

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		Vindhyachal Super Thermal Power Station Stage-I (pit-head)						
3	Installed Capacity and Configuration	MW	6 X 210 = 1260 MW						
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Turbine :LMZ make; condensing type Steam Parameters : 140 Ksc/ 540 Deg C / 540 DegC						
5	Type of BFP		Electric Driven						
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 02.09.2013 with NCL for Vindhyachal- IV - 3.1892 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Vindhyachal - 17.55 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT Annual Requirement : 26.27						
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		<p align="center">NCL</p> <p align="center">17.20 20.39 20.39 20.39 20.74</p> <p align="center">NCL: G7 - G10</p>					For the Station (4760 MW) Requirement has been worked out at 90% PLF	
8.1.2.1	FSA	LOA	18.99	18.34	19.31	20.46	21.44		
		MoU	MMT	0.00	0.12	0.34	0.16		0.00
8.1.2.2	Imported		MMT	0.097	0.57	1.41	0.63		0.36
8.1.2.3	Spot Market/e-auction		MMT	0.000	1.01	0.09	0.07		0.40
8.1.3	Transportation Distance of the station from the sources of supply	KM	NCL: Min. 20 Km (Jayant/Dudhichua), Max. 62 Km (Sipur siding)						
8.1.4	Mode of Transport		Rail/MGR						
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	19.5 / 1.3						
8.1.6	Maximum stock maintained for primary fuel	MT	1103518	988000	1207000	1149891	1316000	For the Station (4760 MW)	
8.1.7	Minimum Stock maintained for primary fuel	MT	17576	46090	6000	480705	331000		
8.1.8	Average stock maintained for primary fuel	MT	393754	498092	268082	859120	778859		
8.2	Secondary Fuel :								
8.2.1	Annual Allocation/ Requirement	KL	18763.92						
8.2.2	Sources of supply		IOCL /HPCL/BPCL						
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400						
8.2.4	Mode of Transport		Rail						
8.2.5	Maximum Station capability to stock secondary fuels	KL	13920						
8.2.6	Maximum Stock of secondary oil actually maintained	KL	4459	8332	6673	7797	8515	For the Station (4760 MW)	

Sl.No.	Particulars		Units	2012-13	2013-14	2014-15	2015-16	2016-17	Basis of Information/ Methodology/ Remarks
8.2.7	Minimum Stock of secondary oil actually maintained		KL	8882	5893	2233	1551	4015	
8.2.8	Average Stock of secondary oil actually maintained		KL	6618	6892	4150	3425	6508	
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2637.290	5864.277	4881.084	6010.790	7607.022	For the station 4760 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	10001.03	9491.62	8570.39	8493.05	7987.70	
10.2	-Actual Net Generation Ex-bus		MU	9082.01	8573.19	7685.67	7593.45	7111.84	
10.3	-Scheduled Generation Ex-bus		MU	9054.53	8549.92	7602.41	7471.37	6987.85	
11	Average Declared Capacity (DC)		MW	1077.51	1077.82	995.29	1053.51	1075.46	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	783.83	769.04	707.49	749.58	730.81	
13	Actual Energy supplied to Colony from the station		MU	21.22	21.69	21.67	22.87	22.74	For the station 4760 MW
14	Primary Fuel :								
14.1	Consumption :		MT	7374376	6677480	6094266	5983101	5536717	
14.1.1	Domestic coal	From linked mines	MT	7308459	6584080	5786716	5783201	5410813	
		Non-linked mines	MT						
14.1.2	Imported coal*		MT	65917	93400	307550	199900	125904	
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	5179	4799	4686	4634	4558	
		(As Received) (TM Basis)	kCal/kg			3321	3378	3542	
		(As Fired) (TM Basis)	kCal/kg						
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6206	5984	5583	5650	5622	
		(As Received) (TM Basis)	kCal/kg	NA	NA	4410	4583	4594	

Sl.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	5185	4835	4746	4664	4576		
14.2.5	Weighted Average Gross Calorific value (As Billed)	kCal/kg	NA	NA	3376	3418	3566		
14.2.6	Weighted Average Gross Calorific value (As Fired)	kCal/kg	3264	3412					
14.3	Price of coal :								
14.3.1	Weighted Average Landed price of Domestic coal		1717.27	1641.09	1844.87	1885.07	2254.42		
14.3.2	Weighted Average Landed Price of Imported coal		7520.89	7509.91	6722.13	7136.62	6033.51		
14.3.3	Weighted Average Landed Price of Spot market/e-auction		0.00	5083.25	3786.40	2892.27	2681.71		
14.3.4	Weighted Average Landed Price of all the Coals		1747.69	1993.19	2177.71	2042.84	2323.71		
14.4	Blending :	% and MT (of the total coal consumed)	0.89	1.40	5.05	3.34	2.27		
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	393754	498092	268082	859120	778859	For the Station 4760 MW	
		Days	6.47	8.19	4.41	14.12	11.46		
14.5	Actual Transit & Handling Losses for coal/Lignite								
14.5.1	Pit- Head Station								
14.5.1.1	Transit loss from linked mines	%	0.19	0.19	0.20	0.20	0.20		
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%							
14.5.1.3	Transit loss of imported coal	%	0.20	0.19	0.20	0.20	0.20		
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	2489	2418	3212	2873	5805	
		LDO	KL	0	0	0	0	0	
15.2	Weighted Average Gross Calorific value (As received)	HFO	Kcal/Ltr	9714	9715	9711	9730	9789	
		LDO	Kcal/Ltr	0	0	0	0	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	HFO	Rs/KL	53480	55622	39842	26606	29814	For the Station 4760 MW	
		LDO	Rs/KL	61740	69711	53433	42182	43871		
15.4	Actual Average Stock maintained		KL	7094	6892	4150	4077	6509		
16	Weighted average duration of outages(unit-wise details):									
16.1	Planned Outages		Days	21.12	20.99	17.23	24.40	11.46		
16.2	Forced Outages		Days	3.74	4.56	4.81	2.82	2.46		
16.3	Number of tripping		Nos	33	39	41	37	45		
16.4	Number of start-ups:		Nos	34	40	42	38	46		
16.4.1	Cold Start-up		Nos	6	7	8	8	9		
16.4.2	Warm Start-up		Nos	20	22	17	22	28		
16.4.3	Hot start-up		Nos	8	11	17	8	9		
17	NOx , SOx ,and other particulate matter emission in :									
17.1	Design value of emission control equipment		mg/Nm3	ESP design dust outlet Conc.: 68 (after R&M)						
17.2	Actual emission (Stage-I)	SPM	mg/Nm3	139.39	139.82	122.31	116.64	139.95		
		SOX	mg/Nm3	826.03	764.42	703.05	704.75	730.43		
		NOX	mg/Nm3	676.79	580.68	519.08	525.32	539.81		
19	Detail of Ash utilization % of fly ash produced			%	66.51	43.60	26.68	17.66	23.51	For the Station (4760 MW)
19.1	Conversion of value added product		%	20.99	6.69	4.31	4.35	2.17		
19.2	For making roads & embarkment		%	0.00	0.00	0.00	0.00	0.00		
19.3	Land filling		%	14.49	8.63	0.75	0.00	1.47		
19.4	Used in plant site in one or other form or used in some other site		%	31.03	28.28	21.62	13.30	19.88		
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	11664.944	12984.491	15268.297	15832.516	14565.294	For the station 4760 MW	
21	Average stock of spares		Rs. Lakhs	17526.61	19477.84	20580.47	20681.91	20655.00		
22	Number of employees deployed in O&M								Man power as on last date of FY. Man MW ratio computed for 4760 MW	
22.1	- Executives			768	796	801	774	764		
22.2	- Non Executives			882	846	771	734	661		
22.3	- Corporate office			3170	3051	2916	2973	2787		
23	Man-MW ratio			0.35	0.34	0.33	0.32	0.30		

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**

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		Vindhyachal 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)		Turbine :Single Shaft Three cylinder reheat condensing type Steam Parameters : 176 Ksc /540 C/540 C						
5	Type of BFP		Steam Driven						
6	Circulating water system		Closed Cycle						
7	Any other Site specific feature		Ball & tube mills						
8	Fuels :								
8.1	Primary Fuel :		Coal/ Lignite					For the Station (4760 MW) Requirement has been worked out at 90% PLF	
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 02.09.2013 with NCL for Vindhyachal- IV - 3.1892 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Vindhyachal - 17.55 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT Annual Requirement : 26.27						
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		<p align="center">NCL</p> <p align="center">17.20 20.39 20.39 20.39 20.74</p> <p align="center">NCL: G7 - G10</p>					For the Station (4760 MW)	
8.1.2.1	FSA	LOA MoU	MMT	18.99	18.34	19.31	20.46		21.44
8.1.2.2	Imported		MMT	0.097	0.57	1.41	0.63		0.36
8.1.2.3	Spot Market/e-auction		MMT	0.000	1.01	0.09	0.07		0.40
8.1.3	Transportation Distance of the station from the sources of supply	KM	NCL: Min. 20 Km (Jayant/Dudhichua), Max. 62 Km (Sipur siding)						
8.1.4	Mode of Transport		Rail/MGR						
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	19.5 / 1.3						
8.1.6	Maximum stock maintained for primary fuel	MT	1103518	988000	1207000	1149891	1316000		
8.1.7	Minimum Stock maintained for primary fuel	MT	17576	46090	6000	480705	331000		
8.1.8	Average stock maintained for primary fuel	MT	393754	498092	268082	859120	778859		
8.2	Secondary Fuel :							For the Station (4760 MW)	
8.2.1	Annual Allocation/ Requirement	KL	18763.92						
8.2.2	Sources of supply		IOCL /HPCL/BPCL						
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400						
8.2.4	Mode of Transport		Rail						

8.2.5	Maximum Station capability to stock secondary fuels		KL	13920					
8.2.6	Maximum Stock of secondary oil actually maintained		KL	4459	8332	6673	7797	8515	
8.2.7	Minimum Stock of secondary oil actually maintained		KL	8882	5893	2233	1551	4015	
8.2.8	Average Stock of secondary oil actually maintained		KL	6618	6892	4150	3425	6508	
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2637.290	5864.277	4881.084	6010.790	7607.022	For the station 4760 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	7855.07	7717.01	6929.14	6628.78	6464.78	
10.2	-Actual Net Generation Ex-bus		MU	7400.63	7275.03	6505.70	6221.21	6107.81	
10.3	-Scheduled Generation Ex-bus		MU	7402.72	7329.75	6433.98	6170.42	6105.30	
11	Average Declared Capacity (DC)		MW	880.52	888.25	802.20	833.04	819.08	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	468.44	447.66	412.03	396.58	409.47	
13	Actual Energy supplied to Colony from the station		MU	21.22	21.69	21.67	22.87	22.74	For the station 4760 MW
14	Primary Fuel :								
14.1	Consumption :		MT	5640211	5307033	4838044	4571001	4346732	
14.1.1	Domestic coal	From linked mines	MT	5599779	5104033	4603644	4345061	4178932	
		Non-linked mines	MT						
14.1.2	Imported coal		MT	40432	203000	234400	225940	167800	
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	5179	4799	4686	4634	4558	
		(As Received) (TM Basis)	kCal/kg	NA	NA	3322	3360	3557	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6206	5984	5583	5650	5622	
		(As Received) (TM Basis)	kCal/kg	NA	NA	4410	4583	4594	
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	5185	4835	4746	4664	4576	

14.2.5	Weighted Average Gross Calorific value (As Received)	kCal/kg	NA	NA	3375	3421	3597	
14.2.6	Weighted Average Gross Calorific value (As Fired)	kCal/kg	3271	3418	NA	NA	NA	
14.3	Price of coal :							
14.3.1	Weighted Average Landed price of Domestic coal		1717.27	1641.09	1844.87	1885.07	2254.42	
14.3.2	Weighted Average Landed Price of Imported coal		7520.89	7509.91	6722.13	7136.62	6033.51	
14.3.3	Weighted Average Landed Price of Spot market/e-auction coal		0.00	5083.25	3786.40	2892.27	2681.71	
14.3.4	Weighted Average Landed Price of all the Coals		1747.69	1993.19	2177.71	2042.84	2323.71	
14.4	Blending :	% and MT (of the total coal consumed)	0.72	3.83	4.84	4.94	3.86	
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	393754	498092	268082	859120	778859	For the Station 4760 MW
		Days	6.47	8.19	4.41	14.12	11.46	
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.189	0.194	0.197	0.198	0.199	
14.5.1.2	Transit loss from non-linked mines including e-auction coal	%						
14.5.1.3	Transit loss of imported coal	%	0.196	0.191	0.196	0.196	0.198	
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	953	1247	2232	2772	3098
		LDO	KL	0	0	0	0	0
15.2	Weighted Average Gross Calorific value (As received)	HFO	Kcal/Ltr	9716	9714	9717	9731	9789
		LDO	Kcal/Ltr	0	0	0	0	0

15.3	Weighted Average Price	HFO	Rs/KL	53480	55622	39842	26606	29814	For the Station 4760 MW
		LDO	Rs/KL	61740	69711	53433	42182	43871	
15.4	Actual Average Stock maintained		KL	7094	6892	4150	4077	6509	
16	Weighted average duration of outages(unit-wise details):								
16.1	Planned Outages		Days	14.34	12.45	21.06	27.19	30.94	
16.2	Forced Outages		Days	6.14	11.48	3.47	5.02	8.14	
16.3	Number of tripping		Nos	15	18	14	17	15	
16.4	Number of start-ups:		Nos	15	18	14	17	15	
16.4.1	Cold Start-up		Nos	2	1	2	2	1	
16.4.2	Warm Start-up		Nos	3	3	5	7	6	
16.4.3	Hot start-up		Nos	9	13	7	8	8	
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 (after R&M)					
17.2	Actual emission (Stage-I)	SPM	mg/Nm3	81	87	80	90	89	
		SOX	mg/Nm3	746	827	666	668	733	
		NOX	mg/Nm3	627	641	562	561	551	
19	Detail of Ash utilization % of fly ash produced			%	66.51	43.60	26.68	17.66	23.51
19.1	Conversion of value added product		%	20.99	6.69	4.31	4.35	2.17	
19.2	For making roads & embarkment		%	0.00	0.00	0.00	0.00	0.00	
19.3	Land filling		%	14.49	8.63	0.75	0.00	1.47	
19.4	Used in plant site in one or other form or used in some other		%	31.03	28.28	21.62	13.30	19.88	
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	11664.944	12984.491	15268.297	15832.516	14565.294	
21	Average stock of spares		Rs. Lakhs	17526.61	19477.84	20580.47	20681.91	20655.00	For the station 4760 MW
22	Number of employees deployed in O&M								
22.1	- Executives			768	796	801	774	764	Man power as on last date of FY. Man MW ratio computed for 4760 MW
22.2	- Non Executives			882	846	771	734	661	
22.3	- Corporate office			3170	3051	2916	2973	2787	
23	Man-MW ratio			0.35	0.34	0.33	0.32	0.30	

Note: Allocation of stations attached at Appendix-I

Man-MW ratio computed excluding Corporate Employees

Average Coal stock computed based on monthly closing stock

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1	Name of Company		NTPC Ltd.					
2	Name of Station/ Pit head or Non- Pit head		Vindhyachal Super Thermal Power Station Stage-III (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)		Turbine :Single Shaft Three cylinder reheat condensing type Steam Parameters : 176 Ksc /540 C/540 C					
5	Type of BFP		Steam Driven					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
8	Fuels :							
8.1	Primary Fuel :		Coal/ Lignite					For the Station (4760 MW) Requirement has been worked out at 90% PLF
8.1.1	Annual Allocation or/and Requirement		Annual allocation through FSA dated 02.09.2013 with NCL for Vindhyachal- IV - 3.1892 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Vindhyachal - 17.55 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT Annual Requirement : 26.27					
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		NCL 17.20 20.39 20.39 20.39 20.74 NCL: G7 - G10					
8.1.2.1	FSA	LOA	18.99	18.34	19.31	20.46	21.44	
		MoU	0.00	0.12	0.34	0.16	0.00	
8.1.2.2	Imported	MMT	0.097	0.57	1.41	0.63	0.36	
8.1.2.3	Spot Market/e-auction	MMT	0.000	1.01	0.09	0.07	0.40	
8.1.3	Transportation Distance of the station from the sources of supply	KM	NCL: Min. 20 Km (Jayant/Dudhichua), Max. 62 Km (Sipur siding)					
8.1.4	Mode of Transport		Rail/MGR					
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	19.5 / 1.3					
8.1.6	Maximum stock maintained for primary fuel	MT	1103518	988000	1207000	1149891	1316000	For the Station (4760 MW)
8.1.7	Minimum Stock maintained for primary fuel	MT	17576	46090	6000	480705	331000	
8.1.8	Average stock maintained for primary fuel	MT	393754	498092	268082	859120	778859	
8.2	Secondary Fuel :							
8.2.1	Annual Allocation/ Requirement	KL	18763.92					
8.2.2	Sources of supply		IOCL /HPCL/BPCL					
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400					
8.2.4	Mode of Transport		Rail					

8.2.5	Maximum Station capability to stock secondary fuels		KL	13920					For the Station (4760 MW)
8.2.6	Maximum Stock of secondary oil actually maintained		KL	4459	8332	6673	7797	8515	
8.2.7	Minimum Stock of secondary oil actually maintained		KL	8882	5893	2233	1551	4015	
8.2.8	Average Stock of secondary oil actually maintained		KL	6618	6892	4150	3425	6508	
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2637.290	5864.277	4881.084	6010.790	7607.022	For the station 4760 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	8148.94	7822.40	7031.44	7433.23	7165.19	
10.2	-Actual Net Generation Ex-bus		MU	7783.57	7472.67	6742.15	7066.49	6801.61	
10.3	-Scheduled Generation Ex-bus		MU	7789.47	7526.92	6641.68	6966.46	6741.23	
11	Average Declared Capacity (DC)		MW	925.33	922.51	831.12	882.12	896.04	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	401.63	386.74	372.34	427.76	407.41	
13	Actual Energy supplied to Colony from the station		MU	21.22	21.69	21.67	22.87	22.74	For the station 4760 MW
14	Primary Fuel :								
14.1	Consumption :		MT	5835832	5378820	4875877	5119397	4827054	For the station 4760 MW
14.1.1	Domestic coal	From linked mines	MT	5834932	5230420	4638677	4950957	4684754	
		Non-linked mines	MT						
14.1.2	Imported coal		MT	900	148400	237200	168440	142300	
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	5179	4799	4686	4634	4558	
		(As Received) (TM Basis)	kCal/kg	NA	NA	3331	3378	3522	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6206	5984	5583	5650	5622	
		(As Received) (TM Basis)	kCal/kg	NA	NA	4410	4583	4594	
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	5185	4835	4746	4664	4576	
14.2.5	Weighted Average	Gross Calorific value (As Received)	kCal/kg	NA	NA	3383	3417	3554	
14.2.6	Weighted Average	Gross Calorific value (As Fired)	kCal/kg	3273	3412	NA	NA	NA	

14.3	Price of coal :								
14.3.1	Weighted Average Landed price of Domestic coal			1717.27	1641.09	1844.87	1885.07	2254.42	
14.3.2	Weighted Average Landed Price of Imported coal			7520.89	7509.91	6722.13	7136.62	6033.51	
14.3.3	Weighted Average Landed Price of Spot market/e-auction			0.00	5083.25	3786.40	2892.27	2681.71	
14.3.4	Weighted Average Landed Price of all the Coals			1747.69	1993.19	2177.71	2042.84	2323.71	
14.4	Blending :		% and MT (of the total coal consumed)	0.02	2.76	4.86	3.29	2.95	
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	393754	498092	268082	859120	778859	
			Days	6.47	8.19	4.41	14.12	11.46	
14.5	Actual Transit & Handling Losses for coal/Lignite								
14.5.1	Pit- Head Station								
14.5.1.1	Transit loss from linked mines		%	0.19	0.19	0.20	0.20	0.20	For the Station 4760 MW
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.		%						
14.5.1.3	Transit loss of imported coal		%	0.20	0.19	0.20	0.20	0.20	
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	946	572	1596	1702	1338	
			LDO	0	27	55	223	1594	
15.2	Weighted Average Gross Calorific value (As received)		HFO	9721	9721	9715	9731	9787	
			LDO	0	9124	9111	9120	9356	
15.3	Weighted Average Price		HFO	53480	55622	39842	26606	29814	For the Station 4760 MW
			LDO	61740	69711	53433	42182	43871	
15.4	Actual Average Stock maintained		KL	7094	6892	4150	4077	6509	
16	Weighted average duration of outages(unit-wise details):								
16.1	Planned Outages		Days	13.14	12.44	22.57	18.75	15.85	
16.2	Forced Outages		Days	4.23	1.76	5.49	6.74	1.96	
16.3	Number of tripping		Nos	12	8	13	8	8	
16.4	Number of start-ups:		Nos	12	8	13	8	8	
16.4.1	Cold Start-up		Nos	1	2	2	1	1	

16.4.2	Warm Start-up	Nos	7	3	5	3	5	
16.4.3	Hot start-up	Nos	4	3	6	4	2	
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	77.76	85.15	81.75	76.95	86.84
		SOX	mg/Nm3	802.70	821.00	716.20	707.70	734.07
		NOX	mg/Nm3	616.29	626.00	575.85	576.00	541.91
19	Detail of Ash utilization % of fly ash produced							
19.1	Conversion of value added product	%	66.51	43.60	26.68	17.66	23.51	For the Station (4760 MW)
19.2	For making roads & embarkment	%	20.99	6.69	4.31	4.35	2.17	
19.3	Land filling	%	0.00	0.00	0.00	0.00	0.00	
19.4	Used in plant site in one or other form or used in some other	%	14.49	8.63	0.75	0.00	1.47	
19.5	Any other use , Please specify	%	31.03	28.28	21.62	13.30	19.88	
20	Cost of spares actually consumed							
21	Average stock of spares							
22	Number of employees deployed in O&M							
22.1	- Executives		768	796	801	774	764	Man power as on last date of FY. Man MW ratio computed for 4760 MW
22.2	- Non Executives		882	846	771	734	661	
22.3	- Corporate office		3170	3051	2916	2973	2787	
23	Man-MW ratio							

Note: Allocation of stations attached at Appendix-I

Man-MW ratio computed excluding Corporate Employees

Average Coal stock computed based on monthly closing stock

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		Vindhyachal Super Thermal Power Station Stage-IV (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)		Turbine :Single Shaft Three cylinder reheat condensing type Steam Parameters : 176 Ksc /540 C/568 C						
5	Type of BFP		Steam Driven						
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 02.09.2013 with NCL for Vindhyachal- IV - 3.1892 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Vindhyachal - 17.55 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT Annual Requirement : 26.27						
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		NCL					For the Station (4760 MW) Requirement has been worked out at 90% PLF	
			17.20	20.39	20.39	20.39	20.74		
			NCL: G7 - G10						
8.1.2.1	FSA	LOA MoU	MMT	18.99	18.34	19.31	20.46		21.44
8.1.2.2	Imported		MMT	0.097	0.57	1.41	0.63		0.36
8.1.2.3	Spot Market/e-auction		MMT	0.000	1.01	0.09	0.07		0.40
8.1.3	Transportation Distance of the station from the sources of supply	KM	NCL: Min. 20 Km (Jayant/Dudhichua), Max. 62 Km (Sipur siding)						For the Station (4760 MW)
8.1.4	Mode of Transport		Rail/MGR						
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	19.5 / 1.3						
8.1.6	Maximum stock maintained for primary fuel	MT	1103518	988000	1207000	1149891	1316000		
8.1.7	Minimum Stock maintained for primary fuel	MT	17576	46090	6000	480705	331000		
8.1.8	Average stock maintained for primary fuel	MT	393754	498092	268082	859120	778859		
8.2	Secondary Fuel :							For the Station (4760 MW)	
8.2.1	Annual Allocation/ Requirement	KL	18763.92						
8.2.2	Sources of supply		IOCL /HPCL/BPCL						
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400						

8.2.4	Mode of Transport			Rail					
8.2.5	Maximum Station capability to stock secondary fuels		KL	13920					For the Station (4760 MW)
8.2.6	Maximum Stock of secondary oil actually maintained		KL	4459	8332	6673	7797	8515	
8.2.7	Minimum Stock of secondary oil actually maintained		KL	8882	5893	2233	1551	4015	
8.2.8	Average Stock of secondary oil actually maintained		KL	6618	6892	4150	3425	6508	
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2637.290	5864.277	4881.084	6010.790	7607.022	For the station 4760 MW
9.2	Cost of spares included in capital cost for the purpose of tariff		Rs. Crs	5.85	60.61	0.00	0.00	0.00	
10	Generation :								
10.1	-Actual Gross Generation at generator terminals		MU	93.51	3660.51	7042.74	7289.29	7100.59	
10.2	-Actual Net Generation Ex-bus		MU	79.32	3440.49	6660.46	6890.19	6690.23	
10.3	-Scheduled Generation Ex-bus		MU	84.86	3506.34	6604.63	6779.78	6537.60	
11	Average Declared Capacity (DC)		MW	114.06	433.73	814.71	895.80	917.60	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	10.39	203.72	389.68	408.91	417.14	
13	Actual Energy supplied to Colony from the station		MU	21.22	21.69	21.67	22.87	22.74	For the station 4760 MW
14	Primary Fuel :								
14.1	Consumption :		MT	69345	2541481	4892491	5022273	4786096	
14.1.1	Domestic coal	From linked mines	MT	69345	2440481	4649991	4805833	4655996	
		Non-linked mines	MT						
14.1.2	Imported coal		MT	0	101000	242500	216440	130100	
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	5179	4799	4686	4634	4558	
		(As Received) (TM Basis)	kCal/kg	NA	NA	3325	3364	3531	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	NA	NA	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6206	5984	5583	5650	5622	
		(As Received) (TM Basis)	kCal/kg	NA	NA	4410	4583	4594	
14.2.3	Spot market/e-auction coal	(As Billed)	kCal/kg						
		(As Received)	kCal/kg						
14.2.4	Weighted Average	Gross Calorific value (As Billed)	kCal/kg	5185	4835	4746	4664	4576	
14.2.5	Weighted Average	Gross Calorific value (As Received)	kCal/kg	NA	NA	3378	3417	3560	
14.2.6	Weighted Average	Gross Calorific value (As Fired)	kCal/kg	3188	3413				
14.3	Price of coal :								

14.3.1	Weighted Average Landed price of Domestic coal		1717.27	1641.09	1844.87	1885.07	2254.42	
14.3.2	Weighted Average Landed Price of Imported coal		7520.89	7509.91	6722.13	7136.62	6033.51	
14.3.3	Weighted Average Landed Price of Spot market/e-auction		0.00	5083.25	3786.40	2892.27	2681.71	
14.3.4	Weighted Average Landed Price of all the Coals		1747.69	1993.19	2177.71	2042.84	2323.71	
14.4	Blending :	% and MT (of the total coal consumed)	0.00	3.97	4.96	4.31	2.72	
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	393754	498092	268082	859120	778859	For the Station 4760 MW
		Days	6.47	8.19	4.41	14.12	11.46	
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.19	0.19	0.20	0.20	0.20	
14.5.1.2	Transit loss from non-linked mines including e-auction coal	%						
14.5.1.3	Transit loss of imported coal	%	0.20	0.19	0.20	0.20	0.20	
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	0	0	2201	2398	3495
		LDO	KL	1097	1967	584	148	203
15.2	Weighted Average Gross Calorific value (As received)	HFO	Kcal/Ltr	0	0	9718	9729	9786
		LDO	Kcal/Ltr	9760	9274	9113	9120	9387
15.3	Weighted Average Price	HFO	Rs/KL	53480	55622	39842	26606	29814
		LDO	Rs/KL	61740	69711	53433	42182	43871
15.4	Actual Average Stock maintained		KL	7094	6892	4150	4077	6509
16	Weighted average duration of outages(unit-wise details):							
16.1	Planned Outages	Days	0.00	0.00	18.63	12.99	1.69	
16.2	Forced Outages	Days	7.60	6.80	10.35	5.93	5.41	
16.3	Number of tripping	Nos	6	22	32	14	14	
16.4	Number of start-ups:	Nos	6	22	32	14	14	
16.4.1	Cold Start-up	Nos	1	1	2	1	1	
16.4.2	Warm Start-up	Nos	3	10	18	6	7	
16.4.3	Hot start-up	Nos	2	11	12	7	6	
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		45	41	40	46	
		SOX	mg/Nm3		685	655	334	735	
		NOX	mg/Nm3		581	577	579	542	
19	Detail of Ash utilization % of fly ash produced		%	66.51	43.60	26.68	17.66	23.51	For the Station (4760 MW)
19.1	Conversion of value added product		%	20.99	6.69	4.31	4.35	2.17	
19.2	For making roads & embarkment		%	0.00	0.00	0.00	0.00	0.00	
19.3	Land filling		%	14.49	8.63	0.75	0.00	1.47	
19.4	Used in plant site in one or other form or used in some other		%	31.03	28.28	21.62	13.30	19.88	
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	11664.944	12984.491	15268.297	15832.516	14565.294	For the station 4760 MW
21	Average stock of spares		Rs. Lakhs	17526.61	19477.84	20580.47	20681.91	20655.00	
22	Number of employees deployed in O&M								Man power as on last date of FY. Man MW ratio computed for 4760 MW
22.1	- Executives			768	796	801	774	764	
22.2	- Non Executives			882	846	771	734	661	
22.3	- Corporate office			3170	3051	2916	2973	2787	
23	Man-MW ratio			0.35	0.34	0.33	0.32	0.30	

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**

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		Vindhyachal Super Thermal Power Station Stage-V (Non pit-head)																									
3	Installed Capacity and Configuration	MW	1 X 500 = 500 MW																									
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Turbine :Single Shaft Three cylinder reheat condensing type Steam Parameters : 176 Ksc /540 C/568 C																									
5	Type of BFP		Steam Driven																									
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 02.09.2013 with NCL for Vindhyachal- IV - 3.1892 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Vindhyachal - 17.55 MMT Allocation through MOU dated 22.07.2014 with NCL - 3.0 MMT Annual Requirement : 26.27																									
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		<table border="1"> <thead> <tr> <th colspan="5">NCL</th> </tr> <tr> <th>2012-13</th> <th>2013-14</th> <th>2014-15</th> <th>2015-16</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>17.20</td> <td>20.39</td> <td>20.39</td> <td>20.39</td> <td>20.74</td> </tr> <tr> <td colspan="5">NCL: G7 - G10</td> </tr> </tbody> </table>					NCL					2012-13	2013-14	2014-15	2015-16	2016-17	17.20	20.39	20.39	20.39	20.74	NCL: G7 - G10					For the Station (4760 MW) Requirement has been worked out at 90% PLF
NCL																												
2012-13	2013-14	2014-15	2015-16	2016-17																								
17.20	20.39	20.39	20.39	20.74																								
NCL: G7 - G10																												
8.1.2.1	FSA	LOA MoU	MMT	18.99	18.34	19.31	20.46	21.44																				
8.1.2.2	Imported		MMT	0.097	0.57	1.41	0.63	0.36																				
8.1.2.3	Spot Market/e-auction		MMT	0.000	1.01	0.09	0.07	0.40																				
8.1.3	Transportation Distance of the station from the sources of supply	KM	NCL: Min. 20 Km (Jayant/Dudhichua), Max. 62 Km (Sipur siding)																									
8.1.4	Mode of Transport		Rail/MGR																									
8.1.5	Maximum Station capability to stock primary fuel	Days & MMT	19.5 / 1.3																									
8.1.6	Maximum stock maintained for primary fuel	MT	1103518	988000	1207000	1149891	1316000	For the Station (4760 MW)																				
8.1.7	Minimum Stock maintained for primary fuel	MT	17576	46090	6000	480705	331000																					
8.1.8	Average stock maintained for primary fuel	MT	393754	498092	268082	859120	778859																					
8.2	Secondary Fuel :																											
8.2.1	Annual Allocation/ Requirement	KL	18763.92																									
8.2.2	Sources of supply		IOCL /HPCL/BPCL																									
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400																									

8.2.4	Mode of Transport			Rail					
8.2.5	Maximum Station capability to stock secondary fuels		KL	13920					For the Station (4760 MW)
8.2.6	Maximum Stock of secondary oil actually maintained		KL	4459	8332	6673	7797	8515	
8.2.7	Minimum Stock of secondary oil actually maintained		KL	8882	5893	2233	1551	4015	
8.2.8	Average Stock of secondary oil actually maintained		KL	6618	6892	4150	3425	6508	
9	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts		Rs. Lakhs	2637.290	5864.277	4881.084	6010.790	7607.022	For the station 4760 MW
9.2	Cost of spares included in capital cost for the purpose of tariff		Rs. Lakhs					4002	
10	Generation :								
10.1	-Actual Gross Generation at generator terminals		MU	NA	NA	NA	1349.08	3488.65	
10.2	-Actual Net Generation Ex-bus		MU	NA	NA	NA	1275.42	3303.32	
10.3	-Scheduled Generation Ex-bus		MU	NA	NA	NA	1246.82	3295.78	
11	Average Declared Capacity (DC)		MW	NA	NA	NA	444.87	428.28	
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	NA	NA	NA	77.77	194.70	
13	Actual Energy supplied to Colony from the station		MU	21.22	21.69	21.67	22.87	22.74	For the station 4760 MW
14	Primary Fuel :								
14.1	Consumption :		MT				927255	2356681	For the station 4760 MW
14.1.1	Domestic coal	From linked mines	MT				927255	2356681	
		Non-linked mines	MT						
14.1.2	Imported coal		MT	0	0	0	0	0	
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	5179	4799	4686	4634	4558	
		(As Received) (TM Basis)	kCal/kg	NA	NA	NA	3434	3506	
		(As Fired) (TM Basis)	kCal/kg	NA	NA	NA	3434	3506	
14.2.2	Imported Coal	(As Billed) (ADB)	kCal/kg	6206	5984	5583	5650	5622	
		(As Received) (TM Basis)	kCal/kg	NA	NA	4410	4583	4594	
14.2.3	Spot market/e-auction coal	(As Billed) (As)	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	5185	4835	4746	4664	4576	
14.2.5	Weighted Average Gross Calorific value (As Received)		kCal/kg	NA	NA	NA	3434	3506	
14.2.6	Weighted Average Gross Calorific value (As Fired)		kCal/kg	NA	NA	NA	NA	NA	
14.3	Price of coal :								
14.3.1	Weighted Average Landed price of Domestic coal						1885.07	2254.42	

14.3.2	Weighted Average Landed Price of Imported coal					7136.62	6033.51	
14.3.3	Weighted Average Landed Price of Spot market/e-auction					2892.27	2681.71	
14.3.4	Weighted Average Landed Price of all the Coals					2042.84	2323.71	
14.4	Blending :	% and MT (of the total coal consumed)	NA	NA	NA	0.00	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	393754	498092	268082	859120	778859	For the Station 4760 MW
		Days	6.47	8.19	4.41	14.12	11.46	
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%						
14.5.1.2	Transit loss from non-linked mines including e-auction coal	%						
14.5.1.3	Transit loss of imported coal	%						
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines (MGR/ Rail)	%	NA	NA	NA	0.198	0.199	
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.							
14.5.2.3	Transit loss of imported coal		NA	NA	NA	0.196	0.198	
15	Secondary Fuel Oil : (If more than one fuel used then give details of all the fuels							
15.1	Consumption	HFO	KL	NA	NA	NA	0	
		LDO	KL	NA	NA	NA	1954	2496
15.2	Weighted Average Gross Calorific value (As received)	HFO	Kcal/Ltr	NA	NA	NA	0	0
		LDO	Kcal/Ltr	NA	NA	NA	9148	9367
15.3	Weighted Average Price	HFO	Rs/KL				26606	29814
		LDO	Rs/KL				42182	43871
15.4	Actual Average Stock maintained	KL	7094	6892	4150	4077	6509	
16	Weighted average duration of outages(unit-wise details):							
16.1	Planned Outages	Days	NA	NA	NA	0.00	25.89	
16.2	Forced Outages	Days	NA	NA	NA	8.91	6.35	
16.3	Number of tripping	Nos	NA	NA	NA	12	10	
16.4	Number of start-ups:	Nos	NA	NA	NA	12	10	
16.4.1	Cold Start-up	Nos	NA	NA	NA	1	1	
16.4.2	Warm Start-up	Nos	NA	NA	NA	6	3	
16.4.3	Hot start-up	Nos	NA	NA	NA	5	6	
17	NOx , SOx ,and other particulate matter emission in :							
17.1	Design value of emission control equipment	mg/Nm3	ESP design dust outlet Conc.: 17					
		SPM	mg/Nm3				37.3	47.0

17.2	Actual emission	SOX	mg/Nm3				503.6	723.1	
		NOX	mg/Nm3				571.0	538.8	
19	Detail of Ash utilization % of fly ash produced		%	66.51	43.60	26.68	17.66	23.51	For the Station (4760 MW)
19.1	Conversion of value added product		%	20.99	6.69	4.31	4.35	2.17	
19.2	For making roads & embarkment		%	0.00	0.00	0.00	0.00	0.00	
19.3	Land filling		%	14.49	8.63	0.75	0.00	1.47	
19.4	Used in plant site in one or other form or used in some other		%	31.03	28.28	21.62	13.30	19.88	
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	11664.944	12984.491	15268.297	15832.516	14565.294	For the station 4760 MW
21	Average stock of spares		Rs. Lakhs	17526.61	19477.84	20580.47	20681.91	20655.00	
22	Number of employees deployed in O&M								Man power as on last date of FY. Man MW ratio computed for 4760 MW
22.1	- Executives			768	796	801	774	764	
22.2	- Non Executives			882	846	771	734	661	
22.3	- Corporate office			3170	3051	2916	2973	2787	
23	Man-MW ratio			0.35	0.34	0.33	0.32	0.30	

Note: Allocation of stations attached at Appendix-I

Man-MW ratio computed excluding Corporate Employees

Average Coal stock computed based on monthly closing stock

DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Name of the Company:

NTPC Ltd.

Name of the Power Station:

Vindhyachal Super Thermal Power Station (4760 MW)

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
1	Consumption of stores & spares	11664.94	12984.49	15268.30	15832.52	14565.29
2	Repair & Maintenance	8923.22	8006.07	10423.40	13970.04	15426.74
3	Insurance	1038.33	1301.21	1438.21	1307.97	1261.98
4	Security	2064.68	2372.47	2637.60	2883.82	3162.16
5	Water Charges	13693.30	7957.51	7957.51	7803.48	7957.51
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	481.29	563.44	567.25	606.92	681.04
6.3	Travelling & Conveyance	847.36	968.38	986.77	1004.42	961.16
6.4	Communication Expenses	136.94	140.48	149.03	180.64	217.96
6.5	Advertising	19.52	6.46	23.07	14.99	47.39
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	71.46	59.75	85.11	146.02	162.49
6.9	Filing fee	137.03	160.51	187.74	187.44	209.50
	Subtotal (Administrative Expenses)	1693.61	1899.01	1998.98	2140.42	2279.54
7.0	Employee Cost					
7.1.1	Salaries, Wages & Allowances	14112.06	16230.85	16501.21	16488.21	20800.92
7.1.2	Pension	100.67	4256.01	1561.86	1641.93	1581.50
7.1.3	Gratuity	657.31	266.89	-111.44	-70.42	3721.38
7.1.4	Provident Fund	1251.18	1457.03	1454.96	1499.92	1563.13
7.1.5	Leave Encashment	1639.88	1691.73	1870.12	1920.76	2833.34
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on superannuated employees	17.00	22.04	31.51	42.32	-0.07
7.2.2	-Medical expenses on regular employees & others	1154.40	1186.90	1440.88	1737.01	417.00
7.2.3	-Uniform/Livries & safety equipment	126.85	387.28	331.36	300.13	379.12
7.2.4	-Canteen expenses	183.34	247.30	171.14	225.39	243.78
7.2.5	-Other staff welfare expenses	248.99	351.56	436.89	349.25	471.45
	Subtotal (Staff welfare Expenses)	1730.58	2195.07	2411.78	2654.10	1511.29
7.3	Productivity linked Incentive	953.25	726.41	290.01	282.81	0.02
7.4	Expenditure on VRS	0.00	0.00	145.86	1.70	0.00
7.5	Ex-gratia	466.66	511.98	494.83	800.84	467.15
7.6	Performance Related Pay (PRP)	994.71	555.44	1486.62	1109.70	1752.08
	Sub Total (Employee Cost)	21906.29	27891.41	26105.80	26329.56	34230.79
8	Loss of Store	3.23	6.26	1.28	0.04	0.73
9	Provisions	85.47	45.95	93.83	127.22	28.67
10	Prior Period Expenses	-395.89	338.56	41.89	0.00	0.00
11	Corporate Office expenses allocation	8417.39	9774.23	11786.31	12346.72	13856.22
12	Others					
12.1	Rates & Taxes	658.18	413.62	480.83	426.17	661.81
12.2	Water cess	115.54	146.25	146.49	159.54	153.91
12.3	Training & recruitment expenses	107.31	77.44	94.20	139.89	190.24
12.4	Tender Expenses	219.14	180.41	256.17	105.46	168.73
12.5	Guest house expenses	100.46	63.39	129.85	114.13	120.41
12.6	Education expenses	33.39	9.22	24.50	20.91	18.15

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
12.7	Community Development Expenses	139.02	237.72	562.84	2513.03	1731.14
12.8	Ash utilisation expenses	35.92	-64.67	-144.02	31.62	-29.10
12.9	Books & Periodicals	4.67	2.50	3.26	5.13	4.11
12.10	Professional Charges	38.53	54.82	16.22	48.12	42.82
12.11	Legal expenses	21.70	1.42	100.98	58.64	56.95
12.12	EDP Hire & other charges	30.21	45.17	43.93	52.41	47.61
12.13	Printing & Stationery	67.60	54.90	74.15	59.85	107.56
12.14	Misc Expenses	906.17	2117.87	1478.28	3064.74	1524.85
	Sub Total (Others)	2477.83	3340.06	3267.68	6799.63	4799.19
13	(Total 1 to 12)	71572.41	75917.24	81020.78	89541.41	97568.82
14	Revenue / Recoveries	-108.97	-190.00	-107.47	-126.06	-158.14
15	Net Expenses	71463.44	75727.23	80913.30	89415.35	97410.68
16	Capital spares consumed	611.93	967.54	1539.63	2198.65	682.26
	Total O&M Cost	72075.37	76694.78	82452.93	91614.00	98092.94

Annexure-VI (C)

DETAILS OF WATER CHARGES

Name of the Company: NTPC Ltd.

Name of the Power Station and Stage/Phase: Vindhyachal Super Thermal Power Station (4760 MW)

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	Open re-circulating system				
4	Any Special Features which may increase/reduce water consumption					
(B)	Quantum of Water : (Cubic Meter)					
5	Contracted Quantum	160740000	160740000	160740000	160740000	153967500
6	Allocation of Water	95415663	108542377	94991902	109645469	126413694
7	Actual water Consumption	Rs. 5.5/cum	Rs. 5.5/cum	Rs. 5.5/cum	Rs. 5.5/cum	Rs. 5.5/cum
8	Rate of Water Charges					
9	Other charges/Fees , if paid as part of Water Charges Rs lakhs					
	Total water Charges Paid Rs	1369330228	795750916	795750917	797931059	795750918

Details of capital Spares

Name of Company : NTPC Limited

Name of Power station : Vindhyachal STPS

Sl. No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
(A)	Details of capital spares in Opening stock	18,256.51	20281.86	25178.60	28520.06	32332.20
(B)	Details of capital spares procured during the year	2637.29	5864.28	4881.08	6010.79	7607.02
(C)	Details of capital spares consumed during the year	-611.93	-967.54	-1539.63	-2198.65	-682.26
(D)	Details of capital spares closing at the end of the year	20281.86	25178.60	28520.06	32332.20	39256.96

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

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Vindhyachal STPS Stage-I														
Station/ Stage/ Unit: 6 X 210														
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal														
Capacity of Plant (MW): 1260 MW														
COD : 01.02.1994														
		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
	Absolute value (in Rs Cr)	131.04	136.332	141.75	147.42	153.34	229.32	242.424	256.284	271.026	286.524	301.14	320.04	340.2
	Water charges (finally admitted by CERC) (in Rs Cr) #											15.22	15.22	15.22
	Rate (%)													
	(f) Compensation Allowances (in Rs Cr)	0.00	0.00	0.00	0.00	0.00	5.67	6.30	7.56	8.19	8.19	8.40	6.30	2.10
	(g) Special Allowances (in Rs. Cr)											31.50	50.25	89.07
25	AFC (Rs. Kwh)	0.393	0.399	0.407	0.416	0.424	0.579	0.593	0.607	0.629	0.655	0.689	0.734	0.797
26	Energy Charge (Rs./Kwh)	0.790	0.870	0.970	1.020	1.220	1.220	1.510	1.640	1.480	1.600	1.680	1.620	1.780
27	Total tariff (Rs. Kwh)	1.183	1.269	1.377	1.436	1.644	1.799	2.103	2.247	2.109	2.255	2.369	2.354	2.577
28	Revenue realisation before tax (Rs. Crore)													
29	Revenue realisation after tax (Rs. Crore)													
30	Profit/ loss (Rs. Crore)*	477.09	414.75	611.22	891.07	949.03	1107.48	1308.06	821.60	1177.96	1297.45	1023.52	1374.66	1451.98
31	DSM Generation (MU)	168.92	141.63	54.00	63.90	53.60	46.21	77.21	70.58	27.49	23.27	83.26	122.08	123.99
32	DSM Rate (Ps/Kwh)													
33	Revenue from DSM (Rs. Crore)				-16.34	-18.81	-24.77	-28.83	-20.01	-11.56	-11.52	-9.96	-31.81	-20.74

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: Vindhyachal 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 : 01.10.2000														
		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) (%)	89.79	94.72	96.36	93.25	95.01	97.05	97.10	89.65	94.17	95.00	85.11	88.39	86.91
2	Plant Load Factors (PLF) (%)	87.79	92.18	94.59	91.25	93.00	95.69	93.98	87.73	89.67	88.09	79.10	75.46	73.80
3	Scheduled Energy (MU)	7191.97	7570.91	7828.14	7569.40	7698.90	7933.09	7766.49	7236.53	7402.72	7329.75	6433.98	6170.42	6105.30
4	Scheduled Generation (MU)	7191.97	7570.91	7828.14	7569.40	7698.90	7933.09	7766.49	7236.53	7402.72	7329.75	6433.98	6170.42	6105.30
5	Actual Generation (MU)	7332.21	7695.09	7878.92	7618.60	7734.00	7977.26	7827.50	7279.06	7400.63	7275.03	6505.70	6221.21	6107.81
6	Quantum of coal consumption (MT)	4631260	5085910	5284517	5234961	5471350	5549583	5459611	5158371	5640211	5307033	4838044	4571001	4346732
7	Value of coal (Rs. Lakh)					80686	87822	105152	107036	98573	105779	105359	93378	101006
8	Specific Coal Consumption (kg/kwh)	0.60	0.63	0.64	0.65	0.67	0.66	0.66	0.67	0.72	0.69	0.70	0.69	0.67
9	Gross Calorific Value of Coal (Kcal/ Kg)	3983.15	3754.70	3685.74	3593.50	3496.71	3538.00	3500.00	3439.73	3271.48	3418.47	3375.00	3420.78	3597.03
10	Heat Contribution of Coal (Kcal/ kwh)	2398.69	2364.85	2350.70	2346.87	2348.34	2342.29	2321.20	2356.74	2349.03	2350.90	2356.48	2358.87	2418.54
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$													
12	Quantum of Oil Consumption (KL)	1147.69	1279.50	464.11	1052.52	1050.30	1389.97	702.56	1802.70	953.04	1247.15	2231.80	2771.79	3098.00
13	Value of Oil (Rs. lakh)													
14	Gross calorific value of oil (kcal/lit)	9730.0	9731.0	9735.0	9293.9	9095.9	9725.3	9729.5	9771.1	9716.42	9714.3	9717.0	9731.1	9788.5
15	Specific Oil Consumption (ml/ kwh)	0.15	0.16	0.06	0.13	0.13	0.17	0.09	0.23	0.12	0.16	0.32	0.42	0.48
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$													
17	Heat Contribution of Oil (Kcal/ kwh)	1.5	1.5	0.5	1.2	1.2	1.6	0.8	2.3	1.18	1.6	3.1	4.1	4.7
18	Station Heat Rate (kcal/kwh)	2400	2366	2351	2348	2350	2344	2322	2297	2350.21	2352	2360	2363	2423
19	Auxiliary Energy Consumption (%)	5.944	5.889	5.661	5.644	5.844	5.700	6.000	5.930	5.964	5.801	5.950	5.983	6.334
20	Debt at the end of the year (Rs. Cr)	1067.13	917.64	761.00	594.92	470.78						3827.78	3806.89	3562.99
21	Equity (Rs. Cr - (Average) #	7431.15	744.44	744.54	745.78	747.48	743.03	744.16	744.71	745.32	752.15	759.23	760.58	762.20
22	Working Capital (Rs. Cr) – finally admitted by CERC	252.19	254.24	256.65	259.88	253.96	378.76	380.64	384.31	386.94	379.58	360.35	365.62	370.31
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #	2551.24	2551.24	2551.24	2551.24	2551.24	2476.78	2480.54	2482.38	2484.40	2507.17	2530.76	2535.26	2540.68
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr	441.51	444.13	449.64	451.39	398.55	509.20	507.92	512.26	518.14	459.04	436.56	448.75	463.92
	(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)	107.15	107.15	107.15	107.15	107.15	174.47	172.72	170.87	171.01	176.61	148.88	149.87	150.19
	Rate (%)	23.48	23.48	23.48	23.48	23.48	23.48	23.21	22.94	22.94	23.48	19.61	19.70	19.70
	(b) Interest on Loan													
	Absolute value (in Rs Cr)	70.98	64.13	58.34	46.31	31.73	14.88	7.69	3.88	0.89	0.00	0.00	0.00	0.00
	Rate (%) – Weighted Average Rate	6.2500	6.4600	6.9500	6.8300	5.9500	3.8343	2.9966	2.9629	2.6055	0.0000	0.0000	0.0000	0.0000
	(c) Depreciation (finally allowed by CERC)													
	Absolute value (in Rs Cr)	92.64	92.64	92.64	92.64	92.64	126.95	126.98	127.08	127.24	55.53	55.87	56.26	56.78
	AAD	51.29	56.85	64.00	73.45	31.50								
	Rate (%)	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74
	(d) Interest on working Capital													
	Absolute value (in Rs Cr)	25.85	26.06	26.31	26.64	26.03	46.40	46.63	47.08	47.40	46.50	48.65	49.36	49.99

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Vindhyachal 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 : 01.10.2000														
		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
	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
	(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	137.397	145.3	153.6	162.4	160	170.1	180.8
	Water charges (finally admitted by CERC) (in Rs Cr) #											21.16	21.16	21.16
	Normative O&M Expenses (in Rs Lakh/MW) #													
	(f) Compensation Allowances (in Rs Cr)								1.50	1.50	1.50	2.00	2.00	5.00
25	AFC (Rs. Kwh)	0.634	0.638	0.646	0.648	0.572	0.731	0.730	0.736	0.744	0.659	0.637	0.655	0.677
26	Energy Charge (Rs./Kwh)	0.770	0.840	0.930	0.990	1.180	1.160	1.420	1.550	1.400	1.510	1.580	1.590	1.700
27	Total tariff (Rs. Kwh)	1.404	1.478	1.576	1.638	1.752	1.891	2.150	2.286	2.144	2.169	2.217	2.245	2.377
28	Revenue realisation before tax (Rs. Crore)													
29	Revenue realisation after tax (Rs. Crore)													
30	Profit/ loss (Rs. Crore)*	477.09	414.75	611.22	891.07	949.03	1107.48	1308.06	821.60	1177.96	1297.45	1023.52	1374.66	1451.98
31	DSM Generation (MU)	140.24	124.19	50.78	49.20	35.10	44.17	61.01	42.53	-2.09	-54.71	71.72	50.79	2.51
32	DSM Rate (Ps/Kwh)													
33	Revenue from DSM (Rs. Crore)				-13.491	-11.007	18.107	-18.155	-10.170	-3.557	1.295	-12.920	-18.498	-7.199

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

Name of the Utility: NTPC Ltd															
Name of the Generating Station: Vindhyachal STPS Stage-III															
Station/ Stage/ Unit: 2 X500															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 15.07.2007															
		2004-05	2005-06	2006-07 (1.12.2006 to 31.03.2007)	2007-08 (01.04.2007 to 14.07.2007)	2007-08 (15.07.2007 to 31.03.2008)	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)			93.50	97.93		96.97	99.70	99.42	97.19	98.97	98.66	88.18	93.59	95.07
2	Plant Load Factors (PLF) (%)			90.55	94.86		94.16	97.52	95.73	93.77	93.02	89.30	80.27	84.62	81.79
3	Scheduled Energy (MU)			1255.82	6796.60		7854.10	8148.63	8010.37	7800.52	7789.47	7526.92	6641.68	6966.46	6741.23
4	Scheduled Generation (MU)			1255.82	6796.60		7854.10	8148.63	8010.37	7800.52	7789.47	7526.92	6641.68	6966.46	6741.23
5	Actual Generation (MU)			1240.13	6840.90		7893.50	8200.05	8055.91	7854.45	7783.57	7472.67	6742.15	7066.49	6801.61
6	Quantum of coal consumption (MT)			831150	4676034		5473645	5650143	5589135	5432119	5835832	5378820	4875877	5119397	4827054
7	Value of coal (Rs. Lakh)						80720	89414	107647	112716	101992	107210	106183	104581	112167
8	Specific Coal Consumption (kg/kwh)			0.632	0.66		0.664	0.660	0.670	0.670	0.716	0.688	0.690	0.689	0.674
9	Gross Calorific Value of Coal (Kcal/ Kg)			3752	3577.84		3495	3536	3512	3444	3273	3412	3383	3417	3554
10	Heat Contribution of Coal (Kcal/ kwh)			2372	2344.03		2319	2339	2341	2331	2344	2346	2346	2354	2394
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
12	Quantum of Oil Consumption (KL)			615	1736.69		1414	949	984	860	946	598	1651	1925	2932
13	Value of Oil (Rs. lakh)														
14	Gross calorific value of oil (kcal/lit)			9735	8599.10		9223	9731	9726	9755	9721	9695	9695	9661	9553
15	Specific Oil Consumption (ml/ kwh)			0.47	0.24		0.17	0.11	0.12	0.11	0.12	0.08	0.23	0.26	0.41
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
17	Heat Contribution of Oil (Kcal/ kwh)			4.55	2.09		1.58	1.08	1.14	1.03	1.13	0.74	2.28	2.50	3.91
18	Station Heat Rate (kcal/kwh)			2376	2346		2321	2340	2342	2284	2345	2347	2348	2356	2398
19	Auxiliary Energy Consumption (%)			5.68	4.88		4.85	4.69	4.30	4.56	4.93	4.94	5.30	5.75	5.69
20	Debt at the end of the year (Rs. Cr)			1291.19	1304.65	2310.11	2265.87	2003.17	1845.75	1667.03	1486.88	1310.60	1196.86	1011.85	919.35
21	Equity (Rs. Cr - (Average) #			559.44	565.46	1024.88	1053.86	1045.61	1056.49	1062.66	1064.16	1066.20	1083.14	1099.47	1101.19
22	Working Capital (Rs. Cr) – finally admitted by CERC			165.48	166.96	323.33	330.98	425.28	427.12	429.93	430.43	433.10	410.77	415.03	417.36
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #			1864.81	1884.88	3452.97	3572.76	3485.38	3521.64	3542.21	3547.22	3553.99	3610.47	3664.90	3670.65
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr			313.10	319.74	595.58	627.07	787.90	786.33	785.58	778.67	779.74	736.75	742.89	740.94
	(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)			78.32	79.17	143.48	147.54	245.52	245.21	243.82	244.16	250.35	212.40	216.65	216.99
	Rate (%)			14.00	14.00	14.00	14.00	23.48	23.21	22.94	22.94	23.48	19.61	19.71	19.71
	(b) Interest on Loan														
	Absolute value (in Rs Cr)			99.24	102.15	183.39	180.69	163.23	152.57	143.87	128.00	113.39	101.65	90.07	76.46
	Rate (%) – Weighted Average Rate			7.6437	7.8280	7.8690	7.9742	7.8501	7.9277	8.1911	8.1167	8.1067	8.1080	8.1560	8.3170
	(c) Depreciation (finally allowed by CERC)														
	Absolute value (in Rs Cr)			67.98	68.71	123.90	127.40	180.12	181.91	182.96	183.26	183.61	186.08	188.88	189.18
	AAD			0.00	0.00	0.00	21.40								
	Rate (%)			3.65	3.65	3.63	3.63	0.05	0.05	0.05	0.05	0.05	5.15	5.15	5.15
	(d) Interest on working Capital														
	Absolute value (in Rs Cr)			16.96	17.11	39.61	40.54	52.10	52.32	52.67	52.73	53.05	55.45	56.03	56.34

Name of the Utility: NTPC Ltd															
Name of the Generating Station: Vindhyachal STPS Stage-III															
Station/ Stage/ Unit: 2 X500															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 15.07.2007															
		2004-05	2005-06	2006-07 (1.12.2006 to 31.03.2007)	2007-08 (01.04.2007 to 14.07.2007)	2007-08 (15.07.2007 to 31.03.2008)	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
	Rate (%)			10.25	10.25	10.25	10.25	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)			50.6	52.6	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) #												21.16	21.16	21.16
	Rate (%)														
	(f) Compensation Allowances (in Rs Cr)														
25	AFC (Rs. Kwh)			0.966	0.986	0.919	0.967	1.132	1.129	1.125	1.118	1.120	1.075	1.081	1.081
26	Energy Charge (Rs./Kwh)			0.950	1.000	1.000	1.180	1.150	1.410	1.560	1.400	1.510	1.570	1.530	1.680
27	Total tariff (Rs. Kwh)			1.916	1.986	1.919	2.147	2.282	2.539	2.685	2.518	2.630	2.645	2.611	2.761
28	Revenue realisation before tax (Rs. Crore)														
29	Revenue realisation after tax (Rs. Crore)														
30	Profit/ loss (Rs. Crore)*	477.09	414.75	611.22	891.07	949.03	1107.48	1308.06	821.60	1177.96	1297.45	1023.52	1374.66	1451.98	
31	DSM Generation (MU)			-15.69	44.30	39.40	51.42	45.54	53.93	-5.90	-54.25	100.47	100.03	60.38	
32	DSM Rate (Ps/Kwh)														
33	Revenue from DSM (Rs. Crore)				-12.66	-12.77	-20.22	-14.28	-16.00	-4.76	-0.65	-27.51	-36.93	-24.86	

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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

Name of the Utility: NTPC Ltd															
Name of the Generating Station: Vindhyachal STPS Stage-IV															
Station/ Stage/ Unit: 2 X500															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal															
Capacity of Plant (MW): 1000 MW															
COD : 27.03.2014															
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13 (01.03.13 to 31.03.13)	2013-14 (01.04.2013- 26.03.2014)	2013-14 (27.03.2014- 31.03.2014)	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)									24.40	91.52		86.44	95.05	97.36
2	Plant Load Factors (PLF) (%)									25.14	82.44		80.40	82.98	81.06
3	Scheduled Energy (MU)									84.86	3506.34		6604.63	6779.78	6587.90
4	Scheduled Generation (MU)									84.86	3506.34		6604.63	6779.78	6587.90
5	Actual Generation (MU)									79.32	3440.49		6660.46	6890.19	6690.23
6	Quantum of coal consumption (MT)									69345	2541481		4892491	5022273	4786096
7	Value of coal (Rs. Lakh)									1211.94	50656.58		106544	102597	111215
8	Specific Coal Consumption (kg/kwh)									0.742	0.69		0.690	0.689	0.674
9	Gross Calorific Value of Coal (Kcal/ Kg)									3188	3412.95		3378	3417	3560
10	Heat Contribution of Coal (Kcal/ kwh)									2364	2370		2347	2354	2400
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
12	Quantum of Oil Consumption (KL)									1097	1967		2786	2546	3698
13	Value of Oil (Rs. lakh)														
14	Gross calorific value of oil (kcal/lit)									9760	9274.01		9591	9693	9764
15	Specific Oil Consumption (ml/ kwh)									11.73	0.54		0.40	0.35	0.52
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC (Ex Bus) \$														
17	Heat Contribution of Oil (Kcal/ kwh)									114.50	4.98		3.79	3.39	5.08
18	Station Heat Rate (kcal/kwh)									2479	2375		2351	2357	2405
19	Auxiliary Energy Consumption (%)									11.11	5.57		5.53	5.61	5.87
20	Debt at the end of the year (Rs. Cr)									1625.58	1756.94	3201.00	3342.48	3289.62	3074.40
21	Equity (Rs. Cr - (Average) #									688.49	755.35	1427.66	1515.53	1649.57	1714.40
22	Working Capital (Rs. Cr) – finally admitted by CERC									208.56	216.56	540.07	446.91	459.68	465.58
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #									2294.96	2699.39	4767.07	5051.77	5498.57	5714.68
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr									516.55	558.16	1097.72	1021.82	1081.58	1103.81
	(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)									157.97	177.36	335.23	297.20	325.06	337.83
	Rate (%)									22.94	23.48	23.48	19.61	19.71	19.71
	(b) Interest on Loan														
	Absolute value (in Rs Cr)									131.91	140.36	272.46	266.27	265.13	253.69
	Rate (%) – Weighted Average Rate									8.2362	8.2991	8.5226	8.1384	7.9954	7.9726
	(c) Depreciation (finally allowed by CERC)														
	Absolute value (in Rs Cr)									115.58	124.53	242.21	257.08	279.82	290.82
	AAD														
	Rate (%)									5.04	4.95	5.09	5.09	5.09	5.09
	(d) Interest on working Capital														
	Absolute value (in Rs Cr)									28.16	29.24	71.29	60.33	62.06	62.85
	Rate (%)									13.50	13.50	13.20	13.50	13.50	13.50

		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13 (01.03.13 to 31.03.13)	2013-14 (01.04.2013- 26.03.2014)	2013-14 (27.03.2014- 31.03.2014)	2014-15	2015-16	2016-17
	(e) Operation and maintenance cost (finally admitted by CERC)														
	Absolute value (in Rs Cr)									65.28	69.02	138.04	136.00	144.59	153.68
	Water charges (finally admitted by CERC) (in Rs Cr) #												4.93	4.93	4.93
	Rate (%)														
	(f) Compensation Allowances (in Rs Cr)														
25	AFC (Rs. Kwh)									1.484	1.603	1.577	1.491	1.574	1.611
26	Energy Charge (Rs./Kwh)									1.470	1.510	1.510	1.580	1.570	1.680
27	Total tariff (Rs. Kwh)									2.954	3.113	3.087	3.071	3.144	3.291
28	Revenue realisation before tax (Rs. Crore)														
29	Revenue realisation after tax (Rs. Crore)														
30	Profit/ loss (Rs. Crore)*	477.09	414.75	611.22	891.07	949.03	1107.48	1308.06	821.60	1177.96	1297.45		1023.52	1374.66	1451.98
31	DSM Generation (MU)									-5.54	-65.85		55.83	110.41	102.33
32	DSM Rate (Ps/Kwh)														
33	Revenue from DSM (Rs. Crore)									0.82		2.28	-16.57	-33.63	-33.95

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- 5 DSM Revenue (-)Received / (+) Paid
- 6 * For the whole station as an when the units were declared COD

		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16 (30.10.2015- 31.03.2016)	2016-17
	Absolute value (in Rs. Cr)												122.73	143.01
	Rate (%)												20.34	20.34
	(b) Interest on Loan													
	Absolute value (in Rs Cr)												108.78	120.23
	Rate (%) – Weighted Average Rate												7.8495	7.8278
	(c) Depreciation (finally allowed by CERC)													
	Absolute value (in Rs Cr)												104.18	121.46
	AAD													
	Rate (%)												5.20	5.20
	(d) Interest on working Capital													
	Absolute value (in Rs Cr)												29.62	31.43
	Rate (%)												13.50	13.50
	(e) Operation and maintenance cost (finally admitted by CERC)													
	Absolute value (in Rs Cr)												71.74	76.84
	Water charges (finally admitted by CERC) (in Rs Cr) #												9.29	9.29
	Rate (%)													
	(f) Compensation Allowances (in Rs Cr)													
25	AFC (Rs. Kwh)												1.303	1.483
26	Energy Charge (Rs./Kwh)												1.500	1.680
27	Total tariff (Rs. Kwh)												2.803	3.163
28	Revenue realisation before tax (Rs. Crore)													
29	Revenue realisation after tax (Rs. Crore)													
30	Profit/ loss (Rs. Crore)*	477.09	414.75	611.22	891.07	949.03	1107.48	1308.06	821.60	1177.96	1297.45	1023.52	1374.66	1451.98
31	DSM Generation (MU)												28.61	7.54
32	DSM Rate (Ps/Kwh)													
33	Revenue from DSM (Rs. Crore)												-6.00	-9.12

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- 5 DSM Revenue (-)Received / (+) Paid
- 6 * For the whole station as an when the units were declared COD