	200.16	315.35	422.41	413.67	396.35	375.62	347.36
	Rate (%) – Weighted Average Rate								7.6557	7.6923	7.6323	7.6488	7.6975	7.7371	7.8253	7.9524
	(c) Depreciation (finally allowed by CERC)															
	Absolute value (in Rs Cr)								191.45	197.10	310.52	424.39	439.91	453.78	463.65	466.03
	AAD															
	Rate (%)								5.10	5.09	5.07	5.08	5.08	5.08	5.08	5.08
	(d) Interest on working Capital															
	Absolute value (in Rs Cr)								34.76	35.29	71.86	127.45	129.31	118.75	120.04	120.45

Name of the Utility: NTPC Ltd																
Name of the Generating Station: Sipat STPS Stage-I																
Station/ Stage/ Unit: 3X660																
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal																
Capacity of Plant (MW): 1980 MW																
COD : 01.08.2012																
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 (1.10.11- 31.3.12)	2012-13 (1.4.12- 24.5.12)	2012-13 (25.5.12- 31.7.12)	2012-13 (01.08.12 to 31.03.13)	2013-14	2014-15	2015-16	2016-17
	Rate (%)								11.75	11.75	13.50	13.50	13.50	13.50	13.50	13.50
	(e) Operation and maintenance cost (finally admitted by CERC)															
	Absolute value (in Rs Cr)								86.328	91.212	182.424	264.5148	279.8268	251.856	267.7719	284.5623
	Water charges (finally admitted by CERC) (in Rs Cr) #													86.95	88.82	88.82
	Rate (%)															
	(f) Compensation Allowances (in Rs Cr)															
25	AFC (Rs. Kwh)								1.71	1.76	1.47	1.37	1.41	1.35	1.37	1.36
26	Energy Charge (Rs./Kwh)								1.00	1.40	1.40	1.40	1.51	1.41	1.21	1.32
27	Total tariff (Rs. Kwh)								2.71	3.16	2.87	2.77	2.92	2.76	2.58	2.68
28	Revenue realisation before tax (Rs. Crore)															
29	Revenue realisation after tax (Rs. Crore)															
30	Profit/ loss (Rs. Crore)					59.29	440.43	301.70	451.48	772.43	1235.82	1117.80	1042.50	1102.00		
31	DSM Generation (MU)							21.10	-36.56	-101.00	72.53	92.08	26.45			
32	DSM Rate (Ps/Kwh)															
33	Revenue from DSM (Rs. Crore)								-13.67	-2.09	-6.53	-41.21	-35.00	-24.48		

Note:

- 1 \$ "Ex-Bus" word is additionally inserted.
- 2 # "Average" word is additionally inserted.
- 3 \$ "for 2004-09 & pre tax (admitted by CERC) for 2009-17" word is additional inserted
- 4 # Additional Row 24(e) inserted
- 5 DSM Revenue (-)Received / (+) Paid
- 6 * For the whole station as an when the units were declared COD

Annexure-XIX

Name of the Utility: NTPC Ltd															
Name of the Generating Station: Sipat STPS Stage-II															
Station/ Stage/ Unit: 2 X 500															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 01.01.2009															
		2004-05	2005-06	2006-07	2007-08	2008-09 (20.06.2008 to 31.12.2008)	2008-09 (01.01.2009 to 31.03.2009)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)					95.69		93.58	96.95	98.79	85.69	94.52	90.55	96.13	96.18
2	Plant Load Factors (PLF) (%)					94.63		93.32	96.53	98.87	78.86	76.40	84.86	90.28	92.81
3	Scheduled Energy (MU)														
4	Scheduled Generation (MU)					4023.47		7663.50	7928.60	8107.20	6455.59	6309.69	6979.90	7428.61	7674.39
5	Actual Generation (MU)					4050.35		7715.67	7981.90	8177.91	6475.58	6290.00	7018.67	7490.60	7687.98
6	Quantum of coal consumption (MT)					2873690.00		5626236	5792593	5775739	4375986	4403232	4631064	5100699	5029031
7	Value of coal (Rs. Lakh)							62097	67854	79393	86478	99359	101609	86204	101469
8	Specific Coal Consumption (kg/kwh)					0.67		0.69	0.69	0.67	0.63	0.66	0.62	0.64	0.62
9	Gross Calorific Value of Coal (Kcal/ Kg)					3490.62		3411.09	3426.22	3541.80	3729.55	3618.65	3775.69	3659.58	3784.28
10	Heat Contribution of Coal (Kcal/ kwh)					2355.53		2347.50	2346.99	2348.43	2362.57	2380.90	2352.27	2353.96	2340.31
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
12	Quantum of Oil Consumption (KL)					2261.93		1608.78	1739.35	798.14	2174.00	1255.00	1257.00	1325.00	1152.00
13	Value of Oil (Rs. lakh)														
14	Gross calorific value of oil (kcal/lit)					9982.89		10097.1	10131.5	10139.42	10148.07	10134.47	10131.66	10115.25	10084.00
15	Specific Oil Consumption (ml/ kwh)					0.53		0.20	0.21	0.09	0.31	0.19	0.17	0.17	0.14
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
17	Heat Contribution of Oil (Kcal/ kwh)					5.30		1.99	2.08	0.93	2.59	1.90	1.68	1.69	1.43
18	Station Heat Rate (kcal/kwh)					2361		2349	2349	2349	2365	2383	2354	2356	2342
19	Auxiliary Energy Consumption (%)					5.28		5.62	5.60	5.82	6.31	6.01	5.55	5.51	5.40
20	Debt at the end of the year (Rs. Cr)					1631.49	2700.15	2557.95	2458.91	2310.70	2141.29	1940.91	1628.00	1409.14	1190.28
21	Equity (Rs. Cr - (Average) #					736.25	1198.51	1187.99	1234.21	1260.94	1280.26	1287.91	1293.04	1294.56	1294.56
22	Working Capital (Rs. Cr) – finally admitted by CERC					175.58	297.20	310.68	316.22	322.96	327.93	331.31	430.64	433.83	436.47
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #					2454	3995	3960	4114	4203	4268	4293	4310	4315	4315
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr					459.69	640.64	833.40	854.09	878.88	896.78	902.12	882.89	881.07	880.85
	(a) Return on equity – post tax (admitted by CERC) for 2004-09 & pre tax (admitted by CERC) for 2009-17 \$														
	Absolute value (in Rs. Cr)					103.08	167.79	278.95	286.46	289.31	293.74	302.41	253.56	255.09	255.09
	Rate (%)					14.0000	14.0000	23.4810	23.2100	22.9440	22.9440	23.4810	19.6100	19.7050	19.7050
	(b) Interest on Loan														
	Absolute value (in Rs Cr)					118.57	186.30	169.60	167.73	176.49	177.05	163.17	148.67	133.58	122.31
	Rate (%) – Weighted Average Rate					7.0801	6.9132	6.6303	6.8214	7.6378	8.2684	8.4068	8.5753	8.7966	9.4107
	(c) Depreciation (finally allowed by CERC)														
	Absolute value (in Rs Cr)					84.79	140.64	202.65	209.62	214.03	218.07	219.41	218.60	218.86	218.86
	AAD					76.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rate (%)					3.455	3.520	5.117	5.095	5.092	5.110	5.111	5.072	5.072	5.072

Name of the Utility: NTPC Ltd															
Name of the Generating Station: Sipat STPS Stage-II															
Station/ Stage/ Unit: 2 X 500															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 01.01.2009															
		2004-05	2005-06	2006-07	2007-08	2008-09 (20.06.2008 to 31.12.2008)	2008-09 (01.01.2009 to 31.03.2009)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
	(d) Interest on working Capital														
	Absolute value (in Rs Cr)					21.51	36.41	38.06	38.74	39.56	40.17	40.59	58.14	58.57	58.92
	Rate (%)					12.25	12.25	12.25	12.25	12.25	12.25	12.25	13.50	13.50	13.50
	(e) Operation and maintenance cost (finally admitted by CERC)														
	Absolute value (in Rs Cr)					54.75	109.5	130	137.4	145.3	153.6	162.4	160	170.1	180.8
	Water charges (finally admitted by CERC) (in Rs Cr) #												43.91	44.86	44.86
	Rate (%)														
	Normative O&M Expenses (in Rs Lakh/MW) #														
	(f) Compensation Allowances (in Rs Cr)														
25	AFC (Rs. Kwh)					1.42	0.99	1.20	1.23	1.26	1.29	1.30	1.29	1.28	1.29
26	Energy Charge (Rs./Kwh)					0.74	0.74	0.77	0.84	0.93	1.26	1.58	1.41	1.24	1.36
27	Total tariff (Rs. Kwh)					2.16	1.73	1.97	2.07	2.19	2.55	2.88	2.70	2.52	2.65
28	Revenue realisation before tax (Rs. Crore)														
29	Revenue realisation after tax (Rs. Crore)														
30	Profit/ loss (Rs. Crore)					59.29		440.43	301.70	451.48	772.43	1235.82	1117.80	1042.50	1102.00
31	DSM Generation (MU)					26.88		52.17	53.30	70.71	19.99	-19.69	38.77	61.99	13.59
32	DSM Rate (Ps/Kwh)														
33	Revenue from DSM (Rs. Crore)					-8.07		-21.338	-18.055	-24.706	-12.876	-5.932	-24.073	-27.131	-16.100

Note:

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- 4 # Additional Row 24(e) inserted
- 5 DSM Revenue (-)Received / (+) Paid
- 6 * For the whole station as an when the units were declared COD