

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 2017-18 to 2021-22

S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology
1	Name of Company		NTPC LTD.					
2	Name of Station/ Pit head or Non- Pit head		NTPC-KAHALGAON/PIT-HEAD					
	Stage		I					
3	Installed Capacity and Configuration	MW	840 MW (4x210 MW)					
3.1	Date of Commercial Operation - Unit Wise		U-I - 01.01.1995, U-II - 01.04.1995, U-III - 01.02.1996, U-IV -01.08.1996					
3.2	Effective COD		01.08.1996					
	Make of Turbine		LMZ-Russian					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		(i) Main Steam Pressure : 140Kgf/cm ² (ii) Main Steam Temperature : 540° C TYPE: Natural Circulation, Dry Bottom, Balanced Draft, Convective Reheat, Solid Fuel with Direct, Tangential Fired, Pulverized Fuel System. Turbine: Type : K-210-130-8, Impulse Reaction, Tandem compound, Re-heat type, Closed cycle with regenerative bleeding.					
5	Type of BFP		Electric Driven					
	Quantity	Per Unit	3 No. of BFPs					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	2305					
	Design Boiler efficiency		87.72					
	Design Turbine cycle heat rate		2022					
8	Fuels :							
8.1	Primary Fuel :		Coal					
8.1.1	Annual Allocation under FSA	MMT	11.32					
	Annual Consumption	MT	4471763	4705243	4968542	4133632	4347348	
	Annual Requirement at NAPAF	MT	4799530	4759257	5117776	5043054	4563323	
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of		ECL (G10 - G13)					
8.1.2.1	FSA	MMT	12.39	13.18	13.3	10.87	11.52	
	LoA	MT						
	MoU	MT						
8.1.2.2	Imported*	MT	NIL					
8.1.2.	Spot Market/e-auction*	MT	NIL					
8.1.3	Transportation Distance of the station from the sources of supply	KM	27.28 KM					
8.1.4	Mode of Transport		MGR- Rail					
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as NAPAF)	Days & MT	20 days & 640000					For the station of 2340 MW
8.1.6	Maximum stock maintained for primary fuel	MT	434631	687010	699740	803283	640793	
	Date		01-04-2017	31-03-2019	03-05-2019	24-06-2020	01-04-2021	
8.1.7	Minimum Stock maintained for primary fuel	MT	0	0	0	477701	19545	

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology
	Date		20-10-2017	19-10-2018	25-10-2019	04-04-2020	23-10-2021	
8.1.8	Average stock maintained for primary fuel	MT	94536	227606	257378	668882	191182	
8.2	Secondary Fuel :		HFO					
8.2.1	Annual Allocation/ Requirement	KL	3679.2					
8.2.2	Sources of supply		IOCL					
8.2.3	Transportation Distance of the station from the sources of supply	KM	Dynamic- Usually from Ex haldia-500 km					
8.2.4	Mode of Transport		Rail/Road					For the station of 2340 MW
8.2.5	Maximum Station capability to stock secondary fuels	KL	8000KL(Inclusive Stg1&2)					
8.2.6	Maximum Stock of secondary oil actually maintained	KL			6914	6173	6918	
8.2.7	Minimum Stock of secondary oil actually maintained	KL			2627	3208	3031	
8.2.8	Average Stock of secondary oil actually maintained	KL			5036	4673	4777	
9.	Cost of Spares :							
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	5512.3	5656.5	4345.5	8478.0	8632.7	For the station of 2340 MW
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)	0	0	0	0	0	
9.3	Initial spares-list, quantity and cost	(Rs. Lakh)	NA					
9.4	Maintenance spares - cost	(Rs. Lakh)	8247.9	7967.5	7907.2	9763.2	9420.2	For the station of 2340 MW
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)						
10	Generation :							
10.1	-Actual Gross Generation at generator terminals	MU	5719.64	6101.09	6011.16	5000.66	5859.22	
10.2	-Actual Net Generation Ex-bus	MU	5187.62	5531.90	5436.34	4512.18	5314.53	
10.3	-Scheduled Generation Ex-bus	MU	5204.42	5516.52	5503.45	4618.14	5361.09	
11	Average Declared Capacity (DC)	MW	662.91	697.95	677.72	607.42	689.32	
	DC Peak HD %	%				82.80	90.80	
	DC Off Peak HD %	%				81.01	90.27	
	DC Peak LD %	%				79.16	90.02	
	DC Off Peak LD %	%				79.00	90.13	
	Actual Declared Capacity	MU	5807.07	6114.02	5953.08	5321.01	6038.42	
	Deemed Declared Capacity	MU	5807.07	6114.02	5953.08	5321.01	6038.42	
12	Actual Auxiliary Energy Consumption excluding colony	MU	526.1	564.0	569.9	481.3	539.5	
13	Actual Energy supplied to Colony from the station	MU	6.0	5.2	4.9	7.2	5.2	
	Actual energy supplied to construction activities	MU	NA	NA	NA	NA	NA	
	Actual energy supplied to long term and medium term beneficiaries	MU	5112.42	5429.45	5169.86	4244.57	5254.17	
	Actual energy supplied in short term							
	Energy supplied under bilateral arrangements							
	Energy supplied through exchahges	MU	0.7094	2.1911	0.164125	3.608738	1.22135	
	Energy supplied under DSM	MU	-16.80	15.38	-67.11	-105.96	-46.55	
	Energy supplied SCED	MU			107.96	315.32	113.26	
14	Primary Fuel :							
14.1	Consumption :							

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology	
14.1.1	Domestic coal	From Linked Mines	MT	4471763	4705243	4968542	4133632	4347348	
		From Non-Linkd Mines	MT						
		From Integerated Mines	MT						
14.1.2	Imported coal	MT							
14.1.3	Spot market/e-auction coal	MT			NA				
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal (for each type)	(As Billed) - EM Basis as per third party	kCal/kg	3886	3745	3661	3648	4177	For the station of 2340 MW
		(As Received) - TM Basis as per third party	kCal/kg	3129	3160	3016	3007	3341	
14.2.2	Imported Coal	(As Billed) - ADB Basis	kCal/kg						
		(As Received) - ADB Basis	kCal/kg						
14.2.3	Spot market/e- auction coal	(As Billed)	kCal/kg			NA			
		(As Received)	kCal/kg						
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	3886	3745	3610	3648	4179	For the station of 2340 MW	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3129	3160	3016	3007	3341		
	Ash content in coal (%)	%	33.95	34.25	35.83	36.91	35.77		
14.3	Price of coal :								
	Billed Cost (including adjustments)								
	Amount Charged by transporting agency upto delivery point								
14.3.1	Weighted Average Landed price of Domestic coal	(Rs/MT)	2776	2633	2511	2468	3183	For the station of 2340 MW	
	Components of landed cost and break up								
	1. Cost of coal,	(Rs/MT)	2532.11	2488.35	2347.53	2286.64	2725.97	For the station of 2340 MW	
	2. Transportation	(Rs/MT)	168.30	107.69	128.04	135.86	410.59		
	3. Other charges	(Rs/MT)	76.02	37.32	35.91	45.40	46.09		
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)							
	Components of landed cost and break up								
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal	(Rs/MT)							
	Components of landed cost and break up								
14.3.4	Weighted Average Landed Price of all the Coals	(Rs/MT)							
14.4	Blending :	% and MT (of the total coal consumed)			No Imported coal received				
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal							
14.4.2	Proportion of e-auction coal in the blending	% & MT			NA				
	Coal stockyard capacity	MT	640000	640000	640000	640000	640000	For full capacity 2340	
14.5	Actual daily Average Coal stock maintained	MT	94536	227606	257378	668882	191182		

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology
		Days	2	6	7	17	5	
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 mines.	%	0.18%	0.20%	0.25%	0.24%	0.29%	
14.5.1.3	Transit loss of imported coal	%	N/A	N/A	N/A	N/A	N/A	
14.5.2	Non-Pit Head station							
14.5.2.1	Transit loss from linked mines	%						
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.	%			N/A			
14.5.2.3	Transit loss of imported coal	%						
15	Secondary Fuel Oil :							
15.1	Consumption	KL	2538.2	2610.28	1729.77	2002.01	3876.27	
		HSD	0	0	0	0	0	
15.2	Weighted Average Gross Calorific value (As received)	(kCal / Lit.)	15509	9439	9884	9858	9746	
		HSD	0	0	0	0	0	
15.3	Weighted Average Price	(Rs / KL)	32030.8	43662.0	41548.9	36287.1	51665.9	
		HSD	52084.9	61967.7	52746.1	47752.8	71554.5	
15.4	Actual Average stock maintained	KL	1835	1703	1763	1636	1672	
		HSD						
16	Weighted average duration of outages(unit-wise details):							
16.1	Planned Outages	(Days)	26.7	11.3	17.5	22.7	22.4	
16.2	Forced Outages	(Days)	6.87	3.63	4.67	48.67	3.94	
	Within control of generator	(Days)	0.14	0.06	0.17	0.05	0.1	
	beyond control of generator	(Days)	6.73	3.57	4.5	48.62	3.84	
16.3	Number of tripping	Nos.	15	14	9	6	9	
16.4	Number of start-ups:	Nos.	29	25	23	23	22	
16.4.1	Cold Start-up	Nos.	5	3	4	8	4	
16.4.2	Warm Start-up	Nos.	11	11	11	6	11	
16.4.3	Hot start-up	Nos.	13	11	8	9	7	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by MoEF&CC							
17.1	Design value of emission control equipment (specify conditions)							ECS system under installation.
	FGD installation date							
	NOX Control system installation date							
17.2	Actual emission (Stage-I)	mg/Nm ³						
		NOX						
		SOX						
	Actual emission (Stage-II)	mg/Nm ³						
		NOX						
		SOX						
	Ash dyke capacity as on 31st March							

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology	
	Ash pond capacity as on 31st March	LMT							
	Fund available in Ash Fund Account as on 31st March		Attached as Annexure-B						
	Amount utilized from Ash Fund Account								
	Ash available as on 31st March	LMT	41.85	43.18	48.48	40.17	42.31	For full capacity 2340	
	Ash utilized for construction of ash dyke	LMT	3.81	3.14	10	6.97	3.7		
	Ash utilized within plant premise, other than construction of ash dyke	LMT	0.16	0.24	0.12	0.12	0.09		
	Ash transported	LMT	0.22	0.54	6.4	23.17	17.63		
	Average Distance**	Km	150	150	150	150	150		
19	Detail of Ash utilization % of fly ash produced	(%)	45.86	48.34	70.71	103.41	78.63	For full capacity 2340	
19.1	Conversion of value added product	(%)	26.37	28.16	18.81	24.84	25.86		
19.2	For making roads &embarkment	(%)	0.53	1.24	13.21	57.68	41.67		
19.3	Land filling	(%)	0.38	0.55	9.34	1.74	1.37		
19.4	Used in plant site in one or other form or used in some other site	(%)	9.10	7.27	20.63	17.35	8.74		
19.5	Any other use , Please specify	(%)	9.49	11.12	8.73	1.79	0.99		
20	Cost of spares actually consumed	(Rs. Lakh)	326.51	390.53	478.05	2879.6	1155.88		
21	Average stock of spares	(Rs. Lakhs)	8117.0	8107.7	7937.3	8835.2	9591.7	For full capacity 2340	
22	Number of employees deployed in O&M	Nos.							
22.1	- Executives	Nos.	397	350	345	342	310	For full capacity 2340	
22.2	- Non Executives	Nos.	590	565	523	519	487		
22.3	- Corporate office	Nos.	2568	2241	2016	1815	1728		
23	Man-MW ratio	Man/MW	0.42	0.39	0.37	0.37	0.34		
	Total billed amount		Attached as Annexure-C						
	Total received amount within due date								
	Total amount received beyond due date								
	Total amount pending								
	Total amount under dispute								
	Total rebate given								
	Total LPSC recovered								
24	Generation Switchyard Details								
	No. of Bays voltagewise		400KV-43 bays,132 KV-18 bays,33 kv-3 bays,11kv-5 bays						
	ICT - nos and rating		400/132 kV, 2 No.s, 200MVA each						
	Dedicated transmission line - voltage and length	Barh-2 Lines-400 KV-180 Km,Kahalgaon-132 KV-20km	Maithon 2 line 400 kv-250 kms	Farakka-2 lines - 400 KV-120 Kms	Durgapur-2 lins- 400 kv-240km	Lakisarai-2 lines- 400 KV-140 Kms	Banka-2 lines- 400 Kv-90 Kms	Lalmatia-132KV- 40 km	sabour-132 KV- 25 Km

Note: Ash available on 31st March indicated is total ash generated during the FY and distance indicated is Weighted average distance of ash transportation.

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology
1	Name of Company		NTPC Ltd.					
2	Name of Station/ Pit head or Non- Pit head		Kahalgaon Super Thermal Power Station Stage-II (pit-head)					
	Stage		II					
3	Installed Capacity and Configuration	MW	3 X 500 = 1500 MW					
3.1	Date of Commercial Operation - Unit Wise		U-I - 01.08.2008, U-II - 30.12.2008, U-III - 20.03.2010					
3.2	Effective COD		20.03.2010					
	Make of Turbine		BHEL KWU					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		537/170 Boiler :M/s. BHEL (C.E.Design) controlled circulation balanced draft,Turbine:M/s. BHEL (KWU), Three cylinder reheat condensing turbine					
5	Type of BFP	Per Units	2 Nos Steam driven & 1No. Electric driven					
	Quantity		3 No					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	Stage-2: 2334					
	Design Boiler efficiency		Stage-2: 83.29					
	Design Turbine cycle heat rate		Stage-2: 1944					
8	Fuels :							
8.1	Primary Fuel :		Coal/Lignite					
8.1.1	Annual Allocation under FSA	MMT	11.32					
	Annual Consumption	MT	8140897	7886233	8479863	6687992	7470351	
	Annual Requirement at NAPAF	MT	8476310	8385672	8923281	8873435	8057100	
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		ECL (G10 - G13)					For the station capacity of of 2340 MW
8.1.2.1	FSA	MMT	12.39	13.18	13.3	10.87	11.52	
	LoA	MT						
	MoU	MT						
8.1.2.2	Imported*	MT	NIL					
8.1.2	Spot Market/e-auction*	MT	NIL					
8.1.3	Transportation Distance of the station from the sources of supply	KM	27.28 KM					
8.1.4	Mode of Transport		MGR- Rail					
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as NAPAF)	Days & MT	20 days & 640000					
8.1.6	Maximum stock maintained for primary fuel	MT	434631	687010	699740	803283	640793	
	Date		01-04-2017	31-03-2019	03-05-2019	24-06-2020	01-04-2021	
8.1.7	Minimum Stock maintained for primary fuel	MT	0	0	0	477701	19545	
	Date		20-10-2017	19-10-2018	25-10-2019	04-04-2020	23-10-2021	
8.1.8	Average stock maintained for primary fuel	MT	94536	227606	257378	668882	191182	
8.2	Secondary Fuel :		HFO/LDO					
8.2.1	Annual Allocation/ Requirement	KL	6570					
8.2.2	Sources of supply		IOCL					
8.2.3	Transportation Distance of the station from the sources of supply	KM	Dynamic- Usually from Ex haldia-500 km					
8.2.4	Mode of Transport		Rail/Road/Pipeline					For the station of 2340 MW

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology	
8.2.5	Maximum Station capability to stock secondary fuels	KL	8000 (Inclusive of stg1&2)						
8.2.6	Maximum Stock of secondary oil actually maintained	KL			6914	6173	6918		
8.2.7	Minimum Stock of secondary oil actually maintained	KL			2627	3208	3031		
8.2.8	Average Stock of secondary oil actually maintained	KL			5036	4673	4777		
9.	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	5512.3	5656.5	4345.5	8478.0	8632.7	For the station of 2340 MW	
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)							
9.3	Initial spares-list, quantity and cost	(Rs. Lakh)			NA				
9.4	Maintenance spares - cost	(Rs. Lakh)	8247.9	7967.5	7907.2	9763.2	9420.2	For the station of 2340 MW	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)			5036	4673	4777		
10	Generation :								
10.1	-Actual Gross Generation at generator terminals	MU	10597.11	10385.05	10493.20	8230.57	10167.66		
10.2	-Actual Net Generation Ex-bus	MU	9989.86	9769.35	9846.71	7690.65	9575.90		
10.3	-Scheduled Generation Ex-bus	MU	10083.27	9861.58	10021.10	7799.78	9636.05		
11	Average Declared Capacity (DC)	MW	1328.62	1257.72	1233.66	989.15	1255.56		
	DC Peak HD %	%				63.16	91.48		
	DC Off Peak HD %	%				63.35	91.26		
	DC Peak LD %	%				73.22	89.55		
	DC Off Peak LD %	%				72.60	88.42		
	Actual Declared Capacity	MU	11638.73	11017.67	10836.48	8664.99	10998.70		
	Deemed Declared Capacity	MU	11638.73	11017.67	10836.48	8664.99	10998.70		
12	Actual Auxiliary Energy Consumption excluding colony	MU	596.4	607.0	638.0	528.4	582.7		
13	Actual Energy supplied to Colony from the station	MU	10.8	8.7	8.5	11.5	9.0		
	Actual energy supplied to construction activities	MU							
	Actual energy supplied to long term and medium term beneficiaries		9758.23	9697.16	9302	7329.1	9370.63		
	Actual energy supplied in short term								
	Energy supplied under bilateral arrangements								
	Energy supplied through exchahnges		4.878	4.683	0.786	5.807	0.231		
	Energy supplied under DSM	MU	-93.41	-92.23	-174.39	-109.12	-60.15		
	Energy supplied SCED				426.05	404.18	330.51		
14	Primary Fuel :								
14.1	Consumption :								
14.1.1	Domestic coal		8140897	7886233	8479863	6687992	7470351		
	From Linked Mines	MT							
	From Non-Linkd Mines	MT							
	From Integerated Mines	MT							
14.1.2	Imported coal	MT							
14.1.3	Spot market/e-auction coal	MT			NA				
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal (for each type)								
	(As Billed) - EM Basis as per third party	kCal/kg	3886	3745	3661	3648	4177	For the station of 2340 MW	
	(As Received) - TM Basis as per third party	kCal/kg	3133	3154	3023	3002	3314		
14.2.2	Imported Coal								
	(As Billed) - ADB Basis	kCal/kg						NA	
	(As Received) - ADB Basis	kCal/kg							
14.2.3	Spot market/e- auction coal								
	(As Billed)	kCal/kg						NA	
	(As Received)	kCal/kg							
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	3886	3745	3610	3648	4179	For the station of 2340 MW	

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14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3133	3154	3023	3002	3314		
	Ash content in coal (%)	%	33.95	34.25	35.83	36.91	35.77		
14.3	Price of coal :								
	Billed Cost (including adjustments)								
	Amount Charged by transporting agency upto delivery point								
14.3.1	Weighted Average Landed price of Domestic coal	(Rs/MT)	2776	2633	2511	2468	3183	For the station of 2340 MW	
	Components of landed cost and break up								
	1. Cost of coal,	(Rs/MT)	2532.11	2488.35	2347.53	2286.64	2725.97	For the station of 2340 MW	
	2. Transportation	(Rs/MT)	168.30	107.69	128.04	135.86	410.59		
	3. Other charges	(Rs/MT)	76.02	37.32	35.91	45.40	46.09		
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)						For the station of 2340 MW	
	Components of landed cost and break up								
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal	(Rs/MT)			NA				
	Components of landed cost and break up								
14.3.4	Weighted Average Landed Price of all the Coals	(Rs/MT)							
14.4	Blending :	% and MT (of the total coal consumed)	No Imported coal received						
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal							
14.4.2	Proportion of e-auction coal in the blending	% & MT						For full capacity 2340	
	Coal stockyard capacity	MT	640000	640000	640000	640000	640000		
14.5	Actual daily Average Coal stock maintained	MT	94536	227606	257378	668882	191182		
		Days	2	6	7	17	5		
14.5	Actual Transit & Handling Losses for coal/Lignite								
14.5.1	Pit- Head Station								
14.5.1.1	Transit loss from linked mines	%	0.18%	0.20%	0.25%	0.24%	0.29%		
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%							
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	%						NA	
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 :								
15.1	Consumption								
	HFO	KL	2715	3648	3005	3493	2173		
	HSD	KL	97.04	119.495	144.62	200.15	112.9		
15.2	Weighted Average Gross Calorific value (As received)	(kCal / Lit.)	9910	9714	9880	9869	9764		
	HSD	(kCal / Lit.)	9578	9586	9551	9523	9355		
15.3	Weighted Average Price	(Rs / KL)	32031	43662	41549	36287	51666		
	HSD	(Rs / KL)							
15.4	Actual Average stock maintained	KL	1835.05	1703.45	5036	4673	4777		
	HSD	KL							
16	Weighted average duration of outages(unit-wise details):								
16.1	Planned Outages	(Days)	11	22	14	51	36		
16.2	Forced Outages	(Days)	7	11	13	38	7		
	Within control of generator		0	0	0	0	0		
	beyond control of generator		7	11	13	37	7		
16.3	Number of tripping	Nos.	7	9	9	9	2		

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 2017-18 to 2021-22

S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology
16.4	Number of start-ups:	Nos.	20	24	21	21	13	
16.4.1	Cold Start-up	Nos.	1	3	8	15	2	
16.4.2	Warm Start-up	Nos.	14	12	6	4	9	
16.4.3	Hot start-up	Nos.	5	9	7	2	2	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by MoEF&CC		ECS system under installation.					
17.1	Design value of emission control equipment (specify conditions)							
	FGD installation date							
	NOX Control system installation date		Attached as Annexure-A					
17.2	Actual emission (Stage-I)	SPM						mg/Nm ³
		NOX						mg/Nm ³
		SOX						mg/Nm ³
Actual emission (Stage-II)	SPM	mg/Nm ³						
	NOX	mg/Nm ³						
	SOX	mg/Nm ³						
	Ash dyke capacity as on 31st March		Attached as Annexure-B					
	Ash pond capacity as on 31st March							
	Fund available in Ash Fund Account as on 31st March							
	Amount utilized from Ash Fund Account							
	Ash available as on 31st March	LMT	79.58	81.86	88.57	87.14	82.38	For full capacity 2340
	Ash utilized for construction of ash dyke	LMT	3.99	16.53	19.93	12.71	11.18	
	Ash utilized within plant premise, other than construction of ash dyke	LMT	0.15	0.24	0.29	0.4	0.36	
	Ash transported	LMT	0	0	0	1.21	5.08	
	Average Distance	Km	0	0	0	150	150	
19	Detail of Ash utilization % of fly ash produced	(%)	45.86	48.34	70.71	103.41	78.63	For full capacity 2340
19.1	Conversion of value added product	(%)	26.37	28.16	18.81	24.84	25.86	
19.2	For making roads &embarkment	(%)	0.53	1.24	13.21	57.68	41.67	
19.3	Land filling	(%)	0.38	0.55	9.34	1.74	1.37	
19.4	Used in plant site in one or other form or used in some other site	(%)	9.10	7.27	20.63	17.35	8.74	
19.5	Any other use . Please specify	(%)	9.49	11.12	8.73	1.79	0.99	
20	Cost of spares actually consumed	(Rs. Lakh)	290.47	352.53	398.71	672.63	133.02	
21	Average stock of spares	(Rs. Lakhs)	8116.98	8107.69	7937.34	8835.20	9591.71	For full capacity 2340
22	Number of employees deployed in O&M	Nos.						For full capacity 2340
22.1	- Executives	Nos.	397	350	345	342	310	
22.2	- Non Executives	Nos.	590	565	523	519	487	
22.3	- Corporate office	Nos.	2568	2241	2016	1815	1728	
23	Man-MW ratio	Man/MW	0.42	0.39	0.37	0.37	0.34	
	Total billed amount		Attached as Annexure-C					
	Total received amount within due date							
	Total amount received beyond due date							
	Total amount pending							
	Total amount under dispute							
	Total rebate given							
	Total LPSC recovered							
24	Generation Switchyard Details							
	No. of Bays voltage wise		400KV-43 bays,132 KV-18 bays,33 kv-3 bays,11kv-5 bays					
	ICT - nos and rating		400/132 kV, 2 No.s, 200MVA each					

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 2017-18 to 2021-22

S.N	Particulars		Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology
	Dedicated transmission line - voltage and length	Barh-2 Lines-400 KV-180 Km,Kahalgaon-132 KV-20km	Maithon 2 line-400 kv-250 kms	Farakka-2 lines -400 KV-120 Kms	Durgapur-2 lins-400 kv-240km	Lakisarai-2 lines-400 KV-140 Kms	Banka-2 lines-400 Kv-90 Kms	Lalmatia-132KV-40 km	sabour-132 KV- 25 Km

Note: Ash available on 31st March indicated is total ash generated during the FY and distance indicated is Weighted average distance of ash transportation.

Name of the Company: NTPC Limited
 C/D of Units/Stations: U-I - 01.01.1995, U-II - 01.04.1995, U-III - 01.02.1996, U-IV - 01.08.1996
 Name of the Power Station: Kabhalgaon Stage-I
 Stage: I

Details of expenditure incurred from Compensation Allowance and Special Allowance during the Period 2009-10 to 2021-22

FY Year	Add-on allowed by the Commission under the provision of Regulation		Compensatory allowance allowed by the Commission, if any (Rs. Lakhs)	Special allowance allowed by the Commission, if any (Rs. Lakhs)	Income tax rate (%)	Effective Compensatory allowance available for Expenditure (Rs. Lakhs)	Effective Special allowance available for Expenditure (Rs. Lakhs)	Details of Asset/Work wise Capitalisation based on the Expenditure allowed by the Commission in the tariff period 2009-11		Total Expenditure done under Special and Compensation Allowance (Rs. Lakhs)	Capitalisation done which has not been claimed/ allowed in the tariff (Rs. Lakhs)	Difference of Allowed vs Expenditure (Rs. Lakhs)	Capital Spares capitalized in Books (Gross Basis) (Rs. Lakhs)	Total Addition during the year (Rs. Lakhs)	Total Addition during the year as per duly audited Schedule of Fixed Asset (Rs. Lakhs)	Variation if any to be reconciled /justified.					
	Net Basis	Liability of (2)						Asset/work	Rs(Lakh)-Gross							Asset/work	Rs(Lakh)-Gross	Asset/work	Rs(Lakh)-Gross	Asset/work	Rs. lakh
1	2	3	4	5	6	7-4*6	8-5*6	9		10		11		12-10+11	13	14-(2+3+7+8) (9+12+13)	15	16-9+12+13+15	17	18	
2009-10	301.80	11.59	126.00	0.00	33.99	83.17	0.00	Ash Handling System AAGMS Land Compensation	207.24 104.04 2.08		0.00			0.00	0.00	83.19	0.00	313.37	-577.55	Decap of construction equipment (-445.89), Decap of Vehicle (-16.08), Decap of MBOA (-3.57), Decap of spares (-243.50), Decap of Wagon (-171.83), ERV (-10.06)	
2010-11	867.07	21.06	210.00	0.00	33.22	140.24	0.00	Ash Handling System	888.13		0.00			0.00	0.00	140.24	641.70	1529.83	658.00	Decap of equipment (-6.75), Decap of MBOA (-14.87), Decap of spares (-123.40), ERV (1.96), Inter unit Transfer (-5.48), Asset not owned by company (-99.83), Decap of wagon (-619.02), Liability reversal (-4.42)	
2011-12	7837.60	1152.26	252.00	0.00	32.45	170.24	0.00	Ash Handling System Wagon Tippler Locomotive (3 Nos.) Land Compensation	30.69 585.84 3065.42 37.91		0.00			0.00	56.90	113.34	321.24	9368.00	8911.40	Decap of spares (-176.34), ERV (6.38), Inter Unit Transfer (975.42), Decap of wagons (-240.1), Locomotive no. 3 (-1021.86) Capitalised during 2012-13 in books after returned from Rihand, But claimed in 2011-12	
2012-13	2979.44	314.47	294.00	0.00	32.45	198.61	0.00	Ash handling System Wagon Tippler Package Land Compensation	1580.88 3425.36 287.67		0.00			0.00	0.00	198.61	886.28	4180.19	3125.09	Decap Spares-Part of Capital cost (-116.53), Wagon-decap (-44.34), Decap of spares-not part of Capital cost (-1.099), Liability reversal (-6.98), Loan ERV (2.58), Inter Unit Transfer (-888.77)	
2013-14	717.11	9.94	294.00	0.00	33.99	194.07	0.00	Ash handling System Augmentation of Railway siding Land Compensation	218.29 437.73 71.03	Bunker Level Monitoring System Ash Utilization (Brick Making Machine)	66.91 61.70		0.00	128.61	0.00	65.46	647.26	1502.92	4209.89	Decap Spares-Part of Capital cost (-267.68), Decap of spares-not part of capital cost (-55.34), Decap of MBOA (-1.16), Liability Reversal (-96.79), Revenue item decap (-8.04), ERV (1.18456), 5 KM Scheme allowed as reimbursement (Not Capitalised) -Rs 134.79 Lakhs	
2014-15			420.00	0.00	20.96	331.97	0.00	132 KV CABLE laying work Land Plant Area Wagon (10 nos.)	224.71 1090.68 454.69		0.00			0.00	0.00	-1437.92	1331.75	3101.63	2671.98	Decap Spares-Part of Capital cost (-313.16), Decap of spares-not part of capital cost (-13.35), Liability Reversal (-103.15)	
2015-16			630.00	0.00	21.34	495.55	0.00	Ash Dike Lagoon Land Plant Area Continuous Emission Monitoring System Turbo supervisory/turbine vibration monitoring system Upgrade of excat relay control system make up water pump	1569.69 339.74 255.14 415.82 89.00				0.00	0.00	-2173.84	1037.07	3706.46	98.12	Decap Spares-Part of Capital cost (-355.49), Decap of spares-not part of capital cost (-35.03), De-Cap of 400 KV Shunt Reactor Pkg Supply part of capital cost (156.29), Decap of MBOA- Part of Capital Cost (-24.66), De-Cap of Electrification of 5 Km Area Around NTPC, Kabhalgaon allowed as reimbursement (Not Capitalised) - Rs (-3036.94) Lakhs		
2016-17			735.00	0.00	21.34	578.14	0.00	Ash Dike Lagoon Land Plant Area VIBRATION MONITORING SYSTEM Upgradation of DDCMIS Effluent Quality Monitoring System(EQMS) Real time Environmental data Transmission	6.94 120.31 575.23 1342.20 33.19 10.35				0.00	0.00	-1510.07	1472.64	3560.85	4142.65	Decap Spares-Part of Capital cost (-239.38), RUT (1103.66), Decap of spares-not part of capital cost (-17.29), Decap of MBOA- Part of Capital Cost (-14.40), De-Cap of Wagon (Part of Capital Cost) - Rs (-28.68)		
2017-18			840.00	0.00	21.34	660.73	0.00	Fire Detection & Protection System for cable gallery Land Plant Area Wagon Tippler Upgradation of DDCMIS Air Compressor system of NTPC Kabhalgaon, Stage-I 132 KV Cable laying work Steam and Water Analysis System TURBO SUPERVISORY/TURBINE Replacement of MoCB with SF6 breaker.	508.67 107.15 102.54 2299.65 255.75 7.33 240.54 1.65 213.39	Capitalisation of MBOA	115.48			115.48	0.00	-3211.42	2713.17	6585.32	3712.88	Decap Spares-Part of Capital cost (-2850.31), RUT (7.65), Decap of spares-not part of capital cost (-29.29), Decap of MBOA- Part of Capital Cost (-0.50)	
2018-19			840.00	0.00	21.34	660.73	0.00	Ash Dike Lagoon Land Plant Area Effluent Quality Monitoring System(EQMS) Upgradation of DDCMIS Air Compressor system of NTPC Kabhalgaon, Stage-I Steam and Water Analysis System VIBRATION MONITORING SYSTEM	1490.11 93.98 0.45 1233.44 17.58 14.66 1.39	Capitalisation of MBOA	20.09			20.09	0.00	-2210.95	1334.52	4206.20	2943.23	Decap Spares-Part of Capital cost (-1155.88), RUT (-20.00), Decap of spares-not part of capital cost (-87.09)	

Annexure-VI (C)

DETAILS OF WATER CHARGES						
Name of the Company:		NTPC Ltd.				
Name of the Power Station and Stage/Phase:		Kahalgaon Super Thermal Power Station (2340 MW)				
(Rs. In Lakhs)						
Sl.No.	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
(A)	Plant	Kahalgaon Super Thermal Power Station Stage-I (pit-head)				
1	Type of Plant	Coal Based Plant				
2	Type of Cooling Tower	INDUCED DRAFT COOLING TOWER				
3	Type of Cooling Water System	CLOSED SYSTEM				
4	Any Special Features which may increase/reduce water consumption	Ash Water Re-circulation System				
(B)	Quantum of Water : (Cubic Meter)					
5	Contracted Quantum					
6	Allocation of Water	150 Cusec(STG1&2)				
7	Actual water Consumption	57089558	57579587	53185937	41853162	46246207
8.	Rate of Water Charges	5.500 from 11//11/2017	5.5	5.5	5.5	5.5
9	Other charges/Fees , if paid as part of Water Charges					
10	Total water Charges Paid	658.8	1646.7	4194.3	1916.7	0.0

Annexure VI (D)**DETAILS OF OPERATIONS AND MAINTENANCE EXPENSES****Name of the Company:**

NTPC Limited

Name of the Power Station or Transmission Region:

Kahalgaon Station(2340 MW)

(Rs. In Lakhs)

Sl. No.	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
(A)	Details of Capital Spares in opening Stock	35064	39365	44670	48839	57210
(B)	Details of Capital Spares procured during the year	5512	5656	4345	8478	8633
(C)	Details of capital spares consumed during the year	1212	351	177	107	2014
(D)	Details of capital spares closing at the end of the	39365	44670	48839	57210	63828

	Absolute value	(Rs. Crore)	" NOT APPLICABLE "																					
	Rate	(%)	" NOT APPLICABLE "																					
	1) Ash Utilisation Expenses	(Rs. Crore)	" NOT APPLICABLE "																					
25	AFC	(Rs./ kWh)	0.64	0.64	0.65	0.65	0.65	0.88	0.89	0.91	0.95	0.98	0.97	1.00	1.04	1.10	1.12	1.11	1.23	1.27	40.58	76.32		
26	Energy Charge	(Rs./kWh)	1.17	1.27	1.3	1.36	1.48	1.82	2.08	2.7	2.32	2.78	2.56	2.3	2.4	2.4	2.27	2.29	2.29	2.29	2.29	2.61	2.61	
26.1	Supplemental Energy Charges - Emission Control	(Rs./kWh)																						
27	Total tariff	(Rs. kWh)	1.81	1.91	1.95	2.01	2.13	2.70	2.97	3.61	3.27	3.76	3.53	3.30	3.44	3.50	3.39	3.40	3.52	3.88				
28	Revenue realisation before tax	(Rs. Crore)																						
29	Revenue realisation after tax	(Rs. Crore)																						
30	Profit/ loss	(Rs. Crore)	391.7	32.8	157.9	163.2	153.4	391.0	631.6	592.3	845.5	1008.6	776.8	839.8	955.1	966.2	884.2	689.0	573.5	889.2				
31	DSM Generation	(MU)			53.6	145.9	52.3	30.0	-179.2	-242.7	-315.3	-47.6	-108.1	-139.8	-16.8	15.4	-67.1	-106.0	-46.6					
32	DSM Rate	(Rs./kWh)																						
33	Revenue from DSM	(Rs. Crore)			-8.7	-20.6	-30.4	-25.8	34.4	36.6	44.8	5.1	17.7	22.9	10.6	8.1	-4.4	31.7	19.1					
34	Compensation received for operation below NAPAf	(Rs. Crore)													5.3	0.0	0.0	2.3	0.0					
35	Part load Compensation received from beneficiaries	(Rs. Crore)													5.3	0.0	0.0	2.3	0.0					
36	Amount received from SCED	(Rs. Crore)													0.0	0.0	10.1	4.4	1.8					

For full capacity of 2340 MW

Note: DSM Revenue (-)/Received / (+) Paid
2a Extra Row inserted .
Gross calorific value indicated for 2019-20,2020-21,2021-22 here after adjusting 85 kcal storage loss

h) Supplementary Tariff - Emission Control														
Absolute value		(Rs. Crore)												
Rate		" NOT APPLICABLE"												
i) Ash Utilisation Expenses		(Rs. Crore)												
25	AFC	(Rs./ kWh)	1.09	1.14	1.17	1.20	1.15	1.14	1.14	1.10	1.10	1.07	1.06	1.05
26	Energy Charge	(Rs./kWh)	1.96	2.46	2.23	2.63	2.43	2.19	2.29	2.31	2.16	2.17	2.16	2.46
26.1	Supplemental Energy Charges - Emission Control	(Rs./kWh)												
27	Total tariff	(Rs. kWh)	3.05	3.60	3.40	3.83	3.58	3.33	3.43	3.41	3.26	3.24	3.22	3.51
28	Revenue realisation before tax	(Rs. Crore)												
29	Revenue realisation after tax	(Rs. Crore)												
30	Profit/ loss	(Rs. Crore)	631.55	592.33	845.50	1008.61	776.77	839.80	955.11	966.15	884.23	689.05	573.46	889.17
31	DSM Generation	(MU)	39.41	-78.07	-170.98	-144.60	22.85	-57.56	-140.16	-93.41	-92.23	-174.39	-109.12	-60.15
32	DSM Rate	(Rs/kWh)												
33	Revenue from DSM	(Rs. Crore)		15.0104	24.673	21.1311	-8.7775	4.7362	9.2198	4.11	5.28	17.4	15.82	6.73
34	Compensation received for operation below	(Rs Crore)							0	0	0	2.32	0	
35	Part load Compensation received from	(Rs Crore)							0	0	0	2.32	0	
36	Amount received from SCED	(Rs Crore)							0	0	19.66	5.38	3.47	

For full capacity

DSM Revenue (-)Received / (+) Paid

2a Extra Row inserted .

Gross calorific value indicated for 2019-20,2020-21,2021-22 here after adjusting 85 kcal storage loss

DETAILS OF EMISSION CONTROL SYSTEM

Generating company: NTPC Limited
Name of Generating station: Kahalgaon Stage-I
Installed Capacity (MW) :840 MW
Type of Emission Control System: FGD

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU					
2	Auxiliary Consumption - emission control	MU	ECS system under installation.				
	Auxiliary Consumption - emission control	%					
3	Auxiliary Consumption (Normative)	%					
4	Hours of Operation	Hrs					
5	O&M Expenses (Actual) with Breakup as per format	Rs. Crore					
6	Other maintenace spares consumed^	Rs. Crore					
7	Initial Spares consumed*	Rs. Crore					

Pls. Note: Where the system is yet not operational guaranteed parameter along with spares cost as per awarded contract to be furnished

* Not part of O&M expenses and Pls specify list of the same

S.No.	Particulars	Units	Kahalgaon Stg-I &II				
			Investment Approval	Approved*			
1	Capital Cost of Emission Control System						
1.1	Hard Cost	Rs. Crore	1456.9	443.20	Hard cost approved		
1.1.1	Civil Works	Rs. Crore	Included in above				
1.1.2	Plant and Machinery and others	Rs. Crore	Included in above				
1.1.3	Initial Spares procured	Rs. Crore	Included in above				
1.2	IDC	Rs. Crore	123.35	44.28			
1.3	IEDC	Rs. Crore	43.71	15.69			
1.4	Others. Pls specify (Taxes & Duties	Rs. Crore		79.78			
1.4	Completed Cost	Rs. Crore	1623.96				

* Wherever cost is vet to be approved by CERC and for which petition has been filed the actual claimed shall be submitted.

* Where the work is still under execution utility to submit the details of awarded cost