

**ANNEXURE-I**

Pro-forma furnishing Actual annual performance/operational data for the coal /lignite based thermal generating stations for the 5 year period from 2008-09 to 2012-2013

	Particulars	Units	2008-09	2009-10	2010-11	2011-12	2012-13	Basis of information / methodology
1	<b>Name of Company</b>		<b>NTPC LTD.</b>					
2	<b>Name of Station</b>		<b>BADARPUR THERMAL POWER STATION(BTPS)</b>					
3	Installed Capacity and Configuration	MW	705 MW					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Boiler (95MW): MS Temp: 535+/- 5 Degree Turbine(95MW): Two Cylinder, Non-Reheat, Pressure before ESV: 90KSC					
			Boiler(210MW): MS/HRH Temp:540/540 Degree, Turbine(210MW): Tandom compound Three cylinder,					
5	Type of BFP		Electrical Driven					
6	Circulating Water System		Closed cycle & Open cycle (Both)					
7	Any other Site specific feature							
8	Fuels:							
8.1	Main Fuel:		Coal					
8.1.1	Annual Allocation or/ and Requirement	MT	Annual allocation through FSA =4.20MMT(705 MW) Annual requirement =5.00 MMT (705MW)					Requirement has been worked out for 90% PLF
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		FSA signed with Central Coal fields Limited(CCL), Eastern Coal fields Limited ( ECL) .					
			Annual contracted quantity of 4.20 MMT (CCL-4.0 MMT , ECL-0.2 MMT)(705MW)					
			Grade of coal as per FSA is CCL: B-E , W-IV, WC , ECL: A - F					
8.1.2.1	FSA	MT	4.01	4.20	3.28	4.06	3.93	
8.1.2.2	Imported	MT	0.04	0.16	0.43	0.03	0.00	
8.1.2.3	Spot Market/e auction	MT	0.00	0.00	0.00	0.00	0.00	
8.1.3	Transportation Distance of the station from the sources of supply	km	CCL- 1225, ECL- 1325					
8.1.4	Mode of Transport		IR					
8.1.5	Maximum Station capability to stock main fuel	Days & MT	30 days & 5.0 LMT					
8.2	Secondary Fuel:		LDO,HSD					
8.2.1	Annual Requirement	klitre	5560					
8.2.2	Sources of supply		IOC/HPCL/BPCL					
8.2.3	Transportation Distance of the station from the sources of supply	Km	2000					
8.2.4	Mode of Transport		Rail					
8.2.5	Maximum Station capability to stock secondary fuels	klitre	6450(LDO)+225(HSD)					
9	Cost of Spares:							
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	582	1111	1277	1909		2012-13 data to be submitted later
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)	0	0	0	0		
10	Generation							
10.1	Actual Gross Generation at generator terminals (Commercial Satge wise)		5503.95	5107.95	4553.12	4775.19	4555.64	
10.2	Actual Net Generation Ex-bus	MU	5091.92	4692.58	4163.87	4361.75	4181.14	
10.3	Scheduled Generation Ex-bus		5027.97	4630.92	4093.10	4298.44	4229.79	Based on REA
11	Average Declared Capacity (DC)	MW	592.77	542.56	565.87	562.54	575.71	Based on REA
12	Actual Auxiliary Energy Consumption including colony consumption		412.03	415.37	389.25	413.43	374.49	
13	Actual Energy supplied to Colony from the station	MU	Not Available	8.21	8.29	8.32	8.27	

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14	Main Fuel:							
14.1	Consumption :							
14.1.1	Domestic Coal (Linked mine/ Other mines/e-auction/spot)	MT	4319379	3986134	3302893	4159122	4006209	
14.1.2	Imported Coal*	MT	38000	200000	400828	63531	0	
14.2	Gross Calorific Value (GCV):							
14.2.1	Domestic Coal (As received)	kCal/kg						
	(As fired)	kCal/kg						
14.2.2	Imported Coal (As received)	kCal/kg	5370	5466	5347	5025	N/A	
14.2.3	Spot market/e-auction coal (As received)	kCal/kg						
14.2.4	Weighted Average Gross Calorific value (As received)	kCal/kg						
14.2.5	Weighted Average Gross Calorific value (As fired)	kCal/kg	3496	3347	3371	3098	3116	
14.3	Price of Coal:							
14.3.1	Weighted Average price of Domestic coal	(Rs/MT)	NA	2532.47	2730.70	3285.05	3647.62	
14.3.2	Weighted Average price of imported coal	(Rs/MT)	NA	7520.15	7686.13	8130.50	-	
14.3.3	Weighted Average price of spot market/ e-auction coal	(Rs/MT)						
14.3.4	Weighted Average price of all the Coals (as received)	(Rs/MT)	2470.70	2718.63	3283.31	3356.77	3647.62	
14.4	Blending:	% and MT						
14.4.1	Blending ratio of imported coal with domestic coal		0.9%	4.8%	10.8%	1.5%	0.0%	Imported/ Total Coal consumption
14.4.2	Proportion of e-Auction coal in the blending							
14.4.3	Actual Average stock maintained	MT	147881	95658	319151	121295	86936	Average of monthly closing stock
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station		NA	NA	NA	NA	NA	
14.5.1.1	Transit loss from linked mines		NA	NA	NA	NA	NA	
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.		NA	NA	NA	NA	NA	
14.5.1.3	Transit loss of imported coal		NA	NA	NA	NA	NA	
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines		0.80%	0.80%	0.80%	0.80%	0.80%	
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.							
14.5.2.3	Transit loss of imported coal		0.20%	0.20%	0.20%	0.20%	0.20%	
15	Secondary Fuel Oil :							
15.1	Consumption	klitre	3274.8	3843.0	3683.5	4773.0	6895.5	
15.2	Weighted Average Gross Calorific value (As received)	kCal/kg(litre)	9552.5	9452.9	9447.4	9477.5	9503.9	
15.3	Weighted Average Price: HSD	Rs/ KL	29235.3	28856.0	31897.3	34807.6	37523.7	
	Weighted Average Price: LDO	Rs/ KL	34116.5	35328.1	41500.5	48618.4	62389.3	
15.4	Actual Average stock maintained (HSD)	klitre	1996	1621	2907	2940	3283	Average of monthly closing stock
	Actual Average stock maintained (LDO)	klitre	97	129	101	109	99	Average of monthly closing stock
16	Weighted average duration of outages							
16.1	Scheduled Outages	MU	252.47	604.77	367.96	394.05	334.08	
16.2	Forced Outages	MU	163.53	183.43	695.88	361.94	510.67	

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16.3	Number of trippings	No	43	48	88	87	112	
16.4	Number of start-ups :	No	47	52	90	89	114	
16.4.1	Cold Start-up	No	5	5	14	12	19	
16.4.2	Warm Start-up	No	12	16	28	16	22	
16.4.3	Hot start-up	No	30	31	48	61	73	
17	NOx , SOx ,and other particulate emission in :							
17.1	Design value of emission- NOx	mg/Nm <sup>3</sup>	NA					No norm; not considered in design

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	Design value of emission- SOx	mg/Nm <sup>3</sup>	NA					No norm; not considered in design
	Design value of emission- SPM	mg/Nm <sup>3</sup>	150					
	Design value of emission- SPM	mg/Nm <sup>3</sup>	150					
17.2	Actual emission (SPM)-St-I	mg/Nm <sup>3</sup>	92-146	108-146	74-133	84-122	90-122	
17.3	Actual emission (SOx)	mg/Nm <sup>3</sup>	708-806	720-806	736-810	728-892	736-766	
17.4	Actual emission (NOx)	mg/Nm <sup>3</sup>	298-362	298-344	300-318	300-320	302-322	
17.2	Actual emission (SPM)-St-II	mg/Nm <sup>3</sup>	84-144	82-141	70-143	77-130	83-128	
17.3	Actual emission (SOx)	mg/Nm <sup>3</sup>	728-810	756-810	756-810	756-812	772-816	
17.4	Actual emission (NOx)	mg/Nm <sup>3</sup>	320-398	344-370	324-374	342-276	346-374	
19	Detail of Ash utilization % of fly ash produced	Quantity Produced (Lakh MT)	13.17	12.53	11.05	12.64	12.02	
19.1	Conversion of value added product(Issue to Cement, RMC & Brick /block industries)	%	8.46	6.71	17.29	47.97	82.96	
19.2	For making roads & embarkment	%	35.68	70.10	45.89	38.13	2.50	
19.3	Land filling	%	9.53	8.30	2.97	0.99	1.16	
19.4	Used in plant site in one or other form or used in some other site (Mine filling & Ash dyke raising)	%	26.57	0.00	23.08	0.00	0.00	
19.5	Any other use , Please specify (Agriculture, Bottom ash cover etc.)	Qty. (Lakh MT) and usage	0.00	0.00	0.00	0.00	0.00	
20	Cost of spares actually consumed	Rs Lakh	3269.5	4551.3	4312.9	5893.0	4844.3	
21	Average stock of spares	Rs Lakh	4613.4	5289.1	4625.4	4757.4	5422.2	
22	Number of employees deployed in O&M							
22.1	Executives		349	351	351	353	341	
22.2	Non Executives		977	881	773	686	565	
22.3	Corporate office + RHQs		3205	3272	3298	3354	3170	Total Corporate Man Power
23	Man-MW ratio		1.88	1.75	1.59	1.47	1.29	Excluding Corporate Man Power

**Note:**

From Oct/ Nov 2012 onwards payment to coal companies is being made on the basis of GCV as received at plant boundary. As per FSA, payment is to be made as per the quality assessed at mine end . Accordingly substantial amount billed by Coal companies are yet to be paid. Prices indicated above reflect the payment being made to Coal Companies.

GCV of Domestic Coal as received is being measured only from Oct/Nov 2012