

## 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	Name of Company		NTPC Ltd.				
2	Name of Station		FARIDABAD GAS POWER STATION				
3	Installed Capacity and Configuration	MW	431.586 MW, 2GT+1ST, 2*13.758MW+1*156.07 MW				
4	Make of Turbine		SIEMENS-V 94.2 (GT),BHEL(ST)				
5	Rated Steam Parameters		Temp: 528OC, Pressure: 78 Kg /Cm2				
6	Average site ambient conditions		Amb. Temp -27OC, Amb Pr -988 Mbar, RH-60%				
7	Any other Site specific feature						
8	Fuels:						
8.1	Main/Primary Fuel		Natural Gas/RLNG				
8.1.1	Annual Allocation (MMSCMD)	Dom. Gas	0.87	1.08	0.93	0.68	0.63
		RLNG	0.87	0.87	1.09	1.15	0.42
		Total	1.74	1.95	2.02	1.83	1.05
8.1.2	Sources of Supply		GAIL				
8.1.3	Transportation Distance of the station from the sources of supply	Km	1200 (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	Alternate Fuel:		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	1800				
8.2.4	Mode of Transport		Road				
8.2.5	Maximum Station capability to stock secondary fuels	Kilo Litre	16000				
9	Cost of Spares :						
9.1	Cost of Spares capitalized in the books	(Rs. Lakhs)	790.15	2855.93	2563.44	2614.00	1429.64

	Particulars	Units	2012-13	2013-14	2014-15	2015-16	2016-17
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakhs)	0	0	0	0	0
<b>10</b>	<b>Generation</b>						
10.1	Actual Gross Generation at generator terminals	MU	2402.87	1731.89	1571.41	1100.66	1034.08
10.1.1	Total	MU	2402.87	1731.89	1571.41	1100.66	1034.08
10.1.2	On Gas	MU	2402.87	1731.89	1570.79	1091.19	1034.08
10.1.3	On Naptha or any other fuel	MU	0.00	0.00	0.62	9.47	0.00
10.2	Actual Net Generation Ex-bus	MU	2335.77	1686.62	1533.19	1073.67	1007.20
10.3	Scheduled Generation Ex-bus	MU	2387.71	1698.09	1543.84	1094.34	1055.75
11	Average Declared Capacity (DC)	MW	382.80	402.65	387.40	410.06	399.36
12	Actual Auxiliary Energy Consumption excluding colony consumption & agency power	MU	59.35	49.16	42.94	31.12	28.96
13	Actual Energy supplied to Colony from the station & Agency Power	MU	1.63	1.53	1.50	1.36	1.32
<b>14</b>	<b>Main / Primary Fuel:</b>						
<b>14.1</b>	<b>Consumption :</b>	MCM/MT/ KI					
14.1.1	Natural Gas : APM Gas	MCM	194.28	329.72	265.61	176.25	157.84
	Non-APM Gas	MCM	121.72	39.41	64.73	61.37	68.04
14.1.2	RLNG	MCM	206.73	0.86	6.18	0.02	0.00
14.1.3	Liquid Fuel	KL	0.00	0.00	153.00	2305.00	0.00
<b>14.2</b>	<b>Weighted Gross Calorific Value (GCV)</b>						
14.2.1	Natural Gas (As recieved)	kcal/scm	9134.278	9164.34	9107.87	9131.53	9124.59
14.2.2	RLNG/ E-RLNG (As recieved)	kcal/scm	9156.059	9211.59	9074.89	9205.67	9227.44
14.2.3	Liquid Fuel (As recieved)	kcal/Lt	----	----	8217.73	8214.93	----
14.3	Weighted Average Landed Price	(Rs per 1000 SCM)					
14.3.1	APM	(Rs per 1000 SCM)	10660.7	12259.33	12308.54	13598.34	11572.28
14.3.2	Non-APM	(Rs per 1000 SCM)					
14.3.3	RLNG / E-RLNG	(Rs per 1000 SCM)	28624.1	33426.58	38671.62	38387.53	21607.71
14.3.4	Liquid Fuel	Rs/KL	30718.22	30718.22	31409	31347.95	31347.95
<b>14.4</b>	<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	%	44.06	55.43	46.71	32.26	31.6
14.4.2	NON APM	%					
14.4.3	RLNG	%	55.83	42.24	53.22	50.94	17.55
14.4.4	Liquid Fuel	%	0.11	2.33	0.07	16.8	50.85
14.4	Actual Average stock maintained						
15	Alternate Fuel:(RLNG/Liquid)		HSD	HSD	HSD	HSD	HSD
15.1	Consumption	MT/ KL	0	0	153	2305	0
15.2	Weighted Average Gross Calorific value (As fired)	kCal/ kg/ ltr	---	---	8217.73	8214.93	----
15.3	Weighted Average Landed Price		30718.22	30718.22	31409	31347.95	31347.95
15.4	Actual Average stock maintained	MT	9050	9950	9907	8623	7726
16	Weighted average duration of outages :						
16.1	Planned Outages	(Days)	19.81	2.92	71.78	14.21	11.64
16.2	Forced Outages	(Days)	38.36	28.3	0.48	1.13	17.11
16.3	Number of tripping	Nos.	24	11	5	9	7
16.4	Number of start-ups :	Nos.	43	36	31	46	25
16.4.1	Cold Start-up	Nos.	3	4	5	10	6
16.4.2	Warm Start-up	Nos.	1	2	2	3	1
16.4.3	Hot start-up	Nos.	7	7	2	5	3
17	Cost of spares consumed	Rs. Lakhs	405.17	303.50	1011.80	457.29	373.66
18	Average stock of spares	Rs. Lakhs	2165.81	2499.69	2673.44	2515.03	2438.27
19	NOx and other particulate matter emission :						
19.1	Design value						
19.2	Actual emission						
20	Number of employees deployed in O&M / Non O&M						
20.1	- Executive		111	105	96	87	81
20.2	- Non Executive		43	44	40	34	33
20.3	Corporate Office		3170	3051	2916	2973	2787
21	Man-MW ratio	Man/MW	0.36	0.35	0.32	0.28	0.26

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

## Annexure-VI (A)

## DETAILS OF OPERATION AND MAINTENANCE EXPENSES

Name of the Company:

NTPC Ltd.

Name of the Power Station:

Faridabad Gas Power Plant

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
1	Consumption of stores & spares	405.17	303.50	1011.80	457.29	373.66
2	Repair & Maintenance	756.76	1400.68	1095.53	926.76	932.05
3	Insurance	95.83	104.07	106.59	110.79	114.29
4	Security	514.58	583.91	627.44	812.75	966.01
5	Water Charges	146.77	112.33	109.76	76.16	70.22
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	64.47	41.74	42.52	42.18	34.34
6.3	Travelling & Conveyance	110.85	112.68	119.96	95.35	87.43
6.4	Communication Expenses	37.33	26.63	24.38	46.86	43.42
6.5	Advertising	9.56	4.53	0.59	3.43	0.22
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	18.40	16.10	26.35	22.81	26.60
6.9	Filing fee	17.26	18.99	18.99	18.99	18.99
	Subtotal (Administrative Expenses)	<b>257.88</b>	<b>220.67</b>	<b>232.79</b>	<b>229.62</b>	<b>210.99</b>
7.0	Employee Cost					
7.1.1	Salaries,Wages & Allowances	2038.87	2028.71	2031.21	1890.11	2057.03
7.1.2	Pension	9.51	535.69	166.25	157.70	145.24
7.1.3	Gratuity	72.90	27.07	-10.94	-4.23	315.23
7.1.4	Provident Fund	148.47	165.42	163.96	152.21	147.06
7.1.5	Leave Encashment	278.39	209.44	232.09	243.04	285.38
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on superannuated employees	7.81	16.68	30.00	71.51	0.00
7.2.2	-Medical expenses on regular employees & others	162.42	163.75	206.05	216.26	129.96
7.2.3	-Uniform/Livries & safety equipment	15.64	36.79	34.84	34.35	35.68
7.2.4	-Canteen expenses	42.73	45.92	47.40	50.79	56.03
7.2.5	-Other staff welfare expenses	39.72	28.43	36.41	35.63	60.40
	Subtotal (Staff welfare Expenses)	268.32	291.57	354.70	408.54	282.06
7.3	Productivity linked Incentive	102.24	74.11	17.08	13.17	0.01
7.4	Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
7.5	Ex-gratia	26.83	26.27	42.54	25.01	21.99
7.6	Performance Related Pay(PRP)	216.47	108.30	201.24	200.52	227.84
	Sub Total (Employee Cost)	<b>3162.00</b>	<b>3466.59</b>	<b>3198.13</b>	<b>3086.07</b>	<b>3481.82</b>
8	Loss of Store	0.00	0.00	0.00	0.00	0.00
9	Provisions	0.39	0.17	4.52	0.00	2.39
10	Prior Period Expenses	0.00	3.27	0.00	0.00	0.00
11	Corporate Office expenses allocation	1110.20	1126.11	1202.16	1237.90	1268.80
12	Others					
12.1	Rates & Taxes	2.98	5.32	3.99	6.52	6.88
12.2	Water cess	5.84	4.69	4.48	1.63	3.09
12.3	Training & recruitment expenses	16.55	10.01	7.00	13.47	9.80
12.4	Tender Expenses	23.77	52.04	26.30	15.47	16.66
12.5	Guest house expenses	25.53	23.03	23.93	25.95	28.70
12.6	Education expenses	0.00	0.00	0.00	0.00	0.00

Rs. Lakhs

Sl. No.	Items	2012-13	2013-14	2014-15	2015-16	2016-17
12.7	Community Development Expenses	60.31	107.88	148.56	128.91	124.14
12.8	Ash utilisation expenses	0.00	0.00	0.00	0.00	0.00
12.9	Books & Periodicals	0.43	1.31	1.34	0.70	0.81
12.10	Professional Charges	38.61	25.32	10.80	4.75	4.48
12.11	Legal expenses	5.00	1.79	10.08	2.34	47.17
12.12	EDP Hire & other charges	44.55	50.49	56.11	54.01	55.07
12.13	Printing & Stationery	9.84	13.61	9.74	7.99	8.41
12.14	Misc Expenses	103.06	112.14	131.20	129.34	162.57
	Sub Total (Others)	<b>336.49</b>	<b>407.65</b>	<b>433.52</b>	<b>391.09</b>	<b>467.77</b>
13	(Total 1 to 12)	<b>6786.05</b>	<b>7728.94</b>	<b>8022.24</b>	<b>7328.41</b>	<b>7888.00</b>
14	Revenue / Recoveries	-10.48	-10.23	-13.10	-10.10	-8.33
15	Net Expenses	<b>6775.57</b>	<b>7718.71</b>	<b>8009.14</b>	<b>7318.31</b>	<b>7879.67</b>
16	Capital spares consumed	174.43	39.10	486.86	101.46	52.40
	Total O&M Cost	<b>6950.00</b>	<b>7757.81</b>	<b>8496.00</b>	<b>7419.77</b>	<b>7932.07</b>

## DETAILS OF WATER CHARGES

Name of the Company: NTPC Ltd.

Name of the Power Station and Stage/Phase: FARIDABAD 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	Circulating closed type				
4	Any Special Features which may increase/reduce water consumption					
(B)	Quantum of Water : ( Cubic Meter)					
5	Contracted Quantum	28 Cusec				
6	Allocation of Water	28 Cusec				
7	Actual water Consumption (Lac KL)	1210	930	900	620	570
8	Rate of Water Charges	12 paise per				
9	Other charges/Fees , if paid as part of Water Charges Rs lakhs					
	<b>Total water Charges Paid Rs lakhs</b>	146.77	112.33	109.76	76.16	70.22

### Details of capital Spares

**Name of Company- NTPC LTD**

**Name of Power station- Faridabad Gas Power Station**

Sl . No.	ITEM	2012-13	2013-14	2014-15	2015-16	2016-17
(A)	Details of capital spares in Opening stock	13132.21	13747.94	16564.76	18641.34	21153.88
(B)	Details of capital spares procured during the year	790.15	2855.93	2563.44	2614.00	1429.64
(C)	Details of capital spares consumed during the year	174.43	39.10	486.86	101.46	52.40
(D)	Details of capital spares closing at the end of the year	13747.94	16564.76	18641.34	21153.88	22531.12

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

Name of the Utility: NTPC Ltd															
Name of the Generating Station: FARIDABAD GAS POWER STATION															
Station/ Stage/ Unit: 431.586 MW, 2GT+1ST, 2*13.758MW+1*156.07 MW															
Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Combined Cycle															
Capacity of Plant (MW): 829.78 MW															
COD : 01.01.2001															
		2004-05	2005-06	2006-07	01.04.07 to 31.08.07	01.09.07 to 31.03.08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	Plant Availability Factor (PAF) (%)	97.04	96.6	93.32		92.56	89.75	99.22	96.71	93.54	94.55	97.31	93.3	98.58	97.55
2	Plant Load Factors (PLF) (%)	83.63	78.1	74.88		69.74	62.96	84.96	83.46	80.92	63.56	45.81	41.56	29.03	27.35
3	Scheduled Energy (MU)	3121.85	2829.93	2720.88		2550.89	2285.52	3104.39	3060.88	3037.51	2387.71	1698.09	1543.84	1094.34	1055.75
4	Scheduled Generation (MU)	3121.85	2829.93	2720.88		2550.89	2285.52	3104.39	3060.88	3037.51	2387.71	1698.09	1543.84	1094.34	1055.75
5	Actual Generation (MU)	3099.49	2884.62	2766.56		2585.46	2317.93	3143.33	3087.51	3002.81	2335.77	1686.61	1533.19	1073.67	1007.2
6	Quantum of Gas consumption (MSMC)	604.62	551.451	555.686		502.775	430.883	603.63	655.672	654.015	522.516	369.995	336.51	237.642	225.89
7	Value of Gas (Rs. Lakh)														
8	Specific Gas Consumption (smc/kwh)	0.208	0.21	0.207		0.212	0.21	0.206	0.208	0.213	0.218	0.215	0.216	0.218	0.218
9	Gross Calorific Value of Gas (Kcal/ Kwh)	9134.78	9207.89	9288.83		9288.37	9390.83	9312.72	9281.78	9096.49	9142.89	9164.66	9107.05	9131.56	9124.59
10	Heat Contribution of Gas (Kcal/ kwh)	1897.42	1932.31	1922.58		1967.53	1972.81	1920.72	1933.18	1939.66	1989	1970.61	1963.11	1988.44	1993.27
11	Cost Of Specific Coal Consumption (Rs./Kwh) – Finally admitted by CERC														
12	Quantum of ARN Consumption (KL)	58095	75059	34210		63901	80903	68042	1801	90	---	---	153	2305	-----
13	Value of Oil (Rs. lakh)														
14	Gross calorific value of oil (kcal/lit)		8094.44	8251.71		8100.62	8063.52	8034.15	8164.07	8257.63	----	----	8217.73	8214.93	-----
15	Specific Oil Consumption (lit/ kwh)		0.231	0.234		0.236	0.245	0.238	0.239	0.235	----	-----	0.247	0.244	-----
16	Cost Of Specific Oil Consumption (Rs./Kwh) – Finally admitted by CERC														
17	Heat Contribution of Oil (Kcal/ kwh)	1868.89	1869.42	1933.06		1914.75	1977.1	1915.36	1952.64	1937.14	-----	-----	2029.54	2000.75	----
18	Station Heat Rate (kcal/kwh)		1925.39	1923.12		1962.14	1973.41	1920.24	1933.23	1939.66	1989	1970.61	1963.13	1988.54	1993.27
19	Auxiliary Energy Consumption (%)		2.31	2.27		2.45	2.51	2.32	2.34	2.29	2.54	2.84	2.73	2.83	2.82
20	Debt at the end of the year (Rs. Cr)	443.09	395.87	347.49	319.39	309.11	253.59	209.00	161.55	115.61	91.54	67.14	42.89	18.84	0.00
21	Equity (Rs. Cr - (Average) #	471.64	472.08	472.82	474.53	483.05	483.83	463.90	470.17	470.65	471.20	471.19	469.68	469.79	469.82
22	Working Capital (Rs. Cr) – finally admitted by CERC	124.26	124.69	125.01	125.99	126.26	126.54	204.53	206.27	207.94	205.27	207.72	278.53	280.87	282.49
23	Capital cost (Rs. Cr) – finally admitted by CERC (Average) #	944.87	946.32	948.80	954.51	990.20	992.82	959.07	979.98	981.58	983.41	983.36	978.33	978.72	978.82
24	Capacity Charges/ Annual Fixed Cost (AFC) in Rs. Cr	211.64	203.88	200.49	197.97	199.36	196.64	265.19	267.15	266.13	242.90	247.70	223.57	226.05	228.45
	(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)	66.03	66.09	66.19	66.43	67.63	67.74	108.93	109.13	107.99	108.11	110.64	92.10	92.57	92.58
	Rate (%)	14%	14%	14%	14%	14%	14%	23.481%	23.210%	22.944%	22.944%	23.481%	19.610%	19.705%	19.705%
	(b) Interest on Loan														
	Absolute value (in Rs Cr)	55.08	51.95	46.76	42.08	41.01	36.64	20.99	17.62	13.44	10.00	7.65	5.27	2.96	0.90
	Rate (%) – Weighted Average Rate	12.1554%	12.3845%	12.5818%	12.6213%	12.7067%	13.0241%	9.4064%	9.5116%	9.7000%	9.6579%	9.6377%	9.6310%	9.6043%	9.5800%
	(c) Depreciation (finally allowed by CERC)														
	Absolute value (in Rs Cr)	38.00	38.06	38.16	38.39	39.82	39.93	46.34	47.59	47.85	24.15	24.16	24.16	24.19	24.20
	Rate (%)	4.02	4.02	4.02	4.02	4.02	4.02	4.83	4.86	4.87	Sread over				
	(d) Interest on working Capital														
	Absolute value (in Rs Cr)	12.74	12.78	12.81	12.91	12.94	12.97	25.06	25.27	25.47	25.15	25.45	37.60	37.92	38.14
	Rate (%)	10.25%	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)	33.66	35.00	36.43	37.85	37.85	39.36	63.87	67.54	71.38	75.48	79.80	63.31	67.28	71.51
	Water charges (finally admitted by CERC) (in Rs Cr) #	Not Applicable											1.12	1.12	1.12
	Rate (%)	Not Applicable													
	Normative O&M Expenses (in Rs Lakh/MW) #	7.80	8.11	8.44	8.77	8.77	9.12	15	16.65	16.54	17.49	18.49	14.67	15.59	16.57



<b>Name of the Utility: NTPC Ltd</b>														
<b>Name of the Generating Station: FARIDABAD GAS POWER STATION</b>														
<b>Station/ Stage/ Unit: 431.586 MW, 2GT+1ST, 2*13.758MW+1*156.07 MW</b>														
<b>Fuel Type (Coal/ Lignite/ Gas/ Liquid Fuel/ Nuclear/ Hydro): Combined Cycle</b>														
<b>Capacity of Plant (MW): 829.78 MW</b>														
<b>COD : 01.01.2001</b>														
	<b>(f) Compensation Allowances (in Rs Cr)</b>	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	<b>AFC (Rs. Kwh)</b>	0.72	0.69	0.68	0.67	0.68	0.67	0.85	0.86	0.85	0.78	0.79	0.71	0.72
26	<b>Energy Charge (Rs./Kwh)</b>	1.13	1.57	1.64	1.98	2.18	1.72	2.73	3.40	4.03	2.77	2.88	3.06	2.35
27	<b>Total tariff (Rs. Kwh)</b>	1.85	2.27	2.32	2.65	2.66	2.85	2.57	3.58	4.25	4.81	3.56	3.59	3.78
28	<b>Revenue realisation before tax (Rs. Crore)</b>													
29	<b>Revenue realisation after tax (Rs. Crore)</b>													
30	<b>Profit/ loss (Rs. Crore)</b>	79.73	88.29	57.00	172.87	74.09	207.27	83.03	155.43	211.94	184.66	149.68	124.74	136.82
31	<b>DSM Generation (MU)</b>													
32	<b>DSM Rate (Ps/Kwh)</b>													
33	<b>Revenue from DSM (Rs. Crore)</b>					-17.18	-21.55	-15.73	-11.54	10.59	9.69	0.90	1.21	3.58

**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