

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		Simhadri Super Thermal Power Station Stage-I (non-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 Pr: 170 ata, MS/HRH Temp: 537/537 deg C BHEL make KWU design Steam Turbine, BHEL make CE design Boiler						
5	Type of BFP		Steam Driven						
6	Circulating water system		Open Cycle						
7	Any other Site specific feature		NDCT, Sea Water is used as cooling water						
8	Fuels :								
8.1	Primary Fuel :		Coal/ Lignite					For the Station (2000 MW) Requirement has been worked out at 90% PLF	
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 17.07.2013 with MCL for Simhadri-II- 4.62 MMT Annual allocation through FSA dated 21.01.2016 with ECL for Simhadri-II- 1.5 MMT Annual allocation through modified FSA dated 23.08.2016 with MCL for Simhadri-I- 3.7 MMT Allocation through MOU dated 07.08.2012, 01.04.2013, 05.05.2015, 05.05.2016 with SCCL Allocation through MOU dated 28.02.2015 with ECL - 5.5 MMT Annual Requirement : 10.72						
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		MCL, ECL, SCCL 5.20 9.82 9.82 9.82 9.82 MCL: G7 to G13 ECL: G13 and above						
8.1.2.1	FSA	LOA MoU	MMT	6.90 0.82	7.65 0.54	7.02 1.07	6.26 1.72		6.55 2.36
8.1.2.2	Imported		MMT	1.479	1.54	2.47	2.24	0.09	
8.1.2.3	Spot Market/e-auction		MMT	0.023	0.30	0.00	0.00	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	KM		MCL: Min. 594 Km (Lajkura O.C. Mines Brajarajnagar), Max. 616 Km (Kanika Sdng) ECL: Min. 999 Km (Bonjemehary Colly Sdng), Max. 1038 Km (Purushottampur Colly Sdng)					For the Station (2000 MW)
8.1.4	Mode of Transport		Rail						
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	36.4 / 1.0						
8.1.6	Maximum stock maintained for primary fuel	MT	205000	110330	394000	817774	918000		

8.1.7	Minimum Stock maintained for primary fuel	MT	9700	2078	14841	170769	321000	
8.1.8	Average stock maintained for primary fuel	MT	42631	42786	194381	490732	648144	
8.2	Secondary Fuel :							
8.2.1	Annual Allocation/ Requirement	KL			7884			
8.2.2	Sources of supply				HPCL (Vizag)			
8.2.3	Transportation Distance of the station from the sources of	KM			40			
8.2.4	Mode of Transport				Road			
8.2.5	Maximum Station capability to stock secondary fuels	KL			4000 (HFO) / 500 (LDO)			
8.2.6	Maximum Stock of secondary oil actually maintained	KL			2401			For the Station (2000 MW)
8.2.7	Minimum Stock of secondary oil actually maintained	KL			1111			
8.2.8	Average Stock of secondary oil actually maintained	KL			1837			
9	Cost of Spares :							
9.1	Cost of Spares capitalized in the books of accounts	Rs. Lakhs	5811.85	4014.32	3561.44	1996.71	1527.02	For the Station (2000 MW)
9.2	Cost of spares included in capital cost for the purpose of tariff	Rs. Lakhs	0	0	0	0	0	
10	Generation :							
10.1	-Actual Gross Generation at generator terminals	MU	7706.49	7558.83	7730.56	7205.24	7212.00	
10.2	-Actual Net Generation Ex-bus	MU	7231.96	7090.60	7276.48	6783.59	6806.47	
10.3	-Scheduled Generation Ex-bus	MU	7171.66	7176.56	7330.18	6875.64	6905.15	
11	Average Declared Capacity (DC)	MW	824.75	837.13	888.06	891.11	897.19	
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	459.28	442.09	422.41	398.24	391.14	
13	Actual Energy supplied to Colony from the station	MU	3.42	3.48	3.31	3.77	3.60	
14	Primary Fuel :							
14.1	Consumption :	MT	5563256	5156953	5072415	5086427	4835188	
14.1.1	Domestic coal	From linked mines	MT	4680010	4167708	3959050	3909255	4757588
		Non-linked mines	MT					
14.1.2	Imported coal	MT	883246	989245	1113365	1177172	77600	
14.1.3	Spot market/e-auction coal	MT						
14.2	Gross Calorific Value (GCV) :							
14.2.1	Domestic Coal	(As Billed) (Eq. Basis)	kCal/kg	3720	4081	4276	3799	4157
		(As Received) (TM Basis)	kCal/kg			3364	3093	3554
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6037	5876	5650	5584	5660
		(As Received) (ADB Basis)	kCal/kg	5589	5292	4736	4404	4755

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	4091	4355	4570	4203	4173		
14.2.5	Weighted Average Gross Calorific value (As Received)		kCal/kg	NA	NA	3578	3379	3574		
14.2.6	Weighted Average Gross Calorific value (As Fired)		kCal/kg	3262	3454	NA	NA	NA		
14.3	Price of coal :									
14.3.1	Weighted Average Landed price of Domestic coal				2116.73	2802.85	3529.94	3158.03	3985.55	
14.3.2	Weighted Average Landed Price of Imported coal				5260.37	5059.66	4149.91	3835.51	1937.28	
14.3.3	Weighted Average Landed Price of Spot market/e-auction				0.00	7579.23	0.00	0.00	0.00	
14.3.4	Weighted Average Landed Price of all the Coals				2620.92	3218.08	3675.62	3307.13	3964.16	
14.4	Blending :		% and MT (of the total coal consumed)		15.88	19.18	21.95	23.14	1.60	
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	42631	42786	194381	490732	648144		For the Station 2000 MW
			Days	1.54	1.54	7.01	17.69	23.36		
14.5	Actual Transit & Handling Losses for coal/Lignite									
14.5.1	Pit- Head Station									
14.5.1.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA		
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			NA	NA	NA	NA	NA		
14.5.2	Non-Pit Head station									
14.5.2.1	Transit loss from linked mines (MGR/ Rail)		%	0.71	0.73	0.79	0.79	0.80		
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.			Nil	Nil	Nil	Nil	Nil		For the Station (2000 MW)
14.5.2.3	Transit loss of imported coal		%	0.17	0.18	0.18	0.18	0.18		
15	Secondary Fuel Oil : (If more than one fuel used then give details of all the fuels									
15.1	Consumption		HFO	KL	1355	1825	886	667	1196	
			LDO	KL	492	221	695	454	735	
15.2	Weighted Average Gross Calorific value (As received)		HFO		9771	9775	9878	9897	9887	
			LDO	Kcal/Ltr	9414	9357	9356	9376	9382	
15.3	Weighted Average Price			Rs/KL	65172.0	63081.0	53734.0	30984.0	38496.0	For the Station (2000 MW)
15.4	Actual Average Stock maintained			KL	1803	1824	1564	1531	1827	
16	Weighted average duration of outages(unit-wise details):									
16.1	Planned Outages			Days	15.92	15.30	15.82	22.34	14.51	

16.2	Forced Outages	Days	8.12	11.52	5.89	0.62	6.22	
16.3	Number of tripping	Nos	14	16	15	6	12	
16.4	Number of start-ups:	Nos	14	16	15	6	12	
16.4.1	Cold Start-up	Nos	2	2	3	1	1	
16.4.2	Warm Start-up	Nos	8	10	7	1	7	
16.4.3	Hot start-up	Nos	4	4	5	4	4	
17	NOx , SOx ,and other particulate matter emission in :							
17.1	Design value of emission control equipment	mg/Nm3	ESP design dust outlet Conc.: 50					
17.2	Actual emission (Stage-I)	SPM	mg/Nm3	81	79	61	68	69
		SOX	mg/Nm3	1253	1292	1060	1064	1112
		NOX	mg/Nm3	372	393	294	316	321
19	Detail of Ash utilization % of fly ash produced		%	60.78	41.81	33.63	35.35	83.65
19.1	Conversion of value added product	%	11.21	11.25	13.72	18.41	23.70	For the Station (2000 MW)
19.2	For making roads & embarkment	%	0.07	0.02	0.01	1.41	0.00	
19.3	Land filling	%	0.00	0.02	0.00	0.00	6.74	
19.4	Used in plant site in one or other form or used in some other	%	49.50	30.52	19.90	15.53	53.21	
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	4064.76	4854.70	5191.50	5797.62	4920.04	For the Station (2000 MW)
21	Average stock of spares	Rs. Lakhs	9332.50	12320.68	14750.23	15670.30	15876.98	
22	Number of employees deployed in O&M							Manpower as on last date of FY. Man-MW ratio for the whole station of 2000 MW
22.1	- Executives		488	464	414	384	350	
22.2	- Non Executives		228	223	201	194	224	
22.3	- Corporate office		3170	3051	2916	2973	2787	
23	Man-MW ratio		0.36	0.34	0.31	0.29	0.29	

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		Simhadri Super Thermal Power Station Stage-II (non-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 Pr: 170 ata, MS/HRH Temp: 537/565 deg C BHEL make KWU design Steam Turbine, BHEL make CE design Boiler					
5	Type of BFP		Steam Driven					
6	Circulating water system		Open Cycle					
7	Any other Site specific feature		NDCT, Sea Water is used as cooling water					
8	Fuels :							
8.1	Primary Fuel :		Coal/ Lignite					
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 17.07.2013 with MCL for Simhadri II- 4.62 MMT Annual allocation through FSA dated 21.01.2016 with ECL for Simhadri-II- 1.5 MMT Annual allocation through modified FSA dated 23.08.2016 with MCL for Simhadri-I- 3.7 MMT Allocation through MOU dated 07.08.2012, 01.04.2013, 05.05.2015, 05.05.2016 with SCCL Allocation through MOU dated 28.02.2015 with ECL - 5.5 MMT Annual Requirement : 10.72					
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		MCL, ECL, SCCL					For the Station (2000 MW) Requirement has been worked out at 90% PLF
			5.20	9.82	9.82	9.82	9.82	
			MCL: G7 to G13 ECL: G13 and above					
8.1.2.1	FSA	LOA MoU	6.90 0.82	7.65 0.54	7.02 1.07	6.26 1.72	6.55 2.36	
8.1.2.2	Imported	MMT	1.479	1.54	2.47	2.24	0.09	
8.1.2.3	Spot Market/e-auction	MMT	0.023	0.30	0.00	0.00	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	KM	MCL: Min. 594 Km (Lajkura O.C. Mines Brajaraj Nagar), Max. 616 Km (Kanika Sdng) ECL: Min. 999 Km (Bonjemehary Colly Sdng), Max. 1038 Km (Purushottampur Colly Sdng)					For the Station (2000 MW)
8.1.4	Mode of Transport		Rail					
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	36.4 / 1.0					
8.1.6	Maximum stock maintained for primary fuel	MT	205000	110330	394000	817774	918000	
8.1.7	Minimum Stock maintained for primary fuel	MT	9700	2078	14841	170769	321000	

Sl.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks	
8.1.8	Average stock maintained for primary fuel	MT	42631	42786	194381	490732	648144		
8.2	Secondary Fuel :								
8.2.1	Annual Allocation/ Requirement	KL	7884					For the Station (2000 MW)	
8.2.2	Sources of supply		HPCL (Vizag)						
8.2.3	Transportation Distance of the station from the sources of	KM	40						
8.2.4	Mode of Transport		Road						
8.2.5	Maximum Station capability to stock secondary fuels	KL	4000 (HFO) / 500 (LDO)						
8.2.6	Maximum Stock of secondary oil actually maintained	KL	2401						
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1111						
8.2.8	Average Stock of secondary oil actually maintained	KL	1837						
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts	Rs. Lakhs	5811.85	4014.32	3561.44	1996.71	1527.02	For the Station (2000 MW)	
9.2	Cost of spares included in capital cost for the purpose of tariff	Rs. Cr.	73.6**	31.76	19.48	0	0	** Allowed till 2012-13	
10	Generation :								
10.1	-Actual Gross Generation at generator terminals	MU	4956.71	7125.66	7294.97	7264.38	6961.44		
10.2	-Actual Net Generation Ex-bus	MU	4670.21	6748.40	6919.31	6873.04	6582.26		
10.3	-Scheduled Generation Ex-bus	MU	4630.24	6829.09	6968.84	6973.75	6667.84		
11	Average Declared Capacity (DC)	MW	532.18	807.39	857.51	908.25	911.66		
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	293.61	404.46	400.83	407.35	386.37		
13	Actual Energy supplied to Colony from the station	MU	1.71	1.74	1.65	1.89	1.80		
14	Primary Fuel :								
14.1	Consumption :	MT	3588840	4815239	4731810	4970112	4621347		
14.1.1	Domestic coal	From linked mines	MT	3034969	4242932	3714067	3612590		4540327
		Non-linked mines	MT						
14.1.2	Imported coal	MT	553871	572307	1017743	1357522	81020		
14.1.3	Spot market/e-auction coal	MT							
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal	(As Billed) (Eq. Basis)	kCal/kg	3720	4081	4276	3799	4157	
		(As Received) (TM Basis)	kCal/kg			3377	3093	3554	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6037	5876	5650	5584	5660	
		(As Received) (ADB Basis)	kCal/kg	5589	5292	4736	4404	4755	

SI.No.	Particulars		Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
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	4091	4355	4570	4203	4173	
14.2.5	Weighted Average	Gross Calorific value (As Received)	kCal/kg	NA	NA	3607	3449	3585	
14.2.6	Weighted Average	Gross Calorific value (As Fired)	kCal/kg	3285	3489	NA	NA	NA	
14.3	Price of coal :								
14.3.1	Weighted Average Landed price of Domestic coal		Rs/ MT	2116.73	2802.85	3529.94	3158.03	3985.55	
14.3.2	Weighted Average Landed Price of Imported coal		Rs/ MT	5260.37	5059.66	4149.91	3835.51	1937.28	
14.3.3	Weighted Average Landed Price of Spot market/e-		Rs/ MT	0.00	7579.23	0.00	0.00	0.00	
14.3.4	Weighted Average Landed Price of all the Coals		Rs/ MT	2620.92	3218.08	3675.62	3307.13	3964.16	
14.4	Blending :		% and MT (of the total coal consumed)	15.43	11.89	21.51	27.31	1.75	
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	42631	42786	194381	490732	648144	For the Station 2000 MW
			Days	1.54	1.54	7.01	17.69	23.36	
14.5	Actual Transit & Handling Losses for coal/Lignite								
14.5.1	Pit- Head Station								
14.5.1.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	
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			NA	NA	NA	NA	NA	
14.5.2	Non-Pit Head station								
14.5.2.1	Transit loss from linked mines (MGR/ Rail)		MT						
			%	0.71	0.73	0.79	0.79	0.80	
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.			Nil	Nil	Nil	Nil	Nil	For the Station (2000 MW)
14.5.2.3	Transit loss of imported coal		MT						
			%	0.17	0.18	0.18	0.18	0.18	
15	Secondary Fuel Oil : (If more than one fuel used then give details of all the fuels								
15.1	Consumption		HFO	0	134	1061	999	678	
			LDO	3449	1126	849	639	525	
15.2	Weighted Average Gross Calorific value (As received)		HFO	--	9754	9900	9899	9903	
			LDO	9414.0	9361.0	9354.0	9378.0	9312.0	

Sl.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
15.3	Weighted Average Price	Rs/KL	65172.0	63081.0	53734.0	30984.0	38496.0	For the Station (2000 MW)
15.4	Actual Average Stock maintained	KL	1803	1824	1564	1531	1827	
16	Weighted average duration of outages(unit-wise)							
16.1	Planned Outages	Days	14.80	28.33	23.10	15.26	12.55	
16.2	Forced Outages	Days	7.70	0.35	6.51	2.22	2.61	
16.3	Number of tripping	Nos	16	8	16	8	8	
16.4	Number of start-ups:	Nos	16	8	16	8	8	
16.4.1	Cold Start-up	Nos	6	4	5	1	1	
16.4.2	Warm Start-up	Nos	2	0	8	3	2	
16.4.3	Hot start-up	Nos	8	4	3	4	5	
17	NOx , SOx ,and other particulate matter emission in :							
17.1	Design value of emission control equipment	mg/Nm3	ESP design dust outlet Conc.: 50					
17.2	Actual emission	SPM	72	70	46	58	58	
		SOX	1251	1295	1043	1053	1114	
		NOX	373	377	281	285	245	
19	Detail of Ash utilization % of fly ash produced	%	60.78	41.81	33.63	35.35	83.65	For the Station (2000 MW)
19.1	Conversion of value added product	%	11.21	11.25	13.72	18.41	23.70	
19.2	For making roads & embarkment	%	0.07	0.02	0.01	1.41	0.00	
19.3	Land filling	%	0.00	0.02	0.00	0.00	6.74	
19.4	Used in plant site in one or other form or used in some	%	49.50	30.52	19.90	15.53	53.21	
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	4064.76	4854.70	5191.50	5797.62	4920.04	For the Station (2000 MW)
21	Average stock of spares	Rs. Lakhs	9332.50	12320.68	14750.23	15670.30	15876.98	
22	Number of employees deployed in O&M							Manpower as on last date of FY. Man-MW ratio for the whole station of 2000 MW
22.1	- Executives		488	464	414	384	350	
22.2	- Non Executives		228	223	201	194	224	
22.3	- Corporate office		3170	3051	2916	2973	2787	
23	Man-MW ratio		0.36	0.34	0.31	0.29	0.29	

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:

Simhadri Super Thermal Power Station (2000 MW)

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
1	Consumption of stores & spares	4064.76	4854.70	5191.50	5797.62	4920.04
2	Repair & Maintenance	4160.34	5774.63	7358.82	7989.69	8974.16
3	Insurance	469.36	531.84	582.78	535.78	516.89
4	Security	1187.02	1486.74	1752.31	2057.44	2362.00
5	Water Charges	1027.82	1022.48	1386.83	1629.44	1369.90
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.75	0.00
6.2	Electricity charges	145.00	170.97	175.78	194.81	204.87
6.3	Travelling & Conveyance	596.45	646.67	653.92	578.65	549.84
6.4	Communication Expenses	93.03	92.86	87.33	118.52	110.31
6.5	Advertising	8.33	12.96	24.52	21.31	18.23
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	49.87	43.20	67.77	77.47	85.63
6.9	Filing fee	78.78	84.66	88.00	88.00	88.00
	Subtotal (Administrative Expenses)	971.46	1051.32	1097.31	1079.52	1056.87
7.0	Employee Cost					
7.1.1	Salaries, Wages & Allowances	7091.79	7955.21	7681.08	7296.61	8072.77
7.1.2	Pension	42.18	1688.95	669.94	659.27	616.96
7.1.3	Gratuity	261.06	91.58	-36.53	-18.71	1125.10
7.1.4	Provident Fund	604.68	681.10	634.61	610.37	605.47
7.1.5	Leave Encashment	854.80	877.29	863.04	808.31	1118.05
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on superannuated employees	10.75	26.39	27.00	27.04	0.45
7.2.2	-Medical expenses on regular employees & others	621.39	655.76	684.21	795.55	468.86
7.2.3	-Uniform/Livries & safety equipment	53.87	159.91	138.21	122.74	167.19
7.2.4	-Canteen expenses	134.74	130.83	145.65	155.11	171.50
7.2.5	-Other staff welfare expenses	161.35	170.46	149.80	166.18	197.82
	Subtotal (Staff welfare Expenses)	982.10	1143.35	1144.88	1266.63	1005.82
7.3	Productivity linked Incentive	280.31	250.51	74.32	58.32	0.00
7.4	Expenditure on VRS	0.00	0.00	166.52	1.99	0.00
7.5	Ex-gratia	108.68	122.13	198.78	112.78	114.93
7.6	Performance Related Pay (PRP)	762.77	514.02	792.25	843.26	952.88
	Sub Total (Employee Cost)	10988.37	13324.13	12188.90	11638.84	13611.97
8	Loss of Store	0.00	0.00	0.00	0.00	0.00
9	Provisions	16.81	22.00	135.49	53.06	241.65
10	Prior Period Expenses	0.00	0.00	118.97	0.00	0.00
11	Corporate Office expenses allocation	4135.37	5196.95	5533.54	5695.90	5821.11
12	Others					
12.1	Rates & Taxes	35.05	22.92	22.34	34.07	18.22
12.2	Water cess	111.79	126.29	132.13	117.49	109.88
12.3	Training & recruitment expenses	107.05	45.62	41.22	97.98	31.21
12.4	Tender Expenses	90.94	126.95	114.88	37.74	66.15
12.5	Guest house expenses	40.30	55.96	49.75	51.89	100.98
12.6	Education expenses	21.62	18.10	31.29	33.56	38.64

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
12.7	Community Development Expenses	321.61	788.98	1390.83	2764.56	1275.77
12.8	Ash utilisation expenses	11.61	0.00	-4.12	0.99	-4.77
12.9	Books & Periodicals	0.78	1.08	1.15	1.52	1.31
12.10	Professional Charges	37.00	66.34	35.37	36.66	57.35
12.11	Legal expenses	2.66	12.41	16.81	28.72	50.03
12.12	EDP Hire & other charges	25.14	34.95	39.85	36.96	32.78
12.13	Printing & Stationery	43.46	55.31	42.25	44.86	34.69
12.14	Misc Expenses	652.89	809.10	709.03	495.04	354.35
	Sub Total (Others)	1501.90	2164.01	2622.77	3782.05	2166.60
13	(Total 1 to 12)	28523.20	35428.79	37969.22	40259.34	41041.18
14	Revenue / Recoveries	-35.43	-42.53	-45.96	-30.07	-48.50
15	Net Expenses	28487.77	35386.26	37923.25	40229.27	40992.68
16	Capital spares consumed	333.39	678.98	445.65	661.32	746.42
	Total O&M Cost	28821.16	36065.24	38368.91	40890.59	41739.10

Annexure-VI (C)

DETAILS OF WATER CHARGES

Name of the Company: NTPC Ltd.

Name of the Power Station and Stage/Phase: Simhadri Super Thermal Power Station (2000 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 Plant				
2	Type of Cooling Tower	Natural Draft				
3	Type of Cooling Water System	Closed				
4	Any Special Features which may increase/reduce water consumption	Sea water				
(B)	Quantum of Water : (Cubic Meter) Sweet water					
5	Contracted Quantum	11680000	11680000	11680000	11680000	11680000
6	Allocation of Water	8052807	7492624	9770392	10316939	7114814
7	Actual water Consumption	8052807	7492624	9770392	10316939	7114814
8	Rate of Water Charges (Rs/kL)	11.80	12.39	13.01	13.66	14.34
9	Other charges/Fees , if paid as part of Water Charges Dead storage pumping charges (Note 1)				97.72	150.47
8.	Sweet water Charges Paid (Rs. in lakh) (based on actual draws only)	950.23	928.34	1271.128	1,408.98	1,020.17
(C)	Quantum of Water : (Cubic Meter) Sea water					
5	Contracted Quantum	NO CONTRACT VOLUME SPECIFIED				
6	Allocation of Water	AS PER THE CONSENT FOR OPERATION ALLOWED QTY				
7	Actual water Consumption (KL)				84218384	80527420
8	Rate of Water Charges (Rs per KL)				0.05	0.05
9	Other charges/Fees , if paid as part of Water Charges					
9.	Sea water Charges Paid (Note - 2)					94.73
10.	Total water charges(sum of sea water & sweet water charges) Paid	950.23	928.34	1,271.13	1,506.70	1,265.36
Note::		1. Dead Storage pumping charges in FY 2015-16 & 2016-17 : Sweet water is being supplied from Yeleru reservoir through canal by gravity flow. Due deficit rainfall in Yeleru reservoir catchment area, level was below gravity level flow. So additional pumps were arranged to pump the water form reservoir dead storage to canal. Pumping power charges were paid additional to normal water charges. An amount of Rs.9.85 lakh paid for water consumed for construction purpose in FY 2012-13 is included.				
		2.Sea Water Charges form FY 2015-16 & 2016-17: Simhadri Station is using sea water for Condenser Cooling. The coastal area is in control of Director of Ports Kakinada. Director of ports raised bills based on design capacity of sea water @0.05 Rs/KL for the period from 2009-10 onwards. However, the Station has requested for waiver of sea water charges upto FY 2014-15 and released the payment for FY 2015-16 (Rs.47.67 lakh) and FY 2016-17 (Rs.47.05 lakh) during FY 2016-17. As on 31.3.2017, an amount of Rs.465.75 lakh is disclosed as contingent liability for the claims relating to earlier years received from Director of Ports, Kakinada.				

Annexure-VI (D)**Details of capital Spares****Name of Company NTPC LIMITED****Name of Power station: Simhadri STPS****Rs. Lakhs**

SI . No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
(A)	Details of capital spares in Opening stock	8695.56	14174.02	17509.36	20625.15	21960.53
(B)	Details of capital spares procured during the year	5811.85	4014.32	3561.44	1996.71	1527.02
(C)	Details of capital spares consumed during the year	333.39	678.98	445.65	661.32	746.42
(D)	Details of capital spares closing at the end of the year	14174.02	17509.36	20625.15	21960.53	22741.13

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

Annexure-XIX

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Simhadri STPS Stage-I														
Station/ Stage/ Unit: 2 X 500(Stage-I)														
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal														
Capacity of Plant (MW): 1000 MW														
COD : 01.03.2003														
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)	93.23	93.72	94.33	90.76	98.85	97.25	97.28	93.79	87.74	89.06	93.73	94.05	94.69
2	Plant Load Factors (PLF) (%)	92.72	88.38	92.10	88.57	97.41	97.27	96.08	92.94	87.97	86.29	88.25	82.03	82.33
3	Scheduled Energy (MU)	7663.71	7303.98	7562.95	7285.31	8009.35	7973.54	7668.79	7523.37	7171.66	7176.56	7330.18	6875.64	6905.15
4	Scheduled Generation (MU)	7663.71	7303.98	7562.95	7285.31	8009.35	7973.54	7668.79	7523.37	7171.66	7176.56	7330.18	6875.64	6905.15
5	Actual Generation (MU)	7663.71	7303.98	7622.46	7324.21	8080.30	8050.84	7947.95	7684.47	7231.96	7090.60	7276.48	6783.59	6806.47
6	Quantum of coal consumption (MT)	5530376	5067342	5499715	5829582	6134424	5973140	6003503	5972915	5563256	5156953	5072415	5086427	4835188
7	Value of coal (Rs. Lakh)	59411	65058	65927	70587	88025	114006	122036	168245	143518	165664	183482	170583	188063
8	Specific Coal Consumption (kg/kwh)	0.68	0.65	0.68	0.75	0.72	0.70	0.71	0.73	0.72	0.68	0.66	0.71	0.67
9	Gross Calorific Value of Coal (Kcal/ Kg)	3487	3605	3452	3143	3269	3348	3291	3217	3262	3454	3578	3379	3574
10	Heat Contribution of Coal (Kcal/ kwh)	2374	2360	2353	2355	2350	2347	2347	2354	2355	2356	2348	2385	2396
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$													
12	Quantum of Oil Consumption (KL)	1755500	1483910	1507160	2079720	853930	1900410	750040	832280	1846790	2046341	1580390	1121490	1931410
13	Value of Oil (Rs. lakh)													
14	Gross calorific value of oil (kcal/lit)	9745	9705	9706	9763	9798	9788	9784	9784	9676	9730	9649	9686	9695
15	Specific Oil Consumption (ml/ kwh)	0.22	0.19	0.19	0.27	0.10	0.22	0.09	0.10	0.24	0.27	0.20	0.16	0.27
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$													
17	Heat Contribution of Oil (Kcal/ kwh)	2.11	1.86	1.84	2.61	0.98	2.18	0.87	1.00	2.32	2.63	1.97	1.51	2.60
18	Station Heat Rate (kcal/kwh)	2376	2361	2355	2358	2351	2349	2348	2355	2357	2359	2350	2387	2398
19	Auxiliary Energy Consumption (%)	5.65	5.65	5.56	5.85	5.27	5.46	5.44	5.65	5.96	5.85	5.46	5.53	5.42
20	Debt at the end of the year (Rs. Cr)	2320.47	2212.86	2198.22	2164.79	2149.05	1945.62	1773.54	1619.77	1455.30	1299.70	1159.99	1073.33	1022.32
21	Equity (Rs. Cr - (Average) #	1039.78	1045.75	1048.15	1048.30	1051.40	1038.38	1037.56	1041.66	1048.41	1055.36	1068.37	1081.84	1088.95
22	Working Capital (Rs. Cr) – finally admitted by CERC	287.66	290.67	293.85	297.70	301.23	537.78	539.66	543.33	545.74	550.57	641.78	635.47	639.88
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #	3465.94	3485.85	3493.85	3494.33	3504.68	3461.27	3458.55	3472.21	3494.71	3517.89	3561.25	3606.13	3629.86
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr	458.92	461.21	472.2	467.66	472.2	696.04	694.73	696.98	703.69	717.72	681.17	621.64	633.46
	(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)	145.56	146.40	146.74	146.76	147.16	243.82	240.81	238.99	240.54	247.81	209.50	213.17	214.57
	Rate (%)	14.0000	14.0000	14.0000	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)	74.87	71.65	77.82	68.84	67.94	64.02	58.51	53.31	48.28	43.23	38.58	35.01	32.03
	Rate (%) – Weighted Average Rate	3.1600	3.1600	3.1600	3.1500	3.1500	3.1500	3.1500	3.1400	3.1400	3.1400	3.1374	3.1356	3.1336
	(c) Depreciation (finally allowed by CERC)													
	Absolute value (in Rs Cr)	115.39	116.06	116.32	116.34	116.68	173.90	173.48	174.35	176.00	176.91	179.17	110.03	111.86
	AAD	0.00	0.00	0.00	0.00	0.00								
	Rate (%)	3.33	3.33	3.33	3.33	3.33	5.02	5.02	5.02	5.04	5.03	5.03	(spread over)	
	(d) Interest on working Capital													
	Absolute value (in Rs Cr)	29.48	29.79	30.12	30.51	30.87	65.87	66.10	66.55	66.85	67.44	86.64	85.78	86.38
	Rate (%)	10.25	10.25	10.25	10.25	10.25	12.25	12.25	12.25	12.25	12.25	13.50	13.50	13.50

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Simhadri STPS Stage-I														
Station/ Stage/ Unit: 2 X 500(Stage-I)														
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal														
Capacity of Plant (MW): 1000 MW														
COD : 01.03.2003														
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
	(e) Operation and maintenance cost (finally admitted by CERC)													
	Absolute value (in Rs Cr)	93.6	97.3	101.2	105.2	109.5	130	137.4	145.3	153.6	162.4	160.00	170.10	180.80
	Water charges (finally admitted by CERC) (in Rs Cr) #											5.26	5.53	5.80
	Rate (%)													
	(f) Compensation Allowances (in Rs Cr)											2.00	2.00	2.00
25	AFC (Rs. Kwh)	0.71	0.71	0.72	0.72	0.73	0.99	0.99	1.00	1.01	1.03	0.99	0.90	0.92
26	Energy Charge (Rs./Kwh)	0.85	0.99	0.97	1.07	1.33	1.47	1.61	2.22	2.05	2.38	2.58	2.48	2.75
27	Total tariff (Rs. Kwh)	1.56	1.70	1.69	1.79	2.06	2.46	2.60	3.22	3.06	3.41	3.57	3.38	3.67
28	Revenue realisation before tax (Rs. Crore)													
29	Revenue realisation after tax (Rs. Crore)													
30	Profit/ loss (Rs. Crore)	100.24	318.30	277.44	171.91	324.51	429.77	102.87	514.67	599.13	847.59	630.09	741.50	690.29
31	DSM Generation (MU)	0.00	0.00	59.51	38.90	70.95	77.30	279.16	161.10	60.30	-85.96	-53.70	-92.05	-98.68
32	DSM Rate (Ps/Kwh)													
33	Revenue from DSM (Rs. Crore)	N.A.			-17.1	-26.8	-28.8	-70.4	-49.2	-24.5	-0.2	1.4	10.0	13.7

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: Simhadri STPS Stage-II															
Station/ Stage/ Unit: 2 X 500(Stage-I)															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 30.09.2012															
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	16.09.11 - 31.03.12	01.04.12 - 29.09.12	30.09.12- 31.03.13	2013-14	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)								89.80	75.42		85.89	90.50	95.86	96.22
2	Plant Load Factors (PLF) (%)								89.79	75.38		81.34	83.28	82.70	79.47
3	Scheduled Energy (MU)								1992.83	4630.24		6829.09	6968.84	6973.75	6667.84
4	Scheduled Generation (MU)								1992.83	4630.24		6829.09	6968.84	6973.75	6667.84
5	Actual Generation (MU)								2015.04	4670.21		6748.40	6919.31	6873.04	6582.26
6	Quantum of coal consumption (MT)								1597340	3588840		4815239	4731810	4970112	4621347
7	Value of coal (Rs. Lakh)								43107	93245		156107	172536	169196	179995
8	Specific Coal Consumption (kg/kwh)								0.75	0.72		0.68	0.65	0.68	0.66
9	Gross Calorific Value of Coal (Kcal/ Kg)								3204	3285		3489	3607	3449	3585
10	Heat Contribution of Coal (Kcal/ kwh)								2399	2378		2358	2340	2360	2380
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
12	Quantum of Oil Consumption (KL)								1326840	3448680		1259387	1910110	1637450	1202430
13	Value of Oil (Rs. lakh)														
14	Gross calorific value of oil (kcal/lit)								9530	9414		9403	9657	9696	9645
15	Specific Oil Consumption (ml/ kwh)								0.62	0.70		0.18	0.26	0.23	0.17
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
17	Heat Contribution of Oil (Kcal/ kwh)								5.93	6.55		1.66	2.53	2.19	1.67
18	Station Heat Rate (kcal/kwh)								2405	2385		2359	2342	2362	2381
19	Auxiliary Energy Consumption (%)								5.45	5.92		5.68	5.49	5.61	5.55
20	Debt at the end of the year (Rs. Cr)								1712.61	1714.01	3142.71	3022.01	295.15	270.28	244.35
21	Equity (Rs. Cr - (Average) #								739.91	777.75	1417.65	1483.94	1553.37	1600.34	1608.88
22	Working Capital (Rs. Cr) – finally admitted by CERC								372.35	377.53	625.60	634.72	715.06	720.02	720.52
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #								2466.39	2592.52	4725.50	4946.46	5177.92	5334.47	5362.95
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr								566.82	595.06	1131.02	1170.79	1093.47	1104.60	1093.55
	(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)								169.76	178.44	325.26	348.44	304.61	315.34	317.03
	Rate (%)								15.5000	15.5000	15.5000	15.5000	15.5000	15.5000	15.5000
	(b) Interest on Loan														
	Absolute value (in Rs Cr)								154.37	162.58	289.34	284.77	278.18	260.52	236.41
	Rate (%) – Weighted Average Rate								9.1220	9.4896	9.9246	9.2388	9.3138	9.2149	9.1875
	(c) Depreciation (finally allowed by CERC)														
	Absolute value (in Rs Cr)								126.29	132.88	242.30	253.42	265.18	273.19	274.65
	AAD														
	Rate (%)								5.1200	5.1258	5.1275	5.1234	5.1214	5.1214	5.1214
	(d) Interest on working Capital														
	Absolute value (in Rs Cr)								43.75	44.36	84.45	85.68	96.53	97.23	97.27
	Rate (%)								11.75	11.75	13.50	13.50	13.50	13.50	13.50
	(e) Operation and maintenance cost (finally admitted by CERC)														
	Absolute value (in Rs Cr)								72.65	76.8	153.6	162.4	144	153.09	162.72

Name of the Utility: NTPC Ltd															
Name of the Generating Station: Simhadri STPS Stage-II															
Station/ Stage/ Unit: 2 X 500(Stage-I)															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 30.09.2012															
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	16.09.11 - 31.03.12	01.04.12 - 29.09.12	30.09.12- 31.03.13	2013-14	2014-15	2015-16	2016-17
	Water charges (finally admitted by CERC) (in Rs Cr) #												4.97	5.23	5.47
	Rate (%)														
	(f) Compensation Allowances (in Rs Cr)														
25	AFC (Rs. Kwh)								1.66	1.74	1.62	1.67	1.57	1.59	1.57
26	Energy Charge (Rs./Kwh)								2.20	2.06		2.41	2.58	2.47	2.74
27	Total tariff (Rs. Kwh)								3.86	3.80	3.68	1.67	3.98	4.17	4.04
28	Revenue realisation before tax (Rs. Crore)														
29	Revenue realisation after tax (Rs. Crore)														
30	Profit/ loss (Rs. Crore)*	100.24	318.30	277.44	171.91	324.51	429.77	102.87	514.67	599.13		847.59	630.09	741.50	690.29
31	DSM Generation (MU)								22.21	39.97		-80.69	-49.53	-100.71	-85.58
32	DSM Rate (Ps/Kwh)														
33	Revenue from DSM (Rs. Crore)								-7.57	-14.13		1.31	1.53	11.88	11.89

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