

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		Talcher Super Thermal Power Station Stage-I (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)		MS : 170 ksc ; 540 deg C Boiler :M/s Stein Industries, France Tower Type Boiler Turbine : ABB, Germany					
5	Type of BFP		2nos Steam Driven + 1nos Electric Driven					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature		High Energy Intensive Tube Mills					
8	Fuels :							
8.1	Primary Fuel :		Coal					For the Station (3000 MW) Requirement has been worked out at 90% PLF
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 31.08.2016 with ECL for Talcher Super-I&II - 1.0 MMT Annual allocation through Modified FSA dated 30.08.2016 with MCL for Talcher Super-I&II - 16.8 MMT Allocation through MOU dated 09.01.2014 with ECL - 5.0 MMT Annual Requirement : 21.4 MMT					
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		MCL, ECL					For the Station (3000 MW)
			17.30	17.30	17.30	17.30	17.80	
			MCL: G 8 to G13 ECL: G13 and above					
8.1.2.1	FSA	LOA	15.02	14.95	15.43	15.72	18.00	
		MoU	0.00	0.00	0.07	0.00	0.00	
8.1.2.2	Imported	MMT	2.214	2.27	2.94	1.83	0.13	
8.1.2.3	Spot Market/e-auction	MMT	0.00	0.00	0.00	0.00	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	KM	MCL: Min. 32 Km (D B Colly sdng, Talcher), Max. 247 Km (Kanika Sdng) ECL: Min. 616 Km (Bonjemehary Colly Sdng), Max. 655 Km (Purushottampur Colly Sdng)					
8.1.4	Mode of Transport		Indian Railways /MGR					
8.1.5	Maximum Station capability to stock primary fuel	Days & MT	16.1 / 0.80					
8.1.6	Maximum stock maintained for primary fuel	MT	168309	278000	1012000	1035605	734300	
8.1.7	Minimum Stock maintained for primary fuel	MT	47826	2568	26000	497827	229000	
8.1.8	Average stock maintained for primary fuel	MT	92050	93040	472304	780982	404319	
8.2	Secondary Fuel :							

SI.No.	Particulars		Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
8.2.1	Annual Allocation/ Requirement	HFO	KL	11200					For the Station (3000 MW)
		LDO	KL	15000					
8.2.2	Sources of supply			IOCL					
8.2.3	Transportation Distance of the station from the sources of		KM						
8.2.4	Mode of Transport			Indian Railways					
8.2.5	Maximum Station capability to stock secondary fuels		KL	13000					
8.2.6	Maximum Stock of secondary oil actually maintained		KL	7176	6833	7099	8009	8141	For the Station (3000 MW)
8.2.7	Minimum Stock of secondary oil actually maintained		KL	2737	3074	2852	3645	3347	
8.2.8	Average Stock of secondary oil actually maintained		KL	5148	4648	5197	5585	6158	
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2347.83	2270.37	2071.07	2937.72	5754.53	For the Station (3000 MW)
9.2	Cost of spares included in capital cost for the purpose of tariff		Rs. Lakhs	0.00	0.00	0.00	0.00	0.00	
10	Generation :								
10.1	-Actual Gross Generation at generator terminals		MU	7123.76	7284.99	7487.99	7855.04	7626.68	
10.2	-Actual Net Generation Ex-bus		MU	6580.38	6731.03	6929.25	7252.53	7008.89	
10.3	-Scheduled Generation Ex-bus		MU	6605.74	6765.65	6898.46	7256.87	7024.24	
11	Average Declared Capacity (DC)		MW	766.04	805.17	810.87	854.29	828.07	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	518.33	528.80	537.36	573.54	594.83	
13	Actual Energy supplied to Colony from the station		MU	5.28	5.29	5.46	5.24	5.21	
14	Primary Fuel :								
14.1	Consumption :		MT	5828759	5747544	5589188	5904802	6178013	
14.1.1	Domestic coal	From linked mines	MT	3073917	3038902	3399714	4642670	5731149	
		Non-linked mines	MT	1991993	1917455	1252141	650377	385916	
14.1.2	Imported coal		MT	762849	791187	937333	611755	60948	
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	3785	3792	3804	3824	3659	
		(As Received) (TM Basis)	kCal/kg	NA	NA	2956	2976	3042	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
		(As Billed) (Eq. Basis)	kCal/kg	6177	6110	5707	5672	5703	

SI.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
14.2.2	Imported Coal (As Received) (TM Basis)	kCal/kg	NA	NA	4740	4764	4796	
14.2.3	Spot market/e-auction coal (As Billed)	kCal/kg	NA	NA	NA	NA	NA	
		(As Received)	NA	NA	NA	NA	NA	
14.2.4	Weighted Average Gross Calorific value (As Billed)	kCal/kg	4098	4111	4123	4015	3679	
14.2.5	Weighted Average Gross Calorific value (As Received)	kCal/kg	NA	NA	3166	3158	3061	
14.2.6	Weighted Average Gross Calorific value (As Fired)	kCal/kg	2910	3034	NA	NA	NA	
14.3	Price of coal :							
14.3.1	Weighted Average Landed price of Domestic coal	Rs/MT	995.78	1083.71	1202.23	1380.76	1985.12	
14.3.2	Weighted Average Landed Price of Imported coal		6164.06	6112.3	4796.4	4382.55	4121.15	
14.3.3	Weighted Average Landed Price of Spot market/e-auction coal		-	-	-	-	-	
14.3.4	Weighted Average Landed Price of all the Coals		1660.98	1745.85	1776.39	1693.57	2000.16	
14.4	Blending :	% and MT (of the total coal consumed)	13.09%	13.77%	16.77%	10.36%	0.99%	
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	92050	93040	472304	780982	404319	For the Station (3000 MW)
		Days	2.15	2.17	11.02	18.23	9.44	
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.24	0.17	0.19	0.19	0.25	
14.5.1.2	Transit loss from non-linked mines including e-auction		NA	NA	NA	NA	NA	
14.5.1.3	Transit loss of imported coal		0.10	0.08	0.08	0.12	0.23	
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines	MT	NA	NA	NA	NA	NA	
		%	NA	NA	NA	NA	NA	
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		NA	NA	NA	NA	NA	
14.5.2.3	Transit loss of imported coal		NA	NA	NA	NA	NA	
15	Secondary Fuel Oil : (If more than one fuel used then give details of all the							

Sl.No.	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks	
15.1	Consumption	HFO	KL	7884	3702	3973	3366	3489	For the Station (3000 MW)
		LDO	KL	302	226	139	281	354	
15.2	Weighted Average Gross Calorific value (As received)	HFO	KL	9514	9510	9758	9980	9990	
		LDO	KL	9435	9432	9826	9892	9900	
15.3	Weighted Average Price	Rs/KL							
15.4	Actual Average Stock maintained	KL	5148	4648	5197	5585	6158		
16	Weighted average duration of outages(unit-wise								
16.1	Planned Outages	Days	15.62	24.16	31.36	18.88	17.83		
16.2	Forced Outages	Days	26.96	15.02	9.35	11.78	12.88		
16.3	Number of tripping	Nos	28	19	14	23	22		
16.4	Number of start-ups:	Nos	29	20	16	24	23		
16.4.1	Cold Start-up	Nos	20	13	14	20	17		
16.4.2	Warm Start-up	Nos	2	2	1	0	2		
16.4.3	Hot start-up	Nos	7	5	1	4	4		
17	NOx , SOx , and other particulate matter emission in :								
17.1	Design value of emission control equipment	mg/Nm3							
17.2	Actual emission	SPM	mg/Nm3	357	218	128	152	257	
		SOX	mg/Nm3	858	844	998	969	1026	
		NOX	mg/Nm3	301	258	315	323	357	
19	Detail of Ash utilization % of fly ash produced	%	37.91	39.73	42.29	42.65	43.14		
19.1	Conversion of value added product	%	1.83	1.28	1.94	2.35	1.83		
19.2	For making roads & embarkment	%	0.00	0.00	0.00	0.00	0.00		
19.3	Land filling	%	7.37	3.24	0.00	0.00	0.00		
19.4	Used in plant site in one or other form or used in some	%	28.71	35.21	40.35	40.30	41.31		
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	12144.29	12576.87	10084.82	8053.17	9120.42	For the Station (3000 MW)	
21	Average stock of spares	Rs. Lakhs	19693.25	20788.01	19567.09	18516.49	18631.76		
22	Number of employees deployed in O&M							Man power as on last day of FY. Man MW ratio computed for 3000 MW	
22.1	- Executives		496	492	479	441	403		
22.2	- Non Executives		738	717	700	699	681		
22.3	- Corporate office		3170	3051	2916	2973	2787		
23	Man-MW ratio		0.41	0.40	0.39	0.38	0.36		

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		Talcher Super Thermal Power Station Stage-II (pit-head)					
3	Installed Capacity and Configuration	MW	4 x 500 = 2000 MW					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		MS : 170 ksc ; 540 deg C Boiler: Forced Circulation, Tangential Fired					
5	Type of BFP		2nos Steam Driven + 1nos Electric Driven					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
8	Fuels :							
8.1	Primary Fuel :		Coal					
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 31.08.2016 with ECL for Talcher Super-I&II - 1.0 MMT Annual allocation through Modified FSA dated 30.08.2016 with MCL for Talcher Super-I&II - 16.8 MMT Allocation through MOU dated 09.01.2014 with ECL - 5.0 MMT Annual Requirement : 21.4 MMT					For the Station (3000 MW) Requirement has been worked out at 90% PLF
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		MCL, ECL 17.30 17.30 17.30 17.30 17.80 MCL: G 8 to G13 ECL: G13 and above					For the Station (3000 MW)
8.1.2.1	FSA	LOA	15.02	14.95	15.43	15.72	18.00	
		MoU	0.00	0.00	0.07	0.00	0.00	
8.1.2.2	Imported	MMT	2.214	2.27	2.94	1.83	0.13	
8.1.2.3	Spot Market/e-auction	MMT	0.00	0.00	0.00	0.00	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	KM	MCL: Min. 32 Km (D B Colly sdng, Talcher), Max. 247 Km (Kanika Sdng) ECL: Min. 616 Km (Bonjemehary Colly Sdng), Max. 655 Km (Purushottampur Colly Sdng)					
8.1.4	Mode of Transport		Indian Railways /MGR					
8.1.5	Maximum Station capability to stock primary fuel	Days & MT	16.1 / 0.80					
8.1.6	Maximum stock maintained for primary fuel	MT	168309	278000	1012000	1035605	734300	
8.1.7	Minimum Stock maintained for primary fuel	MT	47826	2568	26000	497827	229000	
8.1.8	Average stock maintained for primary fuel	MT	92050	93040	472304	780982	404319	

8.2	Secondary Fuel :								
8.2.1	Annual Allocation/ Requirement	HFO	KL			11200			
		LDO	KL			15000			
8.2.2	Sources of supply					IOCL			
8.2.3	Transportation Distance of the station from the sources of			KM					
8.2.4	Mode of Transport				Indian Railways			For the Station (3000 MW)	
8.2.5	Maximum Station capability to stock secondary fuels		KL		13000				
8.2.6	Maximum Stock of secondary oil actually maintained		KL	7176	6833	7099	8009		8141
8.2.7	Minimum Stock of secondary oil actually maintained		KL	2737	3074	2852	3645		3347
8.2.8	Average Stock of secondary oil actually maintained		KL	5148	4648	5197	5585		6158
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2347.83	2270.37	2071.07	2937.72	5754.53	
9.2	Cost of spares included in capital cost for the purpose of tariff		Rs. Lakhs	0.00	0.00	0.00	0.00	0.00	
10	Generation :								
10.1	-Actual Gross Generation at generator terminals		MU	14326.49	14476.67	16210.57	16111.48	15220.85	
10.2	-Actual Net Generation Ex-bus		MU	13461.98	13615.90	15285.86	15227.28	14360.91	
10.3	-Scheduled Generation Ex-bus		MU	13518.90	13732.28	15272.80	15211.62	14361.59	
11	Average Declared Capacity (DC)		MW	1549.72	1592.60	1752.17	1758.77	1698.45	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	874.80	871.12	929.70	896.85	867.18	
13	Actual Energy supplied to Colony from the station		MU	10.55	10.58	10.92	10.48	10.42	
14	Primary Fuel :								
14.1	Consumption :		MT	11682874	11248994	12044372	12103271	12228643	
14.1.1	Domestic coal	From linked mines	MT	6135411	6003970	7374198	9537839	11347710	
		Non-linked mines	MT	3975934	3788323	2715975	1336126	764116	
14.1.2	Imported coal		MT	1571529	1456701	1954199	1229306	116817	
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	3785	3792	3804	3824	3659	
		(As Received) (TM Basis)	kCal/kg	NA	NA	2956	2976	3042	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (Eq. Basis)	kCal/kg	6177	6110	5707	5672	5703	
		(As Received)	kCal/kg	NA	NA	4740	4764	4796	

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	4107	4092	4113	4011	3679		
14.2.5	Weighted Average Gross Calorific value (As Received)		kCal/kg	NA	NA	3163	3160	3058		
14.2.6	Weighted Average Gross Calorific value (As Fired)		kCal/kg	2917	3032	NA	NA	NA		
14.3	Price of coal :									
14.3.1	Weighted Average Landed price of Domestic coal				995.78	1083.71	1202.23	1380.76	1985.12	
14.3.2	Weighted Average Landed Price of Imported coal				6164.06	6112.3	4796.4	4382.55	4121.15	
14.3.3	Weighted Average Landed Price of Spot market/e-auction									
14.3.4	Weighted Average Landed Price of all the Coals				1660.98	1745.85	1776.39	1693.57	2000.16	
14.4	Blending :		% and MT (of the total coal consumed)		13.45	12.95	16.22	10.16	0.96	
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		92050	93040	472304	780982	404319	
			Days		2.15	2.17	11.02	18.23	9.44	
14.5	Actual Transit & Handling Losses for coal/Lignite									
14.5.1	Pit- Head Station								For the Station (3000 MW)	
14.5.1.1	Transit loss from linked mines		%		0.24	0.17	0.19	0.19		0.25
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				0.10	0.08	0.08	0.12		0.23
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 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	4283	3670	4011	4702	4525	
			LDO	KL	229	187	181	197	154	
15.2	Weighted Average Gross Calorific value (As received)		HFO	KL	9514	9510	9762	9981	9989	
			LDO	KL	9434	9432	9811	9893	9899	
15.3	Weighted Average Price			Rs/KL					For the Station (3000 MW)	
15.4	Actual Average Stock maintained			KL	5148	4648	5197	5585	6158	

16	Weighted average duration of outages:								
16.1	Planned Outages	Days	20.68	17.32	14.46	12.59	21.95		
16.2	Forced Outages	Days	13.94	27.44	7.61	10.18	5.09		
16.3	Number of tripping	Nos	23	28	21	32	21		
16.4	Number of start-ups:	Nos	24	30	23	34	23		
16.4.1	Cold Start-up	Nos	12	21	15	18	13		
16.4.2	Warm Start-up	Nos	4	2	2	9	0		
16.4.3	Hot start-up	Nos	8	7	6	7	10		
17	NOx , SOx ,and other particulate matter emission in :								
17.1	Design value of emission control equipment		mg/Nm3						
17.2	Actual emission	SPM	mg/Nm3	357	218	128	152	257	For the Station (3000 MW)
		SOX	mg/Nm3	858	844	998	969	1026	
		NOX	mg/Nm3	301	258	315	323	357	
19	Detail of Ash utilization % of fly ash produced		%	37.91	39.73	42.29	42.65	43.14	For the Station (3000 MW)
19.1	Conversion of value added product		%	1.83	1.28	1.94	2.35	1.83	
19.2	For making roads & embarkment		%	0.00	0.00	0.00	0.00	0.00	
19.3	Land filling		%	7.37	3.24	0.00	0.00	0.00	
19.4	Used in plant site in one or other form or used in some other		%	28.71	35.21	40.35	40.30	41.31	
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	12144.29	12576.87	10084.82	8053.17	9120.42	For the Station (3000 MW)
21	Average stock of spares		Rs. Lakhs	19693.25	20788.01	19567.09	18516.49	18631.76	
22	Number of employees deployed in O&M								Man power as on last day of FY. Man MW ratio computed for 3000 MW
22.1	- Executives			496	492	479	441	403	
22.2	- Non Executives			738	717	700	699	681	
22.3	- Corporate office			3170	3051	2916	2973	2787	
23	Man-MW ratio			0.41	0.40	0.39	0.38	0.36	

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: Talcher Super Thermal Power Station (3000 MW)

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
1	Consumption of stores & spares	12144.29	12576.87	10084.82	8053.17	9120.42
2	Repair & Maintenance	9073.22	9353.68	11576.46	10284.78	10479.94
3	Insurance	1132.49	1162.88	1065.12	875.78	828.90
4	Security	1653.21	1817.57	1956.17	2010.76	2319.66
5	Water Charges	7231.09	6001.02	6001.02	6017.46	5312.55
6	Administrative Expenses					
6.1	Rent	10.60	13.08	15.32	18.14	20.39
6.2	Electricity charges	280.75	286.87	284.08	269.37	331.92
6.3	Travelling & Conveyance	688.62	777.79	761.81	676.43	631.87
6.4	Communication Expenses	146.02	119.53	115.79	137.08	155.39
6.5	Advertising	22.62	31.83	35.47	57.01	56.81
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	38.79	48.82	70.69	75.91	79.90
6.9	Filing fee	120.00	132.00	132.00	132.00	132.00
	Subtotal (Administrative Expenses)	1307.40	1409.92	1415.14	1365.93	1408.28
7.0	Employee Cost					
7.1.1	Salaries,Wages & Allowances	10230.30	10529.82	11160.97	11176.98	13716.43
7.1.2	Pension	76.26	2572.16	1026.21	1071.87	1051.92
7.1.3	Gratuity	304.86	156.34	-54.80	-39.25	1849.75
7.1.4	Provident Fund	795.10	908.39	911.60	925.84	973.16
7.1.5	Leave Encashment	1146.06	1213.44	1126.63	1231.42	1814.21
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on superannuated employees	0.51	0.77	2.41	12.22	0.18
7.2.2	-Medical expenses on regular employees & others	817.11	746.61	935.32	1232.60	233.82
7.2.3	-Uniform/Livries & safety equipment	85.92	267.93	245.03	236.38	323.02
7.2.4	-Canteen expenses	149.81	154.67	157.16	160.15	187.80
7.2.5	-Other staff welfare expenses	228.92	214.98	261.61	254.47	336.58
	Subtotal (Staff welfare Expenses)	1282.26	1384.95	1601.54	1895.82	1081.41
7.3	Productivity linked Incentive	389.92	277.75	225.95	176.85	0.00
7.4	Expenditure on VRS	0.00	0.00	0.00	2.69	0.00
7.5	Ex-gratia	353.52	365.82	651.22	429.58	416.04
7.6	Performance Related Pay(PRP)	714.22	633.51	698.50	882.02	1153.27
	Sub Total (Employee Cost)	15292.50	18042.17	17347.81	17753.82	22056.20
8	Loss of Store	1.23	1.04	0.03	0.00	0.00
9	Provisions	218.68	339.07	62.36	152.23	42.66
10	Prior Period Expenses	0.00	66.07	0.00	0.00	0.00
11	Corporate Office expenses allocation	7719.73	7796.33	8330.69	8573.48	8765.05
12	Others					
12.1	Rates & Taxes	132.98	149.05	138.79	151.78	164.39
12.2	Water cess	92.55	98.46	92.07	105.97	111.47
12.3	Training & recruitment expenses	125.12	69.50	79.06	78.48	89.93
12.4	Tender Expenses	92.19	114.44	135.94	159.57	96.82
12.5	Guest house expenses	54.98	55.50	60.57	68.15	57.00

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
12.6	Education expenses	169.03	158.62	173.61	68.49	37.68
12.7	Community Development Expenses	708.97	486.72	1137.59	1919.40	1082.71
12.8	Ash utilisation expenses	4.89	0.00	-1.43	-2.07	-1.67
12.9	Books & Periodicals	2.59	4.82	2.43	2.62	4.57
12.10	Professional Charges	132.34	89.78	42.36	89.73	89.80
12.11	Legal expenses	18.78	23.46	19.20	22.88	53.04
12.12	EDP Hire & other charges	53.60	55.22	62.69	74.58	38.44
12.13	Printing & Stationery	29.65	32.56	25.70	33.80	45.49
12.14	Misc Expenses	753.91	2376.88	880.21	28079.02	-2257.08
	Sub Total (Others)	2371.57	3715.01	2848.78	30852.41	-387.41
13	(Total 1 to 12)	58145.41	62281.65	60688.41	85939.81	59946.26
14	Revenue / Recoveries	-83.65	-111.25	-124.28	-86.31	-105.40
15	Net Expenses	58061.76	62170.40	60564.13	85853.50	59840.86
16	Capital spares consumed	99.92	121.51	830.52	1048.68	887.78
	Total O&M Cost	58161.68	62291.91	61394.65	86902.19	60728.64

Annexure-VI (C)

DETAILS OF WATER CHARGES

Name of the Company: NTPC Ltd.

Name of the Power Station and Stage/Phase: Talcher Super Thermal Power Station (3000 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					
(B)	Quantum of Water : (Cubic Meter)					
5	Contracted Quantum	107161122	107161122	107161122	107454714	94866952
6	Allocation of Water	107161122	107161122	107161122	107454714	94866952
	Allocation in cusec	120	120	120	120	Apr16: 120 May16- Mar17: 105
7	Actual water Consumption	71726287	73398733	80840153	75429374	74710040
8	Rate of Water Charges	5.63 per m3 on allocated quantity				
9	Other charges/Fees , if paid as part of Water Charges Rs lakhs	0	0	0	5250	0
	Total water Charges Paid Rs lakhs	6001.02	6001.02	6001.02	11267.46	5312.55

Annexure-VI (D)**Details of capital Spares****Name of Company: NTPC LTD****Name of Power station: Talcher STPS (3000 MW)**

Sl . No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
(A)	Details of capital spares in Opening stock	21258.16	23506.08	25654.94	26895.48	28784.52
(B)	Details of capital spares procured during the year	2347.83	2270.37	2071.07	2937.72	5,754.53
(C)	Details of capital spares consumed during the year	99.92	121.51	830.52	1048.68	887.78
(D)	Details of capital spares closing at the end of the year	23506.08	25654.94	26895.48	28784.52	33651.27

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

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Talcher STPS Stage-I														
Station/ Stage/ Unit: 2 X 500														
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal														
Capacity of Plant (MW): 1000 MW														
COD : 01.07.1997														
		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) (%)	84.21	83.77	84.53	89.36	88.49	86.68	84.77	80.83	81.93	86.11	86.03	90.64	87.86
2	Plant Load Factors (PLF) (%)	84.55	83.88	84.15	89.17	88.68	87.62	84.94	78.83	81.32	83.16	85.48	89.42	87.06
3	Scheduled Energy (MU)	6809.60	6771.86	6795.53	7257.71	7167.66	7062.30	6871.59	6499.72	6605.74	6765.65	6898.46	7256.87	7024.24
4	Scheduled Generation (MU)	6809.60	6771.86	6795.53	7257.71	7167.66	7062.30	6871.59	6499.72	6605.74	6765.65	6898.46	7256.87	7024.24
5	Actual Generation (MU)	6824.90	6802.43	6854.80	7307.36	7229.24	7116.27	6911.61	6431.61	6580.38	6731.03	6929.27	7252.22	7008.89
6	Quantum of coal consumption (MT)	5486246	4861606	5220246	5774521	6186696	6275212	5786436	5303434	5828759.00	5747544	5589188	5904802	6178013
7	Value of coal (Rs. Lakh)						63819	65323	96050	142146	100343	99286	100002	123570
8	Specific Coal Consumption (kg/kwh)	0.74	0.66	0.71	0.74	0.80	0.82	0.78	0.77	0.82	0.79	0.75	0.75	0.81
9	Gross Calorific Value of Coal (Kcal/ Kg)	3229.00	3578.00	3334.00	3161.00	2956.00	2875.00	3015.72	3073.79	2910.23	3033.82	3166.00	3158.00	3061.00
10	Heat Contribution of Coal (Kcal/ kwh)	2392.00	2367.00	2361.00	2330.00	2354.00	2350.00	2345.28	2354.08	2381.19	2393.55	2364.82	2372.85	2482.00
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$													
12	Quantum of Oil Consumption (KL)	4236000.00	4716000.00	2734000.00	3052000.00	7007000.00	8484000.00	4196000.00	4857000.00	8186000.00	3928000.00	4112000.00	3647000.00	3843000.00
13	Value of Oil (Rs. lakh)													
14	Gross calorific value of oil (kcal/lit)	9500.0	9500.0	9500.0	9499.0	9517.0	9505.0	9503.6	9510.1	9511.36	9505.5	9760.1	9973.5	9982.1
15	Specific Oil Consumption (ml/ kwh)	0.57	0.64	0.37	0.39	0.90	1.11	0.56	0.70	1.15	0.54	0.55	0.46	0.50
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$													
17	Heat Contribution of Oil (Kcal/ kwh)	5.0	6.0	4.0	3.7	8.6	11.0	5.4	6.7	10.93	5.1	5.4	4.6	5.0
18	Station Heat Rate (kcal/kwh)	2397	2373	2364	2334	2362	2361	2351	2361	2392.12	2399	2370	2378	2487
19	Auxiliary Energy Consumption (%)	7.436	6.747	6.807	6.453	6.670	7.016	6.809	6.831	7.350	7.331	7.176	7.300	7.799
20	Debt at the end of the year (Rs. Cr)	340.45	256.58	178.99	119.21	87.14	28.07	0.00	0.00	0.00	0.00			
21	Equity (Rs. Cr - (Average) #	1256.96	1256.87	1255.75	1256.10	1259.15	1257.45	1259.38	1261.71	1266.50	1272.71	1279.46	1301.09	1333.02
22	Working Capital (Rs. Cr) – finally admitted by CERC	196.00	196.90	197.95	199.82	202.37	365.12	367.41	371.08	374.86	380.97	409.76	417.70	426.26
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #	2515.01	2514.72	2511.00	2512.15	2522.32	2519.08	2525.54	2533.30	2549.25	2569.97	2592.46	2664.57	2770.99
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr	439.86	430.63	421.19	414.24	412.07	538.93	540.07	544.75	557.21	578.89	561.51	587.55	622.96
	(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)	175.97	175.96	175.80	175.85	176.28	295.26	292.30	289.48	290.58	298.84	250.91	256.38	262.68
	Rate (%)	14.000	14.000	14.000	14.000	14.000	23.481	23.210	22.944	22.944	23.481	20.961	21.342	21.342
	(b) Interest on Loan													
	Absolute value (in Rs Cr)	61.36	48.36	35.20	23.97	16.45	5.43	1.34	0.00	0.00	0.00	0.00	0.12	0.11
	Rate (%) – Weighted Average Rate	16.218	16.203	16.166	16.076	15.943	9.580	9.580	9.580	9.580	9.580	8.980	8.803	8.455
	(c) Depreciation (finally allowed by CERC)													
	Absolute value (in Rs Cr)	88.84	88.83	88.70	88.74	89.10	62.02	62.53	63.02	64.61	67.49	70.29	79.57	95.56
	AAD	0.00	0.00	0.00	0.00	0.00								
	Rate (%)	3.53	3.53	3.53	3.53	3.53								
	(d) Interest on working Capital													
	Absolute value (in Rs Cr)	20.09	20.18	20.29	20.48	20.74	44.72	45.00	45.45	45.92	46.66	55.31	56.38	57.54
	Rate (%)	10.250	10.250	10.250	10.250	10.250	12.250	12.250	12.250	12.250	12.250	13.500	13.500	13.500
	(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	170.1	180.8
	Water charges (finally admitted by CERC) (in Rs Cr) #											20.00	20.00	21.27
	Rate (%)													
	Normative O&M Expenses (in Rs Lakh/MW) #													
	(f) Compensation Allowances (in Rs Cr)						1.50	1.50	1.50	2.50	3.50	5.00	5.00	5.00

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Talcher STPS Stage-I														
Station/ Stage/ Unit: 2 X 500														
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal														
Capacity of Plant (MW): 1000 MW														
COD : 01.07.1997														
		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
25	AFC (Rs. Kwh)	0.68	0.66	0.65	0.64	0.64	0.77	0.78	0.78	0.80	0.83	0.82	0.86	0.91
26	Energy Charge (Rs./Kwh)	0.47	0.66	0.62	0.68	0.95	1.00	1.55	2.04	1.51	1.51	1.45	1.36	1.66
27	Total tariff (Rs. Kwh)	1.15	1.32	1.27	1.32	1.59	1.77	2.33	2.82	2.31	2.34	2.27	2.22	2.57
28	Revenue realisation before tax (Rs. Crore)													
29	Revenue realisation after tax (Rs. Crore)													
30	Profit/ loss (Rs. Crore)	490.61	418.37	565.15	637.42	731.97	1189.59	997.26	805.80	753.83	829.36	808.55	798.18	755.65
31	DSM Generation (MU)	15.30	30.57	59.27	49.65	61.58	53.97	40.02	-68.11	-25.35	-34.62	30.80	-4.65	-15.34
32	DSM Rate (Ps/Kwh)													
33	Revenue from DSM (Rs. Crore)				-10.98	-20.46	-15.98	-11.09	5.60	-5.06	-1.56	-12.64	-8.55	-1.54

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: Talcher STPS Stage- II																
Station/ Stage/ Unit: 4 X 500																
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal																
Capacity of Plant (MW): 2000 MW																
COD : 01.08.2005																
		2004-05 01.4.04- 31.10.04	2004-05 01.11.04 - 31.03.05	2005-06 01.04.05 - 31.07.05	2005-06 01.08.05 - 31.03.06	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) (%)		81.02		88.94	95.75	99.58	86.14	93.12	90.01	88.55	82.87	85.17	92.95	93.30	90.10
2	Plant Load Factors (PLF) (%)		79.90		84.27	92.95	96.36	84.41	91.80	86.14	85.00	81.77	82.63	92.53	91.71	86.88
3	Scheduled Energy (MU)		7897.30		12681.51	15400.87	16050.32	13960.03	15171.33	14196.82	14181.37	13518.90	13732.28	15272.80	15211.62	14361.59
4	Scheduled Generation (MU)		7897.30		12681.51	15400.87	16050.32	13960.03	15171.33	14196.82	14181.37	13518.90	13732.28	15272.80	15211.62	14361.59
5	Actual Generation (MU)		7947.90		12875.31	15526.25	16167.76	14071.79	15282.59	14304.44	14103.94	13461.98	13615.90	15285.89	15227.28	14360.91
6	Quantum of coal consumption (MT)		6257678.00		9012965.00	11587903	12663007	11729256	13168232	11823574	11525672	11682874	11248994	12044372	12103271	12228643
7	Value of coal (Rs. Lakh)								133921	133476	208741	284910	196391	213955	204977	244592
8	Specific Coal Consumption (kg/kwh)		0.74		0.67	0.71	0.75	0.79	0.82	0.78	0.77	0.82	0.78	0.74	0.75	0.80
9	Gross Calorific Value of Coal (Kcal/ Kg)		3233.00		3564.00	3327.00	3153.00	2960.00	2872.00	2999.15	3054.34	2916.71	3032.47	3163.00	3160.00	3058.00
10	Heat Contribution of Coal (Kcal/ kwh)		2495.00		2374.00	2368.00	2358.00	2348.00	2351.00	2349.60	2357.54	2378.50	2356.36	2349.56	2374.11	2456.00
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$															
12	Quantum of Oil Consumption (KL)		6098000.00		5821000.00	3664000	2559000	7353000	6559000	5946000	3974000	4512000	3857000	4192000	4899000	4679000
13	Value of Oil (Rs. lakh)															
14	Gross calorific value of oil (kcal/lit)		9500.00		9500.00	9500	9497	9518	9505	9508	9508	9510	9506	9764	9977	9986
15	Specific Oil Consumption (ml/ kwh)		0.72		0.43	0.23	0.15	0.50	0.41	0.39	0.27	0.31	0.27	0.26	0.30	0.31
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$															
17	Heat Contribution of Oil (Kcal/ kwh)		7.00		4.00	2.00	1.40	4.70	4.00	3.75	2.53	3.00	2.53	2.53	3.03	3.07
18	Station Heat Rate (kcal/kwh)		2402.00		2378.00	2370	2360	2353	2355	2353	2360	2381	2359	2352	2377	2459
19	Auxiliary Energy Consumption (%)		5.79		5.02	4.90	4.64	4.98	5.12	5.38	5.63	6.18	6.09	5.74	5.57	5.70
20	Debt at the end of the year (Rs. Cr)		1718.68	2473.38	2439.08	2824.33	2479.58	1984.18	1621.15	1303.53	1061.16	826.23	619.27	406.69	160.11	0.00
21	Equity (Rs. Cr - (Average) #		781.87	1152.35	1160.72	1487.56	1500.13	1518.71	1539.81	1492.70	1498.10	1506.80	1525.00	1562.40	1592.90	1610.30
22	Working Capital (Rs. Cr) – finally admitted by CERC		195.56	343.04	312.78	500.28	463.32	464.69	463.80	729.70	732.70	738.15	742.30	751.50	772.20	780.80
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #		2606.24	3840.88	3869.06	4958.91	5000.44	5062.37	5132.71	4975.67	4993.79	5022.80	5083.30	5208.10	5309.78	5367.90
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr		479.47	856.70	697.19	1234.89	1027.62	1009.74	984.32	1104.99	1097.83	1095.97	1100.40	1125.88	1076.85	1090.54
	(a) Return on equity – post tax (admitted by CERC) for 2004-09 & pre tax (admitted by CERC) for 2009-17 \$		109.46	161.31	162.5	208.27	210.00	212.60	215.60	350.50	347.70	345.70	349.90	366.87	312.37	317.30
	Absolute value (in Rs. Cr)		14.00	14.00	14.00	14.00	14.00	14.00	14.00	23.48	23.21	22.94	22.94	23.48	19.61	19.71
	Rate (%)															
	(b) Interest on Loan		158.24	223.87	217.05	259.43	220.54	186.21	146.36	116.43	96.10	78.34	58.54	41.74	23.16	6.53
	Absolute value (in Rs Cr)		9.02	8.88	8.84	8.62	8.32	8.34	8.12	8.15	8.13	8.30	8.10	8.14	8.18	8.16
	Rate (%) – Weighted Average Rate															
	(c) Depreciation (finally allowed by CERC)															
	Absolute value (in Rs Cr)		94.24	138.62	139.63	178.51	180.00	182.23	184.76	258.18	258.96	260.30	263.34	269.90	275.05	278.07
	AAD		3.89	157.34	0.00	342.81	167.17	170.65	171.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rate (%)		3.62	3.61	3.60	3.60	3.60	3.60	3.60	5.19	5.19	5.18	5.18	5.18	5.18	5.18
	(d) Interest on working Capital															
	Absolute value (in Rs Cr)		20.04	35.16	32.06	51.27	47.49	47.63	47.54	89.38	89.75	90.42	90.93	92.06	104.20	105.40
	Rate (%)		10.250	10.250	10.250	10.250	10.250	10.250	10.250	12.250	12.250	12.250	12.250	12.250	13.500	13.500
	(e) Operation and maintenance cost (finally admitted by CERC)															
	Absolute value (in Rs Cr)		93.6	140.4	145.95	194.6	202.4	210.4	219	260	274.8	290.6	307.2	324.8	320	340.2
	Water charges (finally admitted by CERC) (in Rs Cr) #													40.01	40.01	42.55
	Rate (%)															
	(f) Compensation Allowances (in Rs Cr)													2.00	3.00	4.00

Name of the Utility: NTPC Ltd
Name of the Generating Station: Talcher STPS Stage- II
Station/ Stage/ Unit: 4 X 500
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal
Capacity of Plant (MW): 2000 MW
COD : 01.08.2005

		2004-05 01.4.04- 31.10.04	2004-05 01.11.04 - 31.03.05	2005-06 01.04.05 - 31.07.05	2005-06 01.08.05 - 31.03.06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
25	AFC (Rs. Kwh)	0.741	0.883	0.717	0.953	0.795	0.784	0.760	0.794	0.788	0.787	0.790	0.809	0.786	0.796	0.816
26	Energy Charge (Rs./Kwh)	0.510		0.670		0.610	0.680	0.960	1.020	1.550	2.020	1.500	1.480	1.440	1.350	1.660
27	Total tariff (Rs. Kwh)	1.251	1.393	1.387	1.623	1.405	1.464	1.720	1.814	2.338	2.807	2.290	2.289	2.226	2.146	2.476
28	Revenue realisation before tax (Rs. Crore)															
29	Revenue realisation after tax (Rs. Crore)															
30	Profit/ loss (Rs. Crore)	490.61		418.37		565.15	637.42	731.97	1189.59	997.26	805.80	753.83	829.36	808.55	798.18	755.65
31	DSM Generation (MU)	50.60		193.80		125.38	117.44	111.76	111.26	107.62	-77.43	-56.92	-116.38	13.08	15.66	-0.68
32	DSM Rate (Ps/Kwh)															
33	Revenue from DSM (Rs. Crore)						-0.3754	-36.6417	-37.5974	-33.855	-9.6176	-8.2974	5.6443	-15.7509	-14.0913	-4.5236

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