

## ANNEXURE-II

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

	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17
1	<b>Name of Company</b>		<b>NTPC Ltd.</b>				
2	<b>Name of Station</b>		<b>ANTA GAS POWER STATION</b>				
3	<b>Installed Capacity and Configuration</b>	MW	Capacity : 419.33 MW (88.71 x 3 GTs + 153.2 x 1 STG )				
4	<b>Make of Turbine</b>		ABB Make 13D2				
5	<b>Rated Steam Parameters</b>		WHRB O/L Steam parameters : (From HBD) Pressure      Temp.      Flow HP : 67.3ATA      488°C      153T/HR LP : 5.91ATA      210°C      39.1T/HR				
6	<b>Average site ambient conditions</b>		Gas Turbine rated for 27°C Ambient Temp.& 60% Relative Humidity				
7	<b>Any other Site specific feature</b>						
8	<b>Fuels:</b>						
8.1	<b>Main/Primary Fuel</b>		Natural Gas/RLNG				
8.1.1	Annual Allocation (MMSCMD)	Dom. Gas	1.12	1.25	1.03	0.60	0.45
		RLNG	0.58	0.83	1.09	1.48	0.56
		Total	1.70	2.08	2.12	2.08	1.01
8.1.2	Sources of Supply		GAIL				
8.1.3	Transportation Distance of the station from the sources of supply	Km	1000 (GAIL HVJ/DVPL pipeline Zone-4)				
8.1.4	Mode of Transport		Pipeline				
8.1.5	Maximum Station capability to stock main/primary fuel	Million Cubic meter or MT or Kilo Litre	N/A				
8.2	<b>Alternate Fuel:</b>		Naphtha				
8.2.1	Annual Allocation/ Requirement	Million Cubic meter or MT or Kilo Litre	N/A				
8.2.2	Sources of Supply		HPCL, Vizag				
8.2.3	Transportation Distance of the station from the sources of supply	Km	1600				

	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17
8.2.4	Mode of Transport		Road				
8.2.5	Maximum Station capability to stock secondary fuels	Kilo Litre	3000				
9	<b>Cost of Spares :</b>						
9.1	<b>Cost of Spares capitalized in the books</b>	(Rs. Lakhs)	366.25	101.00	2396.57	3332.96	231.89
9.2	<b>Cost of spares included in capital cost for the purpose of tariff</b>	(Rs. Lakhs)	0.00	0.00	0.00	0.00	0.00
10	<b>Generation</b>						
10.1	<b>Actual Gross Generation at generator terminals</b>	MU	2176.42	1965.33	1653.84	941.95	695.17
10.1.1	<b>Total</b>	MU					
10.1.2	<b>On Gas</b>	MU	2175.04	1965.28	1653.84	941.89	695.17
10.1.3	<b>On Naptha or any other fuel</b>	MU	1.38	0.05	0	0.06	0
10.2	<b>Actual Net Generation Ex-bus</b>	MU	2125.08	1919.94	1612.12	908.67	666.42
10.3	<b>Scheduled Generation Ex-bus</b>	MU	2124.09	1954.36	1641.77	947.47	686.91
11	<b>Average Declared Capacity (DC)</b>	MW	380.77	400	385.11	388.22	382.37
12	<b>Actual Auxiliary Energy Consumption excluding colony consumption &amp; agency power</b>	MU	48.26	42.22	38.7	30.28	25.71
13	<b>Actual Energy supplied to Colony from the station &amp; Agency Power</b>	MU	3.09	3.16	3.02	3	3.04
14	<b>Main / Primary Fuel:</b>						
14.1	<b>Consumption :</b>	MCM/MT/ KI	496.477	435.502	374.407	219.162	158.396
14.1.1	<b>Natural Gas : APM Gas</b>	SCM					
	<b>Non-APM Gas</b>	SCM	407.259	433.042	364.117	208.795	158.394
14.1.2	<b>RLNG</b>		89.218	2.461	10.29	10.367	0.002
14.1.3	<b>Liquid Fuel</b>	KL					
14.2	<b>Weighted Gross Calorific Value (GCV)</b>						
14.2.1	<b>Natural Gas (As recieved)</b>	kcal/scm	9110.745	9258.604	9143.427	9096.372	9174.562
14.2.2	<b>RLNG (As recieved)</b>	kcal/scm	9107.877	9256.776	9133.88	9092.335	9174.562
14.2.3	<b>Liquid Fuel (As recieved)</b>	kcal/Lt	9123.839	9580.278	9481.261	9177.685	9181.366
14.3	<b>Weighted Average Landed Price</b>	(Rs per 1000 SCM)					
14.3.1	<b>APM</b>	(Rs per 1000 SCM)	11850.79	12320.6	12584.75	13685.38	10951.47
14.3.2	<b>Non-APM</b>	(Rs per 1000 SCM)					
14.3.3	<b>RLNG</b>	(Rs per 1000 SCM)	30401.23	33670.76	40396.54	25247.82	19361.14
14.3.4	<b>Liquid Fuel</b>	(Rs per 1000 SCM)					
14.4	<b>Percentage of Declared Capacity</b>	%					

	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17
14.4.1	APM Gas+PMT + NON APM GAS	%	56.99	67.97	55.95	32.68	23.47
14.4.2	NON APM	%					
14.4.3	RLNG	%	33.88	29.65	37.16	59.03	23.01
14.4.4	Liquid Fuel	%	2.74	0.72	1.08	3.24	47.05
14.4	Actual Average stock maintained				NA		
15	Alternate Fuel:(RLNG/Liquid)						
15.1	Consumption	MT/ KL	268.48	9.74	0	10.5	0
15.2	Weighted Average Gross Calorific value (As fired)	kCal/ Kg/ ltr	11355.81	11330.24	0	11371	0
15.3	Weighted Average Landed Price		43730.42	43730.42	43730.42	42332.75	42102.26
15.4	Actual Average stock maintained	MT	839.08	829.34	829.34	1251.94	1502
16	Weighted average duration of outages :						
16.1	Scheduled Outages	Days	53.70	15.24	42.43	35.48	51.90
16.2	Forced Outages	Days	1.19	0.35	2.30	0.76	0.41
16.3	Number of trippings	Nos	7.00	3.00	5.00	5.00	1.00
16.4	Number of start-ups :	Nos	39.00	46.00	59.00	41.00	34.00
16.4.1	Cold Start-up	Nos	1.00	5.00	6.00	7.00	8.00
16.4.2	Warm Start-up	Nos	2.00	2.00	6.00	1.00	1.00
16.4.3	Hot start-up	Nos	6.00	2.00	2.00	1.00	0.00
17	Cost of spares consumed		582.14	543.88	836.19	670.28	189.95
18	Average stock of spares		2656.50	2917.80	2992.54	2823.30	2779.04
19	NOx and other particulate matter emission :						
19.1	Design value		220	220	220	220	220
19.2	Actual emission		195	199.8	190.6	194.3	201.1
20	Number of employees deployed in O&M / Non O&M						
20.1	- Executive		104	99	93	85	75
20.2	- Non Executive		122	116	111	105	101
20.3	Corporate Office		3170	3051	2916	2973	2787
21	Man-MW ratio	Man/MW	0.54	0.51	0.49	0.45	0.42

Note: Allocation of stations attached at Appendix-I  
Man-MW ratio computed excluding Corporate Employees

## DETAILS OF OPERATION AND MAINTENANCE EXPENSES

**Name of the Company:**  
**Name of the Power Station:**

**NTPC Ltd.**  
**Anta Gas Plant**

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
1	Consumption of stores & spares	582.14	543.88	836.19	670.28	189.95
2	Repair & Maintenance	1164.84	1681.31	1788.63	1675.52	918.85
3	Insurance	91.56	99.99	105.86	101.77	105.95
4	Security	650.40	711.81	843.75	882.73	973.30
5	Water Charges	34.89	61.72	83.02	39.56	231.65
6	Administrative Expenses					
6.1	Rent	4.08	4.24	4.56	5.37	12.15
6.2	Electricity charges	126.37	109.30	107.38	117.46	87.63
6.3	Travelling & Conveyance	150.59	162.89	158.63	166.17	154.84
6.4	Communication Expenses	37.52	29.76	25.83	52.15	48.37
6.5	Advertising	2.18	2.08	7.13	1.73	1.03
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	13.55	12.83	18.42	23.23	25.61
6.9	Filing fee	16.77	18.45	18.45	18.45	18.45
	Subtotal (Administrative Expenses)	<b>351.05</b>	<b>339.56</b>	<b>340.40</b>	<b>384.56</b>	<b>348.09</b>
7.0	Employee Cost					
7.1.1	Salaries, Wages & Allowances	2276.74	2320.88	2352.52	2316.51	2760.22
7.1.2	Pension	14.44	638.13	203.51	207.45	194.47
7.1.3	Gratuity	80.42	33.73	-14.55	-9.10	454.83
7.1.4	Provident Fund	171.95	194.63	190.43	187.64	187.60
7.1.5	Leave Encashment	255.90	251.60	239.66	257.80	386.92
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on superannuated employees	2.79	24.38	40.35	7.95	0.00
7.2.2	-Medical expenses on regular employees & others	165.79	172.31	198.07	239.95	44.34
7.2.3	-Uniform/Livries & safety equipment	19.53	47.44	44.65	35.10	56.35
7.2.4	-Canteen expenses	43.77	44.78	45.13	46.92	50.98
7.2.5	-Other staff welfare expenses	50.51	56.82	73.24	52.72	62.76
	Subtotal (Staff welfare Expenses)	282.39	345.72	401.45	382.64	214.42
7.3	Productivity linked Incentive	106.50	92.60	45.63	32.87	0.02
7.4	Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
7.5	Ex-gratia	69.09	67.14	112.89	67.08	65.03
7.6	Performance Related Pay (PRP)	171.30	89.26	140.90	183.97	200.24
	Sub Total (Employee Cost)	<b>3428.74</b>	<b>4033.69</b>	<b>3672.44</b>	<b>3626.86</b>	<b>4463.76</b>
8	Loss of Store	0.42	0.43	0.06	3.15	0.25
9	Provisions	9.00	9.59	18.91	10.90	126.11
10	Prior Period Expenses	0.00	0.00	0.00	0.00	0.00
11	Corporate Office expenses allocation	1081.05	1089.79	1159.41	1195.04	1219.42
12	Others					
12.1	Rates & Taxes	4.90	25.07	13.82	12.29	18.04
12.2	Water cess	73.50	74.05	66.10	45.72	20.59
12.3	Training & recruitment expenses	7.80	14.39	17.78	16.94	15.28
12.4	Tender Expenses	11.62	15.62	34.34	22.15	6.93
12.5	Guest house expenses	20.09	35.03	34.49	37.63	45.90
12.6	Education expenses	49.79	52.51	171.75	75.01	6.82

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
12.7	Community Development Expenses	139.07	124.29	112.01	1183.88	432.61
12.8	Ash utilisation expenses	0.00	0.00	0.00	0.00	0.00
12.9	Books & Periodicals	0.87	1.24	0.60	0.71	0.30
12.10	Professional Charges	21.95	34.75	2.49	7.52	27.11
12.11	Legal expenses	11.19	14.77	23.26	8.55	5.01
12.12	EDP Hire & other charges	5.94	10.65	9.06	9.52	9.10
12.13	Printing & Stationery	10.65	9.07	11.03	8.39	8.02
12.14	Misc Expenses	309.62	425.14	272.37	160.62	254.14
	Sub Total (Others)	<b>666.99</b>	<b>836.57</b>	<b>769.09</b>	<b>1588.93</b>	<b>849.85</b>
13	(Total 1 to 12)	<b>8061.10</b>	<b>9408.32</b>	<b>9617.75</b>	<b>10179.32</b>	<b>9427.19</b>
14	Revenue / Recoveries	-11.99	-13.76	-16.87	-25.41	-23.23
15	Net Expenses	<b>8049.11</b>	<b>9394.56</b>	<b>9600.89</b>	<b>10153.91</b>	<b>9403.96</b>
16	Capital spares consumed	596.29	40.59	193.05	672.30	26.95
	Total O&M Cost	<b>8645.40</b>	<b>9435.16</b>	<b>9793.94</b>	<b>10826.21</b>	<b>9430.91</b>

## DETAILS OF WATER CHARGES

Name of the Company: NTPC Ltd.

Name of the Power Station and Stage/Phase: ANTA GAS POWER PROJECT

(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	Gas Based combined cycle generation plant				
2	Type of Cooling Tower	IDCT				
3	Type of Cooling Water System	Open Cycle (Once Through) & Closed Cycle (Through Cooling Tower)				
4	Any Special Features which may increase/reduce water consumption					
(B)	Quantum of Water : ( Cubic Meter)					
5	Contracted Quantum	2990939	2990939	2990939	2990939	2990939
6	Allocation of Water	2990939	2990939	2990939	2990939	2990939
7	Actual water Consumption (Lac KL)	753	710.49	691.46	466.11	203.53
8	Rate of Water Charges	<b>Rs 706/1000 Cubic Meter</b>				
9	Other charges/Fees , if paid as part of Water Charges Rs lakhs	13.85	15.16	17.98	18.04	19.88
	Water Charges Paid	21.35	35.67	65.32	27.78	7.43
	Total water Charges Paid Rs lakhs	<b>35.20</b>	<b>50.83</b>	<b>83.30</b>	<b>45.81</b>	<b>27.31</b>

## Details of capital Spares

**Name of Company**  
**Name of Power station**

**NTPC Ltd**  
**Anta Gas Power Station**

Sl . No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
(A)	Details of capital spares in Opening stock	16454.09	16224.05	16284.46	18487.97	21148.63
(B)	Details of capital spares procured during the year	366.25	101.00	2396.57	3332.96	231.89
(C)	Details of capital spares consumed during the year	596.29	40.59	193.05	672.30	26.95
(D)	Details of capital spares closing at the end of the year	16224.05	16284.46	18487.97	21148.63	21353.57

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

Name of the Utility: NTPC Ltd														
Name of the Generating Station: Anta Gas Project														
Station/ Stage/ Unit: 419.33 MW (88.71 x 3 GTs + 153.2 x 1 STG )														
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal														
Capacity of Plant (MW): 419.33 MW														
COD : 01.08.1990														
		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) (%)	86.26	91.34	87.65	84.9	83.17	89.36	89.588	94.089	93.613	98.34	94.195	94.956	93.525
2	Plant Load Factors (PLF) (%)	75.82	76.47	80.07	74.07	68.48	81.72	67.728	73.101	59.249	53.503	45.023	25.573	18.925
3	Scheduled Energy (MU)	2785.29	2809.11	2941.16	2728.32	2515.57	3001.77	2487.88	2692.59	2176.42	1965.33	1653.84	941.95	695.17
4	Scheduled Generation (MU)	2705.82	2713.72	2860.81	2618.04	2350.76	2586.84	2359.79	2582.41	2125.56	1954.41	1641.56	947.32	686.91
5	Actual Generation (MU)	2710.17	2738.39	2884.9	2676.28	2456.18	2933.49	2420.77	2637.59	2125.08	1919.94	1612.12	908.67	666.42
6	Quantum of Gas consumption (MSMC)	551.78	515.325	563.105	525.483	503.759	637.86	549.493	603.299	496.542	435.456	374.99	219.241	158.396
7	Value of Gas (Rs. Lakh)													
8	Specific Gas Consumption (smc/kwh)	0.2279	0.2183	0.2079	0.2115	0.2265	0.2201	0.2213	0.2244	0.2283	0.2216	0.2267	0.2328	0.2279
9	Gross Calorific Value of Gas (Kcal/ Kwh)	9048.7	9505.98	9767.47	9768.16	9123.53	9274.94	9408.26	9100.53	9110.67	9258.89	9142.28	9096.02	9175.56
10	Heat Contribution of Gas (Kcal/ kwh)	2062.38	2075.53	2030.4	2066.25	2066.84	2041.41	2082.16	2041.74	2079.88	2051.54	2072.91	2117.25	2090.68
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC													
12	Quantum of ARN Consumption (KL)	91639	111215	58713	62897	75631	26209	1272	924	381	14	0	15	0
13	Value of Oil (Rs. lakh)													
14	Gross calorific value of oil (kcal/lit)	8055.55	8170.71	8090.55	8050.8	8012.83	8025.49	7961.4	8030.06	8002.92	8067.13	0	7959.7	0
15	Specific Oil Consumption (lit/ kwh)	0.2515	0.2477	0.2528	0.2576	0.2591	0.2541	0.2547	0.261	0.2771	0.267	0	0.2707	0
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC	2026.01	2024.24	2045.06	2074.25	2076.39	2039.28	2027.83	2095.48	2217.28	2153.69	0	2154.59	0
17	Heat Contribution of Oil (Kcal/ kwh)													
18	Station Heat Rate (kcal/kwh)	2057.62	2067.33	2031.55	2066.97	2067.95	2040.95	2082.05	2041.81	2079.97	2051.54	2072.91	2117.25	2090.68
19	Auxiliary Energy Consumption (%)	2.69	2.51	2.12	1.96	2.36	2.274	2.697	2.043	2.358	2.306	2.34	3.215	3.7
20	Debt at the end of the year (Rs. Cr)	0.000	0.000	2.997	0.000	144.747	265.886	248.685	221.643	195.343	168.547	146.884	128.607	100.476
21	Equity (Rs. Cr - (Average) #	230.566	230.896	233.630	238.098	273.351	317.915	332.319	332.918	332.954	333.039	334.563	338.566	342.061
22	Working Capital (Rs. Cr) – finally admitted by CERC	128.788	129.533	130.697	132.676	134.105	199.016	202.203	204.769	206.412	208.895	273.192	276.256	278.585
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #	461.476	462.578	471.692	486.584	604.095	751.979	799.993	801.989	802.108	802.393	807.471	820.814	832.465
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr	105.450	99.352	93.426	103.810	125.709	187.419	198.344	202.792	205.855	211.108	194.544	201.669	208.576
	(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)	32.28	32.33	32.71	33.33	38.27	74.65	77.13	76.38	76.39	78.20	65.61	66.71	67.40
	Rate (%)	14%	14%	14%	14%	14%	23.481%	23.210%	22.944%	22.944%	23.481%	19.61%	19.71%	19.71%
	(b) Interest on Loan													
	Absolute value (in Rs Cr)	0.18	0.00	0.12	0.09	2.92	5.13	4.20	4.53	3.37	2.18	1.88	1.63	1.32
	Rate (%) – Weighted Average Rate	8.08%	8.06%	8.10%	5.80%	4.04%	2.17%	1.63%	1.93%	1.62%	1.20%	1.19%	1.18%	1.16%
	(c) Depreciation (finally allowed by CERC)													
	Absolute value (in Rs Cr)	7.50	7.68	9.43	14.01	11.34	21.20	26.62	27.43	27.46	27.61	28.31	30.31	32.41
	Rate (%)													
	(d) Interest on working Capital													
	Absolute value (in Rs Cr)	13.20	13.28	13.40	13.60	13.75	199.02	202.20	204.77	206.41	208.90	36.88	37.29	37.61
	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)	32.71	34.01	35.39	36.78	38.24	62.06	65.63	69.36	73.34	77.53	61.52	65.37	69.48
	Water charges (finally admitted by CERC) (in Rs Cr) #											0.35	0.35	0.35
	Rate (%)													
	(f) Compensation Allowances (in Rs Cr)													
25	AFC (Rs. Kwh)	0.37	0.35	0.33	0.36	0.44	0.62	0.65	0.67	0.68	0.70	0.64	0.66	0.69
26	Energy Charge (Rs./Kwh)	1.48	2.10	2.16	2.26	2.24	2.20	2.72	3.38	3.66	2.92	3.23	3.36	2.55



<b>Name of the Utility: NTPC Ltd</b>														
<b>Name of the Generating Station: Anta Gas Project</b>														
<b>Station/ Stage/ Unit: 419.33 MW (88.71 x 3 GTs + 153.2 x 1 STG )</b>														
<b>Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Coal</b>														
<b>Capacity of Plant (MW): 419.33 MW</b>														
<b>COD : 01.08.1990</b>														
		<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>
<b>27</b>	<b>Total tariff (Rs. Kwh)</b>	1.85	2.45	2.49	2.62	2.68	2.82	3.37	4.05	4.34	3.62	3.87	4.02	3.24
<b>28</b>	<b>Revenue realisation before tax (Rs. Crore)</b>													
<b>29</b>	<b>Revenue realisation after tax (Rs. Crore)</b>													
<b>30</b>	<b>Profit/ loss (Rs. Crore)</b>	34.95	88.75	134.15	173.75	120.43	159.03	152.90	216.15	213.21	121.61	42.28	6.78	90.99
<b>31</b>	<b>DSM Generation (MU)</b>	4.35	24.67	24.09	58.24	105.42	346.65	60.98	55.18	-0.48	-34.47	-29.44	-38.65	-20.49
<b>32</b>	<b>DSM Rate (Ps/Kwh)</b>													
<b>33</b>	<b>Revenue from DSM (Rs. Crore)</b>				-24.90	-71.34	-136.60	-29.43	-31.33	-15.34	1.65	1.07	5.75	2.17

**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