

**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/ Remarks
1	Name of Company		<b>NTPC Ltd.</b>					
2	Name of Station/ Pit head or Non- Pit head		<b>Feroz Gandhi Unchahar Thermal Power Station Stage-I (Non Pit-Head)</b>					
	Stage		<b>Stage-I</b>					
3	Installed Capacity and Configuration	MW	2 X 210 = 420 MW					
3.1	Date of Commercial Operation - Unit Wise		Unit-1- 21.11.1988, Unit-2- 22.03.1989					
3.2	Effective COD		22.03.1989					
	Make of Turbine		KWU, WEST GERMANY					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		TANGENTIALLY FIRED, BALANCE DRAUGHT, NATURAL CIRCULATION, RADIANT REHEAT TYPE, DRY BOTTOM, DIRECT FIRED PULVERIZED COAL WITH, BOWL MILL / 175.8 kg/cm2 /540 °C					
5	Type of BFP		Stage-I - Electric Driven					
	<b>Quantity</b>		Stage-I 3 x 2 MDBFP,					
6	Circulating water system		Close Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	Stage-I 2340.85					
	Design Boiler efficiency	%	Stage-I - 84.67					
	Design Turbine cycle heat rate	Kcal/Kwh	Stage-I 1982					
8	<b>Fuels :</b>							
8.1	<b>Primary Fuel :</b>		Coal					
8.1.1	Annual Allocation under FSA	MT	Annual allocation of 7.41 MMT					For Full capacity of 1550 MW
	Annual Consumption	MT	1694743	1731745	1548700	1299793	1315746	
	Annual Requirement at NAPAF		1995882	1976882	2126847	2212545	2061753	
8.1.2	Sources of supply/ procurement along with contracted quantity and		CCL, BCCL, ECL, NTPC-PB, IMPORTED, MCL, SCCL					
8.1.2.1	FSA	MT	4354342	4753142	5687132	4884451	5122349	
	MoU	MT					67602	
8.1.2.2	Imported*	MT	0	0	154004	19550	130293	
8.1.2.	Spot Market/e-auction*	MT	410521	0	0	0	0	
8.1.3	Transportation Distance of the station from the sources of supply	KM	401 Km to 1383 Km					
8.1.4	Mode of Transport		Rail/Road/Sea					For Full capacity of 1550

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as NAPAF)	Days & MT	27 & 598991						MW
8.1.6	Maximum stock maintained for primary fuel	MT	697174	764233	847436	727936	385452		
	Date		22-04-2017	31-03-2019	10-04-2019	May-20	01-04-2021		
8.1.7	Minimum Stock maintained for primary fuel	MT	0	0	83381	175173	3870		
	Date		07-10-2017	18-08-2018	12-09-2019	Feb-21	14-10-2021		
8.1.8	Average stock maintained for primary fuel	MT	302306	331269	416962	394371	184111		
8.2	<b>Secondary Fuel :</b>								
8.2.1	Annual Allocation/ Requirement	KL	10000KL					For Full capacity of 1550 MW	
8.2.2	Sources of supply		IOCL						
8.2.3	Transportation Distance of the station from the sources of supply	KM	140						
8.2.4	Mode of Transport		Rail						
8.2.5	Maximum Station capability to stock secondary fuels	KL	12000KL						
8.2.6	Maximum Stock of secondary oil actually maintained	KL	7500KL						
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1850KL						
8.2.8	Average Stock of secondary oil actually maintained	KL	5000KL						
9.	<b>Cost of Spares :</b>								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	4751.04	6532.63	5365.16	4462.63	3804.89	For Full capacity of 1550 MW	
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)	NA						
9.3	Initial spares-list, quantity and cost	(Rs. Lakh)	NA						
9.4	Maintenance spares - cost	(Rs. Lakh)	3480.98	5478.92	5715.34	6118.66	5776.83	For Full capacity of 1550 MW	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	1407.99	3162.9	2850.45	3258.64	639.79	For Full capacity of 1550 MW	
10	<b>Generation :</b>								
10.1	-Actual Gross Generation at generator terminals	MU	2589.99	2681.37	2219.62	1772.64	1932.85		
10.2	-Actual Net Generation Ex-bus	MU	2337.21	2418.71	1981.37	1562.02	1707.28		
10.3	-Scheduled Generation Ex-bus	MU	2434.20	2507.71	2081.29	1618.41	1813.79		
11	Average Declared Capacity (DC)	MW	336.17	370.16	364.14	384.11	328.69		
	DC Peak HD %	%				102.93	85.03		
	DC Off Peak HD %	%				103.04	85.44		
	DC Peak LD %	%				99.36	86.44		
	DC Off Peak LD %	%				99.27	86.17		
	Actual Declared Capacity	MU	2944.87	3242.61	3198.63	3364.80	2879.34		
	Deemed Declared Capacity	MU	2944.87	3242.61	3198.63	3364.80	2879.34		
12	Actual Auxiliary Energy Consumption excluding colony	MU	240.40	253.02	228.90	201.87	215.16		
13	Actual Energy supplied to Colony from the station	MU	11.38	9.43	9.30	8.52	10.01		
	Actual energy supplied to construction activities	MU	1.00	0.21	0.04	0.23	0.40		
	Actual energy supplied to long term and medium term beneficiaries	MU	2398.9	2446.9	2102.4	1659.7	1710.2		
	Actual energy supplied in short term								
	Energy supplied under bilateral arrangements								
	Energy supplied through exchahnges								

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks	
	Energy supplied under DSM	MU	-96.99	-89.00	-99.92	-56.39	-106.51		
	Energy supplied SCED								
14	<b>Primary Fuel :</b>								
14.1	Consumption :	MT							
14.1.1	Domestic coal	MT	1694742.8	1731745.4	1523347	1295543	1307463		
		From Linked Mines							
		From Non-Linkd Mines							
		From Integerated Mines							
14.1.2	Imported coal	MT	0	0	25353	4250	8283		
14.1.3	Spot market/e-auction coal	MT							
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal (for each type)	(As Billed) - EM Basis as per third party	kCal/kg	4188	4527	4632	4104	4545	For Full capacity of 1550 MW
		(As Received) - TM Basis as per third party	kCal/kg	3851	3990	3913	3529	3751	
14.2.2	Imported Coal	(As Billed) - ADB Basis	kCal/kg			5834	5758	6182	
		(As Received) - ADB Basis	kCal/kg			4888	4826	5440	
14.2.3	Spot market/e- auction coal	(As Billed)	kCal/kg	4817					
		(As Received)	kCal/kg	3989					
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	4207	4527	4674	4111	4595		
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3760	3876	3680	3538	3795		
	Ash content in coal (%)		36.03%	34.87%	36.05%	35.12%	37.70%		
14.3	<b>Price of coal :</b>								
	Billed Cost (including adjustments)								
	Amount Charged by transporting agency upto delivery point								
14.3.1	Weighted Average Landed price of Domestic coal	(Rs/MT)	3650	4243	4825	3796	4321	For Full capacity of 1550 MW	
	Components of landed cost and break up								
	1. Cost of coal,	(Rs/MT)	2287	2819	3341	2288	2784		
	2. Transportation	(Rs/MT)	1363	1424	1484	1508	1529		
	3. Other charges	(Rs/MT)					8		
		(Rs/MT)							
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	0	0	8437	8233	14061		
	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)	3650	4243	4921	3813	4561		
14.4	Blending :	% and MT ( of the total coal consumed )							
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal	0.000	0.000	1.637	0.327	0.630		
14.4.2	Proportion of e-auction coal in the blending	% & MT							

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
	Coal stockyard capacity	MT	739406	739406	739406	598991	598991	For Full capacity of 1550 MW
14.5	Actual daily Average Coal stock maintained	MT	302306	331269	416962	394371	184111	
		Days	13	14	18	8	11	
14.5	<b>Actual Transit &amp; Handling Losses for coal/Lignite</b>							
14.5.1	<b>Pit- Head Station</b>							
14.5.1.1	Transit loss from linked mines	%						
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%						
14.5.1.3	Transit loss of imported coal	%			NA			
14.5.2	<b>Non-Pit Head station</b>							
14.5.2.1	Transit loss from linked mines	%	0.780	0.790	0.790	0.750	0.740	
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	<b>Secondary Fuel Oil :</b>							
15.1	Consumption							
		HFO	KL	336.03	675.377	0	0	0
		HSD	KL	480.5	300.5	4212.3	1624.4	4320.3
15.2	Weighted Average Gross Calorific value (As received)		(kCal / Lit.)	9807	9642			
		HSD	(kCal / Lit.)	9939	9202	9642	9538	8169
15.3	Weighted Average Price		(Rs / KL)		47114			
		HSD	(Rs / KL)	41575	56567	54507	40993	64299
15.4	Actual Average stock maintained		KL	652	652	652	652	652
		HSD	KL	136.123	680.172	1008.72	2379.72	961.49
16	<b>Weighted average duration of outages( unit-wise details):</b>							
16.1	Planned Outages	(Days)	16.6	14.3	15.0	0.0	30.4	
16.2	Forced Outages	(Days)	3.11	4.51	11.59	1.78	4.91	
	Within control of generator	(Days)	0.0	0.0	0.1	0.2	0.5	
	beyond control of generator	(Days)	3.1	4.5	11.5	1.6	4.4	
16.3	Number of tripping	Nos.	15	14	17	12	24	
16.4	Number of start-ups:	Nos.	15	14	17	12	24	
16.4.1	Cold Start-up	Nos.	2	1	5	7	10	
16.4.2	Warm Start-up	Nos.	3	3	4	2	5	
16.4.3	Hot start-up	Nos.	9	14	10	6	9	
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)							
		SPM	mg/Nm <sup>3</sup>					
		NOX	mg/Nm <sup>3</sup>					
		SOX	mg/Nm <sup>3</sup>					
	Actual emission (Stage-II)							
		SPM	mg/Nm <sup>3</sup>					
		NOX	mg/Nm <sup>3</sup>					
		SOX	mg/Nm <sup>3</sup>					

Attached as Annexure-A

**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/ Remarks
	Ash dyke capacity as on 31st March							
	Ash pond capacity as on 31st March							
	Fund available in Ash Fund Account as on 31st		Attached as Annexure-B					
	Amount utilized from Ash Fund Account							
	Ash available as on 31st March	LMT	16.8	17.21	21.65	19.77	20.85	For station capacity 1550 MW
	Ash utilized for construction of ash dyke	LMT	0	0.25	1.81	0	0	
	Ash utilized within plant premise, other than construction of ash dyke	LMT	0.01	0.02	0.02	0.02	0.01	
	Ash transported	LMT	4.68	9.65	6.66	24.61	17.76	
	Average Distance	Km	150	150	150	150	150	For station capacity 1550 MW
19	Detail of Ash utilization % of fly ash produced	(%)	102.15	117.98	90.35	166.46	159.14	
19.1	Conversion of value added product	(%)	61.76	59.53	42.45	41.98	43.69	
19.2	For making roads & embarkment	(%)	27.85	56.10	30.76	124.48	85.18	
19.3	Land filling	(%)	0.04	0.11	1.66	0.00	0.00	
19.4	Used in plant site in one or other form or used in some other site	(%)	0.00	1.45	8.36	0.00	0.00	
19.5	Any other use, Please specify	(%)	12.50	0.80	7.11	0.00	30.26	
20	Cost of spares actually consumed	(Rs. Lakh)	0.00	0.95	141.32	38.42		
21	Average stock of spares	(Rs. Lakhs)	14957	16201	17532	18334	20220	For station capacity 1550 MW
22	Number of employees deployed in O&M	Nos.						For station capacity 1550 MW
22.1	- Executives	Nos.	396	369	312	291	284	
22.2	- Non Executives	Nos.	423	362	323	298	248	
22.3	- Corporate office	Nos.	2568	2241	2016	1815	1728	
23	Man-MW ratio	Man/MW	0.53	0.47	0.41	0.38	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	<b>Generation Switchyard Details</b>		200KV and 400KV with ICT connection					
	No. of Bays voltages wise		26bays of 220kV and 9 bays of 400KV					
	ICT - nos and rating		1.NO. ICT 500MVA 400 KV / 220 KV					
	Dedicated transmission line - voltage and length		04 no. 220KV Kanpur line 144 km					
			03 no. 220KV Raebareli line 42.5 km					
			01 no. 220KV Fatehpur line 56 km					
			01 no. 220KV Malwan line 85 km					
			02 no. 400KV Fatehpur line 54 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/ Remarks
1	Name of Company		<b>NTPC Ltd.</b>					
2	Name of Station/ Pit head or Non- Pit head		<b>Feroz Gandhi Unchahar Thermal Power Station/ (Non Pit-Head)</b>					
	Stage		<b>Stage-II</b>					
3	Installed Capacity and Configuration	MW	2 X 210 = 420 MW					
3.1	Date of Commercial Operation - Unit Wise		Unit-1: 1.1.2001 Unit-2: 1.3.2000					
3.2	Effective COD		01.01.2001					
	Make of Turbine		BHEL- KRAFT WERK UNION DESIGN					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Natural circulation, radiant reheat outdoor, /184.5 Kg/cm <sup>2</sup> (g),					
5	Type of BFP		Electric Driven					
	<b>Quantity</b>		3 x 2 MDBFP,					
6	Circulating water system		Close Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	Stage-2: 2262					
	Design Boiler efficiency		Stage-2: - 86.86					
	Design Turbine cycle heat rate		Stage-2: - 1964.9					
8	<b>Fuels :</b>							
8.1	<b>Primary Fuel :</b>		Coal					
8.1.1	Annual Allocation under FSA	MT	Annual allocation of 7.41 MMT					For Full capacity of 1550 MW
	Annual Consumption	MT	1795615	1702453	1580591	1373655	1526717	
	Annual Requirement at NAPAF	MT	1996507	1960837	2102693	2191161	2065828	
8.1.2	Sources of supply/ procurement along with contracted quantity and		CCL, BCCL, ECL, NTPC-PB, IMPORTED, MCL, SCCL					
8.1.2.1	FSA	MT	4354342	4753142	5687132	4884451	5122349	
	LoA	MT					67602	
	MoU	MT						
8.1.2.2	Imported*	MT	0	0	154004	19550	130293	
8.1.2.	Spot Market/e-auction*	MT	410521	0	0	0	0	
8.1.3	Transportation Distance of the station from the sources of supply	KM	401 Km to 1383 Km					
8.1.4	Mode of Transport		Rail/Road/Sea					For Full capacity of 1550

**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/ Remarks	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as NAPAF)	Days & MT	27 & 598991						MW
8.1.6	Maximum stock maintained for primary fuel	MT	697174	764233	847436	727936	385452		
	Date		22-04-2017	31-03-2019	10-04-2019	May-20	01-04-2021		
8.1.7	Minimum Stock maintained for primary fuel	MT	0	0	83381	175173	3870		
	Date		07-10-2017	18-08-2018	12-09-2019	Feb-21	14-10-2021		
8.1.8	Average stock maintained for primary fuel	MT	302306	331269	416962	394371	184111		
8.2	<b>Secondary Fuel :</b>								
8.2.1	Annual Allocation/ Requirement	KL	10000KL						For Full capacity of 1550 MW
8.2.2	Sources of supply		IOCL						
8.2.3	Transportation Distance of the station from the sources of supply	KM	140						
8.2.4	Mode of Transport		Rail						
8.2.5	Maximum Station capability to stock secondary fuels	KL	12000KL						
8.2.6	Maximum Stock of secondary oil actually maintained	KL	7500KL						
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1850KL						
8.2.8	Average Stock of secondary oil actually maintained	KL	5000KL						
9.	<b>Cost of Spares :</b>								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	4751.04	6532.63	5365.16	4462.63	3804.89	For Full capacity of 1550 MW	
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)	Nil						
9.3	Initial spares-list, quantity and cost	(Rs. Lakh)	NA						
9.4	Maintenance spares - cost	(Rs. Lakh)	3480.98	5478.92	5715.34	6118.66	5776.83	For Full capacity of 1550 MW	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	1407.99	3162.9	2850.45	3258.64	639.79	For Full capacity of 1550 MW	
10	<b>Generation :</b>								
10.1	<b>-Actual Gross Generation at generator terminals</b>	MU	2754.34	2654.12	2271.96	1877.28	2235.42		
10.2	<b>-Actual Net Generation Ex-bus</b>	MU	2494.92	2401.08	2043.48	1668.48	1991.94		
10.3	<b>-Scheduled Generation Ex-bus</b>	MU	2587.46	2477.19	2115.94	1666.55	2152.85		
11	<b>Average Declared Capacity (DC)</b>	MW	368.98	366.79	373.87	360.92	354.57		
	DC Peak HD %	%				104.23	92.78		
	DC Off Peak HD %	%				103.92	92.36		
	DC Peak LD %	%				92.37	94.27		
	DC Off Peak LD %	%				92.34	93.93		
	Actual Declared Capacity	MU	3232.27	3213.09	3284.09	3161.63	3106.00		
	Deemed Declared Capacity	MU	3232.27	3213.09	3284.09	3161.63	3106.00		
12	<b>Actual Auxiliary Energy Consumption excluding colony</b>	MU	254.86	248.32	228.08	204.31	239.93		
13	<b>Actual Energy supplied to Colony from the station</b>	MU	4.56	4.71	0.40	4.49	3.55		
	Actual energy supplied to construction activities	MU	0.00	0.00	0.00	0.00	0.00		
	Actual energy supplied to long term and medium term beneficiaries	MU	2546.4	2434.6	2150.5	1765.3	2106.4		

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S.N	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
	Actual energy supplied in short term							
	Energy supplied under bilateral arrangements							
	Energy supplied through exchahnges							
	Energy supplied under DSM	MU	-92.54	-76.11	-72.46	1.93	-160.92	
	Energy supplied SCED							
14	<b>Primary Fuel :</b>							
14.1	<b>Consumption :</b>							
14.1.1	Domestic coal							
	From Linked Mines	MT	1795614.5	1702452.5	1530936.253	1368655.44	1523413	
	From Non-Linkd Mines	MT						
	From Integerated Mines	MT						
14.1.2	Imported coal	MT	0	0	49654.747	5000	3304	
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 (for each type)							
	(As Billed) - EM Basis as per third party	kCal/kg	4188	4527	4632	4104	4545	
	(As Received) - TM Basis as per third party	kCal/kg	3851	3990	3913	3529	3751	
14.2.2	Imported Coal							
	(As Billed) - ADB Basis	kCal/kg			5834	5758	6182	
	(As Received) - ADB Basis	kCal/kg			4888	4826	5440	
14.2.3	Spot market/e- auction coal							
	(As Billed)	kCal/kg	4817					
	(As Received)	kCal/kg	3989					
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	4207	4527	4674	4111	4595	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3759	3888	3691	3538	3793	
	Ash content in coal (%)	%	36.03%	34.87%	36.05%	35.12%	37.70%	
14.3	<b>Price of coal :</b>							
	Billed Cost (including adjustments)							
	Amount Charged by transporting agency upto delivery point							
14.3.1	Weighted Average Landed price of Domestic coal	(Rs/MT)	3650	4243	4825	3796	4321	
	Components of landed cost and break up							
	1. Cost of coal,	(Rs/MT)	2287	2819	3341	2288	2784	
	2. Transportation	(Rs/MT)	1363	1424	1484	1508	1529	
	3. Other charges	(Rs/MT)					8	
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	0	0	8437	8233	14061	
	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)	3650	4243	4921	3813	4561	

For Full capacity of 1550 MW

For Full capacity of 1550 MW



**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/ Remarks				
14.4	Blending :	% and MT ( of the total coal consumed )										
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal	0.000	0.000	3.142	0.364	0.216					
14.4.2	Proportion of e-auction coal in the blending	% & MT										
	Coal stockyard capacity	MT	739406	739406	739406	598991	598991	For Full capacity of 1550 MW				
14.5	Actual daily Average Coal stock maintained	MT	302306	331269	416962	394371	184111					
		Days	13	14	18	8	11					
14.5	Actual Transit & Handling Losses for coal/Lignite											
14.5.1	Pit- Head Station		NA									
14.5.1.1	Transit loss from linked mines	%										
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	%	0.780	0.790	0.790	0.750	0.740					
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	201.483	1245.841	0	0	0					
	HSD	KL	416.7	734.5	2474.2	2347.6	2173.8					
15.2	Weighted Average Gross Calorific value (As received)											
	HFO	(kCal / Lit.)	9841	9598	0	0	0	For station capacity 1550 MW				
	HSD	(kCal / Lit.)	9602	9645	9639	9552	7548					
15.3	Weighted Average Price											
	HFO	(Rs / KL)		47114								
	HSD	(Rs / KL)	41575	56567	54507	40993	64299					
15.4	Actual Average stock maintained											
	HFO	KL	652	652	652	652	652					
	HSD	KL	136.123	680.172	1008.72	2379.72	961.49					
16	Weighted average duration of outages( unit-wise details):											
16.1	Planned Outages	(Days)	9.2	17.5	17.0	21.5	22.1					
16.2	Forced Outages	(Days)	1.47	3.99	2.00	6.90	2.93					
	Within control of generator	(Days)	0.1	0.2	0.1	0.0	0.0					
	beyond control of generator	(Days)	1.4	3.8	1.9	6.9	2.9					
16.3	Number of tripping	Nos.	12	14	15	10	10					
16.4	Number of start-ups:	Nos.	12	14	15	10	10					
16.4.1	Cold Start-up	Nos.	2	2	2	4	4					
16.4.2	Warm Start-up	Nos.	1	2	1	3	2					
16.4.3	Hot start-up	Nos.	8	13	12	5	5					
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											

**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/ Remarks	
	NOX Control system installation date								
17.2	Actual emission (Stage-I)	SPM	mg/Nm <sup>3</sup>	Attached as Annexure-A					
		NOX	mg/Nm <sup>3</sup>						
		SOX	mg/Nm <sup>3</sup>						
	Actual emission (Stage-II)	SPM	mg/Nm <sup>3</sup>						
		NOX	mg/Nm <sup>3</sup>						
		SOX	mg/Nm <sup>3</sup>						
	Ash dyke capacity as on 31st March								
	Ash pond capacity as on 31st March								
	Fund available in Ash Fund Account as on 31st		Attached as Annexure-B						
	Amount utilized from Ash Fund Account								
	Ash available as on 31st March	LMT	16.8	17.21	21.65	19.77	20.85	For station capacity 1550 MW	
	Ash utilized for construction of ash dyke	LMT	0	0.25	1.81	0	0		
	Ash utilized within plant premise, other than construction of ash dyke	LMT	0.01	0.02	0.02	0.02	0.01		
	Ash transported	LMT	4.68	9.65	6.66	24.61	17.76		
	Average Distance	Km	150	150	150	150	150		
19	Detail of Ash utilization % of fly ash produced	(%)	102.15	117.98	90.35	166.46	159.14		
19.1	Conversion of value added product	(%)	61.76	59.53	42.45	41.98	43.69		
19.2	For making roads & embarkment	(%)	27.85	56.10	30.76	124.48	85.18		
19.3	Land filling	(%)	0.04	0.11	1.66	0.00	0.00		
19.4	Used in plant site in one or other form or used in some other site	(%)	0.00	1.45	8.36	0.00	0.00		
19.5	Any other use , Please specify	(%)	12.50	0.80	7.11	0.00	30.26		
20	Cost of spares actually consumed	( Rs. Lakh)	99.07	108.12	110.88	145.31	59.02		
21	Average stock of spares	(Rs. Lakhs)	14957	16201	17532	18334	20220	For station capacity 1550 MW	
22	Number of employees deployed in O&M	Nos.							
22.1	- Executives	Nos.	396	369	312	291	284	For station capacity 1550 MW	
22.2	- Non Executives	Nos.	423	362	323	298	248		
22.3	- Corporate office	Nos.	2568	2241	2016	1815	1728		
23	Man-MW ratio	Man/MW	0.53	0.47	0.41	0.38	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		200KV and 400KV with ICT conection						

**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/ Remarks
	No. of Bays voltageswise		26bays of 220kV and 9 bays of 400KV					
	ICT - nos and rating		1.NO. ICT 500MVA 400 KV / 220 KV					
	Dedicated transmission line - voltage and length		04 no. 220KV Kanpur line 144 km					
			03 no. 220KV Raebareli line 42.5 km					
			01 no. 220KV Fatehpur line 56 km					
			01 no. 220KV Malwan line 85 km					
			02 no. 400KV Fatehpur line 54 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.

**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/ Remarks
1	Name of Company		<b>NTPC Ltd.</b>					
2	Name of Station/ Pit head or Non- Pit head		<b>Feroz Gandhi Unchahar Thermal Power Station Stage-III (Non Pit-Head)</b>					
	Stage		<b>one Stage</b>					
3	Installed Capacity and Configuration	MW	1 X 210 = 210 MW					
3.1	Date of Commercial Operation - Unit Wise		01.01.2007					
3.2	Effective COD		01.01.2007					
	Make of Turbine							
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Natural circulation, radiant reheat outdoor,/179.0 Kg/cm <sup>2</sup> (g) /					
5	Type of BFP		Electric Driven					
	<b>Quantity</b>		3 x 1 MDBFP,					
6	Circulating water system		Close Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	Stage-III 2305.4					
	Design Boiler efficiency		Stage-III - 85.23					
	Design Turbine cycle heat rate		Stage-III - 1964.9					
8	<b>Fuels :</b>							
8.1	<b>Primary Fuel :</b>		Coal					
8.1.1	Annual Allocation under FSA	MT	Annual allocation of 7.41 MMT					For Full capacity of 1550 MW
	Annual Consumption	MT	901850	794239	831208	772522	819833	
	Annual Requirement at NAPAF		997915	972417	1058167	1114125	1029480	
8.1.2	Sources of supply/ procurement along with contracted quantity and		CCL, BCCL, ECL, NTPC-PB, IMPORTED, MCL, SCCL					
8.1.2.1	FSA	MT	4354342	4753142	5687132	4884451	5122349	
	MoU	MT					67602	
8.1.2.2	Imported*	MT	0	0	154004	19550	130293	
8.1.2.	Spot Market/e-auction*	MT	410521	0	0	0	0	
8.1.3	Transportation Distance of the station from the sources of supply	KM	401 Km to 1383 Km					
8.1.4	Mode of Transport		Rail/Road/Sea					For Full capacity of 1550

**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/ Remarks	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as NAPAF)	Days & MT	27 & 598991						MW
8.1.6	Maximum stock maintained for primary fuel	MT	697174	764233	847436	727936	385452		
	Date		22-04-2017	31-03-2019	10-04-2019	May-20	01-04-2021		
8.1.7	Minimum Stock maintained for primary fuel	MT	0	0	83381	175173	3870		
	Date		07-10-2017	18-08-2018	12-09-2019	Feb-21	14-10-2021		
8.1.8	Average stock maintained for primary fuel	MT	302306	331269	416962	394371	184111		
8.2	<b>Secondary Fuel :</b>								
8.2.1	Annual Allocation/ Requirement	KL	10000KL						For Full capacity of 1550 MW
8.2.2	Sources of supply		IOCL						
8.2.3	Transportation Distance of the station from the sources of supply	KM	140						
8.2.4	Mode of Transport		Rail						
8.2.5	Maximum Station capability to stock secondary fuels	KL	12000KL						
8.2.6	Maximum Stock of secondary oil actually maintained	KL	7500KL						
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1850KL						
8.2.8	Average Stock of secondary oil actually maintained	KL	5000KL						
9.	<b>Cost of Spares :</b>								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	4751.04	6532.63	5365.16	4462.63	3804.89	For Full capacity of 1550 MW	
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)	Nil						
9.3	Initial spares-list, quantity and cost	(Rs. Lakh)							
9.4	Maintenance spares - cost	(Rs. Lakh)	3480.98	5478.92	5715.34	6118.66	5776.83	For Full capacity of 1550 MW	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	1407.99	3162.9	2850.45	3258.64	639.79	For Full capacity of 1550 MW	
10	<b>Generation :</b>								
10.1	<b>-Actual Gross Generation at generator terminals</b>	MU	1382.70	1242.99	1198.67	1051.54	1215.17		
10.2	<b>-Actual Net Generation Ex-bus</b>	MU	1256.75	1126.63	1082.04	941.44	1094.02		
10.3	<b>-Scheduled Generation Ex-bus</b>	MU	1313.72	1162.40	1126.11	943.51	1127.75		
11	<b>Average Declared Capacity (DC)</b>	MW	189.60	177.54	196.77	181.58	183.76		
	DC Peak HD %	%				104.66	99.48		
	DC Off Peak HD %	%				104.66	98.77		
	DC Peak LD %	%				91.32	95.09		
	DC Off Peak LD %	%				91.40	95.27		
	Actual Declared Capacity	MU	1660.87	1555.27	1728.45	1590.66	1609.70		
	Deemed Declared Capacity	MU	1660.87	1555.27	1728.45	1590.66	1609.70		
12	<b>Actual Auxiliary Energy Consumption excluding colony</b>	MU	125.94	116.36	116.63	110.10	121.15		
13	<b>Actual Energy supplied to Colony from the station</b>	MU	0.00	0.00	0.00	0.00	0.00		
	Actual energy supplied to construction activities	MU	0.00	0.00	0.00	0.00	0.00		
	Actual energy supplied to long term and medium term beneficiaries	MU	1273.8	1126.5	1112.6	991.0	1109.6		

**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/ Remarks	
	Actual energy supplied in short term								
	Energy supplied under bilateral arrangements								
	Energy supplied through exchahnges								
	Energy supplied under DSM	MU	-56.97	-35.77	-44.07	-2.07	-33.73		
	Energy supplied SCED								
14	<b>Primary Fuel :</b>								
14.1	<b>Consumption :</b>								
14.1.1	Domestic coal								
	From Linked Mines	MT	898137.9	794239.3	804908	768712	777802		
	From Non-Linkd Mines	MT							
	From Integerated Mines	MT							
14.1.2	Imported coal	MT	0	0	26300	3810	41531.6		
14.1.3	Spot market/e-auction coal	MT							
14.2	Gross Calorific Value (GCV) :								
14.2.1	Domestic Coal (for each type)	(As Billed) - EM Basis as per third party	kCal/kg	4188	4527	4632	4104	4545	For Full capacity of 1550 MW
		(As Received) - TM Basis as per third party	kCal/kg	3851	3990	3913	3529	3751	
14.2.2	Imported Coal	(As Billed) - ADB Basis	kCal/kg			5834	5758	6182	
		(As Received) - ADB Basis	kCal/kg			4888	4826	5440	
14.2.3	Spot market/e- auction coal	(As Billed)	kCal/kg	4817					
		(As Received)	kCal/kg	3989					
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	4207	4527	4674	4111	4595		
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3763	3868	3687	3559	3803		
	Ash content in coal (%)	%	36.03%	34.87%	36.05%	35.12%	37.70%		
14.3	<b>Price of coal :</b>								
	Billed Cost (including adjustments)								
	Amount Charged by transporting agency upto delivery point								
14.3.1	Weighted Average Landed price of Domestic coal	(Rs/MT)	3650	4243	4825	3796	4321	For Full capacity of 1550 MW	
	Components of landed cost and break up								
	1. Cost of coal,	(Rs/MT)	2287	2819	3341	2288	2784		
	2. Transportation	(Rs/MT)	1363	1424	1484	1508	1529		
	3. Other charges	(Rs/MT)					8		
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	0	0	8437	8233	14061		
	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)	3650	4243	4921	3813	4561		

**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/ Remarks				
14.4	Blending :	% and MT ( of the total coal consumed )										
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal	0.000	0.000	3.164	0.493	5.066					
14.4.2	Proportion of e-auction coal in the blending	% & MT										
	Coal stockyard capacity	MT	739406	739406	739406	598991	598991	For Full capacity of 1550 MW				
14.5	Actual daily Average Coal stock maintained	MT	302306	331269	416962	394371	184111					
		Days	13	14	18	8	11					
14.5	Actual Transit & Handling Losses for coal/Lignite											
14.5.1	Pit- Head Station		NA									
14.5.1.1	Transit loss from linked mines	%										
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	%	0.780	0.790	0.790	0.750	0.740					
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	60.26	675.079	0	0	0					
	HSD	KL	140.8	139.6	1150.5	536.9	1632.1					
15.2	Weighted Average Gross Calorific value (As received)											
	HFO	(kCal / Lit.)	9778	9781	0	0	0	For station capacity 1550 MW				
	HSD	(kCal / Lit.)	9306	9652	9636	9552	8341					
15.3	Weighted Average Price											
	HFO	(Rs / KL)		47114								
	HSD	(Rs / KL)	41575	56567	54507	40993	64299					
15.4	Actual Average stock maintained											
	HFO	KL	652	652	652	652	652					
	HSD	KL	136.123	680.172	1008.72	2379.72	961.49					
16	Weighted average duration of outages( unit-wise details):											
16.1	Planned Outages	(Days)	3.8	27.0	0.0	32.0	9.2					
16.2	Forced Outages	(Days)	0.56	8.52	4.33	0.49	2.93					
	Within control of generator	(Days)	0.0	0.0	0.2	0.0	0.4					
	beyond control of generator	(Days)	0.6	8.5	4.2	0.5	2.5					
16.3	Number of tripping	Nos.	4	7	7	3	6					
16.4	Number of start-ups:	Nos.		7	7	3	6					
16.4.1	Cold Start-up	Nos.	0	3	1	1	2					
16.4.2	Warm Start-up	Nos.	1	0	0	0	1					
16.4.3	Hot start-up	Nos.	2	4	6	2	4					
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											

**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/ Remarks	
	NOX Control system installation date								
17.2	Actual emission (Stage-I)	SPM	mg/Nm <sup>3</sup>	Attached as Annexure-A					
		NOX	mg/Nm <sup>3</sup>						
		SOX	mg/Nm <sup>3</sup>						
	Actual emission (Stage-II)	SPM	mg/Nm <sup>3</sup>						
		NOX	mg/Nm <sup>3</sup>						
		SOX	mg/Nm <sup>3</sup>						
	Ash dyke capacity as on 31st March								
	Ash pond capacity as on 31st March								
	Fund available in Ash Fund Account as on 31st		Attached as Annexure-B						
	Amount utilized from Ash Fund Account								
	Ash available as on 31st March	LMT	16.8	17.21	21.65	19.77	20.85	For station capacity 1550 MW	
	Ash utilized for construction of ash dyke	LMT	0	0.25	1.81	0	0		
	Ash utilized within plant premise, other than construction of ash dyke	LMT	0.01	0.02	0.02	0.02	0.01		
	Ash transported	LMT	4.68	9.65	6.66	24.61	17.76		
	Average Distance	Km	150	150	150	150	150		
19	Detail of Ash utilization % of fly ash produced	(%)	102.15	117.98	90.35	166.46	159.14		
19.1	Conversion of value added product	(%)	61.76	59.53	42.45	41.98	43.69		
19.2	For making roads & embankment	(%)	27.85	56.10	30.76	124.48	85.18		
19.3	Land filling	(%)	0.04	0.11	1.66	0.00	0.00		
19.4	Used in plant site in one or other form or used in some other site	(%)	0.00	1.45	8.36	0.00	0.00		
19.5	Any other use , Please specify	(%)	12.50	0.80	7.11	0.00	30.26		
20	Cost of spares actually consumed	( Rs. Lakh)	37.51	194.94	241.18	119.17	419.02		
21	Average stock of spares	(Rs. Lakhs)	14957	16201	17532	18334	20220	For station capacity 1550 MW	
22	Number of employees deployed in O&M	Nos.							
22.1	- Executives	Nos.	396	369	312	291	284	For station capacity 1550 MW	
22.2	- Non Executives	Nos.	423	362	323	298	248		
22.3	- Corporate office	Nos.	2568	2241	2016	1815	1728		
23	Man-MW ratio	Man/MW	0.53	0.47	0.41	0.38	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		200KV and 400KV with ICT conection						



**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/ Remarks
	No. of Bays voltageswise		26bays of 220kV and 9 bays of 400KV					
	ICT - nos and rating		1.NO. ICT 500MVA 400 KV / 220 KV					
	Dedicated transmission line - voltage and length		04 no. 220KV Kanpur line 144 km					
			03 no. 220KV Raebareli line 42.5 km					
			01 no. 220KV Fatehpur line 56 km					
			01 no. 220KV Malwan line 85 km					
			02 no. 400KV Fatehpur line 54 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.

**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 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
1	Name of Company		<b>NTPC Ltd.</b>					
2	Name of Station/ Pit head or Non- Pit head		<b>Feroze Gandhi Unchahar Super Thermal Power Station</b>					
	Stage		<b>Stage-IV</b>					
3	Installed Capacity and Configuration	MW	1 x 500 MW = 500 MW					
3.1	Date of Commercial Operation - Unit Wise		Unit-I 30.09.2017,					
3.2	Effective COD		Station COD 30.09.2017					
	Make of Turbine		BHEL					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Controlled Circulation with Refilled tubing , (CC+) ,Dry bottom ,Radiant Reheat ,Single drum ,Top supported ,Balanced Draft Furnace , / 209 Kg/cm2(g)					
5	Type of BFP		2 TDBFP+1MDBFP					
	Quantity		3					
6	Circulating water system		Close Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	2270.27027					
	Design Boiler efficiency		Stage-IV - 85.10					
	Design Turbine cycle heat rate		Stage-IV - 1932					
8	<b>Fuels :</b>							
8.1	<b>Primary Fuel :</b>		Coal					
8.1.1	Annual Allocation under FSA	MT	Annual allocation of 7.41 MMT					For Full capacity of 1550 MW
	Annual Consumption	MT	176558	417676	1908106	1733999	1865539	
	Annual Requirement at NAPAF	MT	1155986	2239737	2457744	2563770	2376270	
8.1.2	Sources of supply/ procurement along with contracted quantity and		CCL, BCCL, ECL, NTPC-PB, IMPORTED, MCL, SCCL					
8.1.2.1	FSA	MT	4354342	4753142	5687132	4884451	5122349	For Full capacity of 1550 MW
	LoA	MT					67602	
	MoU	MT					130293	
8.1.2.2	Imported*	MT	0	0	154004	19550		
8.1.2.	Spot Market/e-auction*	MT	410521	0	0	0	0	
8.1.3	Transportation Distance of the station from the sources of supply	KM	401 Km to 1383 Km					
8.1.4	Mode of Transport		Rail/Road/Sea					
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as NAPAF)	Days & MT	27 & 598991					
8.1.6	Maximum stock maintained for primary fuel	MT	697174	764233	847436	727936	385452	

## 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 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
	Date		22-04-2017	31-03-2019	10-04-2019	May-20	01-04-2021	
8.1.7	Minimum Stock maintained for primary fuel	MT	0	0	83381	175173	3870	
	Date		07-10-2017	18-08-2018	12-09-2019	Feb-21	14-10-2021	
8.1.8	Average stock maintained for primary fuel	MT	302306	331269	416962	394371	184111	
8.2	<b>Secondary Fuel :</b>							
8.2.1	Annual Allocation/ Requirement	KL	10000KL					For Full capacity of 1550 MW
8.2.2	Sources of supply		IOCL					
8.2.3	Transportation Distance of the station from the sources of supply	KM	140					
8.2.4	Mode of Transport		Rail					
8.2.5	Maximum Station capability to stock secondary fuels	KL	12000KL					
8.2.6	Maximum Stock of secondary oil actually maintained	KL	7500KL					
8.2.7	Minimum Stock of secondary oil actually maintained	KL	1850KL					
8.2.8	Average Stock of secondary oil actually maintained	KL	5000KL					
9.	Cost of Spares :							
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	4751.04	6532.63	5365.16	4462.63	3804.89	For Full capacity of 1550 MW
9.2	Cost of spares included in capital cost for the purpose of tariff	(Rs. Lakh)			1060.8			
9.3	Initial spares-list, quantity and cost	(Rs. Lakh)						
9.4	Maintenance spares - cost	(Rs. Lakh)	3480.98	5478.92	5715.34	6118.66	5776.83	For Full capacity of 1550 MW
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	1407.99	3162.9	2850.45	3258.64	639.79	For Full capacity of 1550 MW
10	<b>Generation :</b>							
10.1	-Actual Gross Generation at generator terminals	MU	271.11	662.52	2836.35	2455.32	2859.19	
10.2	-Actual Net Generation Ex-bus	MU	252.51	611.04	2655.77	2290.67	2680.79	
10.3	-Scheduled Generation Ex-bus	MU	262.24	616.43	2659.40	2306.70	2754.66	
11	<b>Average Declared Capacity (DC)</b>	MW	33.88	104.45	448.28	414.78	421.93	
	DC Peak HD %	%				97.72	96.43	
	DC Off Peak HD %	%				97.84	95.96	
	DC Peak LD %	%				85.41	88.32	
	DC Off Peak LD %	%				85.33	87.91	
	Actual Declared Capacity	MU	296.76	914.98	3937.65	3633.43	3696.09	
	Deemed Declared Capacity	MU	296.76	914.98	3937.65	3633.43	3696.09	
12	<b>Actual Auxiliary Energy Consumption excluding colony</b>	MU	18.60	51.48	180.58	164.66	178.40	
13	<b>Actual Energy supplied to Colony from the station</b>	MU	0.00	0.00	0.00	0.00	0.00	
	Actual energy supplied to construction activities	MU	0.00	0.00	0.00	0.00	0.00	
	Actual energy supplied to long term and medium term beneficiaries		257.9	613.0	2468.7	2311.7	2572.6	
	Actual energy supplied in short term							
	Energy supplied under bilateral arrangements							
	Energy supplied through exchahnges							

**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 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
	Energy supplied under DSM	MU	-9.73	-5.39	-3.64	-16.03	-73.88	
	Energy supplied SCED							
14	<b>Primary Fuel :</b>							
14.1	<b>Consumption :</b>							
14.1.1	Domestic coal							
		From Linked Mines	MT	179102.5	417676	1855683	1727543	1788732
		From Non-Linkd Mines	MT					
		From Integerated Mines	MT					
14.1.2	Imported coal	MT	0	0	52423.3	6455.9	76806.9	
14.1.3	Spot market/e-auction coal	MT						
14.2	Gross Calorific Value (GCV) :							
14.2.1	Domestic Coal (for each type)	(As Billed) - EM Basis as per third party	kCal/kg	4188	4527	4632	4104	4545
		(As Received) - TM Basis as per third party	kCal/kg	3851	3990	3913	3529	3751
14.2.2	Imported Coal	(As Billed) - ADB Basis	kCal/kg			5834	5758	6182
		(As Received) - ADB Basis	kCal/kg			4888	4826	5440
14.2.3	Spot market/e- auction coal	(As Billed)	kCal/kg	4817				
		(As Received)	kCal/kg	3989				
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	4207	4527	4674	4111	4595	For Full capacity of 1550 MW
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3675	3757	3688	3559	3794	
	Ash content in coal (%)		36.03%	34.87%	36.05%	35.12%	37.70%	

**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 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
14.3	<b>Price of coal :</b>							
	Billed Cost (including adjustments)							For Full capacity of 1550 MW
	Amount Charged by transporting agency upto delivery point							
14.3.1	Weighted Average Landed price of Domestic coal	(Rs/MT)	3650	4243	4825	3796	4321	
	Components of landed cost and break up							
	1. Cost of coal,		2287	2819	3341	2288	2784	
	2. Transportation		1363	1424	1484	1508	1529	
	3. Other charges						8	
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)			8437	8233	14061	
	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)	3650	4243	4921	3813	4561	
14.4	Blending :	% and MT ( of the total coal consumed )						
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal	0.000	0.000	2.747	0.372	4.117	
14.4.2	Proportion of e-auction coal in the blending	% & MT						
	Coal stockyard capacity	MT	739406	739406	739406	598991	598991	For Full capacity of 1550 MW
14.5	Actual daily Average Coal stock maintained	MT	302306	331269	416962	394371	184111	
		Days	13	14	18	8	11	
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.	%						
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	%	0.780	0.790	0.790	0.750	0.740	
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	0	245.707	0	0	0	
	HSD	KL	431.6	2690.1	3398.0	1687.5	1242.1	
15.2	Weighted Average Gross Calorific value (As received)	HFO (kCal / Lit.)	0	9796	0	0	0	
	HSD (kCal / Lit.)		7254	9647	9646	9562	8889	
15.3	Weighted Average Price	HFO (Rs / KL)		47114				
	HSD (Rs / KL)		41575	56567	54507	40993	64299	
15.4	Actual Average stock maintained	HFO KL	652	652	652	652	652	
	HSD KL		136.123	680.172	1008.72	2379.72	961.49	
16	Weighted average duration of outages( unit-wise details):							

**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 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks				
16.1	Planned Outages	(Days)	0.0	257.5	8.6	46.5	9.1					
16.2	Forced Outages	(Days)	301.81	22.94	19.94	8.59	14.55					
	Within control of generator	(Days)	0.4	0.1	0.3	0.1	0.0					
	beyond control of generator	(Days)	301.5	22.9	19.7	8.4	14.5					
16.3	Number of tripping	Nos.	8	13	17	6	9					
16.4	Number of start-ups:	Nos.	8	13	17	6	9					
16.4.1	Cold Start-up	Nos.	2	4	4	4	2					
16.4.2	Warm Start-up	Nos.	0	4	6	1	3					
16.4.3	Hot start-up	Nos.	5	7	9	3	6					
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											
17.2	Actual emission (Stage-I)	SPM mg/Nm <sup>3</sup> NOX mg/Nm <sup>3</sup> SOX mg/Nm <sup>3</sup>	Attached as Annexure-A									
	Actual emission (Stage-II)	SPM mg/Nm <sup>3</sup> NOX mg/Nm <sup>3</sup> SOX mg/Nm <sup>3</sup>										
	Ash dyke capacity as on 31st March											
	Ash pond capacity as on 31st March											
	Fund available in Ash Fund Account as on 31st		Attached as Annexure-B									
	Amount utilized from Ash Fund Account											
	Ash available as on 31st March	LMT	16.8	17.21	21.65	19.77	20.85	For station capacity 1550 MW				
	Ash utilized for construction of ash dyke	LMT	0	0.25	1.81	0	0					
	Ash utilized within plant premise, other than construction of ash dyke	LMT	0.01	0.02	0.02	0.02	0.01					
	Ash transported	LMT	4.68	9.65	6.66	24.61	17.76					
	Average Distance	Km	150	150	150	150	150					
19	Detail of Ash utilization % of fly ash produced	(%)	102.15	117.98	90.35	166.46	159.14					
19.1	Conversion of value added product	(%)	61.76	59.53	42.45	41.98	43.69					
19.2	For making roads & embarkment	(%)	27.85	56.10	30.76	124.48	85.18					
19.3	Land filling	(%)	0.04	0.11	1.66	0.00	0.00					
19.4	Used in plant site in one or other form or used in some other site	(%)	0.00	1.45	8.36	0.00	0.00					
19.5	Any other use , Please specify	(%)	12.50	0.80	7.11	0.00	30.26					
20	Cost of spares actually consumed	( Rs. Lakh)	963.33	905.70	613.59	410.05	344.84					
21	Average stock of spares	(Rs. Lakhs)	14957	16201	17532	18334	20220					
22	Number of employees deployed in O&M	Nos.										

**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 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	Basis of Information/ Methodology/ Remarks
22.1	- Executives	Nos.	396	369	312	291	284	
22.2	- Non Executives	Nos.	423	362	323	298	248	
22.3	- Corporate office	Nos.	2568	2241	2016	1815	1728	
23	Man-MW ratio	Man/MW	0.53	0.47	0.41	0.38	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	<b>Generation Switchyard Details</b>				200KV and 400KV with ICT conection			
	No. of Bays voltageswise				26bays of 220kV and 9 bays of 400KV			
	ICT - nos and rating				1.NO. ICT 500MVA 400 KV / 220 KV			
	Dedicated transmission line - voltage and length				04 no. 220KV Kanpur line 144 km			
					03 no. 220KV Raebareli line 42.5 km			
					01 no. 220KV Fatehpur line 56 km			
					01 no. 220KV Malwan line 85 km			
					02 no. 400KV Fatehpur line 54 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 Generating Station : Feroz Gandhi Unchahar Thermal Power Station  
 Stage: Stage-II  
 COD of Units/Station : 1.1.2001

Details of expenditure incurred from Compensation Allowance and Special Allowance during Tariff Period 2009-14

FY Year	Add-cap allowed by the Commission under the provision of Regulation 9(2)		Compensatory allowance allowed by the Commission, if any	Special allowance allowed by the Commission, if any	Income tax rate (%)	Effective Compensatory allowance available for Expenditure	Effective Special allowance available for Expenditure	Details of Asset/Work wise Capitalisation based on the Expenditure allowed by the Commission in the tariff period 2009-14						Total Expenditure done under Special and Compensation Allowance	Capitalisation done which has not been claimed/ allowed in the tariff	Difference of Allowed vs Expenditure	Capital Spares	Total Addition during the year	Total Addition during the year as per duly audited Schedule of Fixed Asset	Variation if any to be reconciled /justified.			
	Net Basis	Liability Not included in (2)						Capitalisation out of add cap allowed under Regulation 9(2)		Capitalisation out of Compensation allowance in the stations wherever applicable		Capitalisation out of Special Allowance allowed in the stations where applicable									(Rs. Lakhs)	(Rs. Lakh)	(Rs. lakh)
								Asset/work	Rs(Lakh)	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	307.05	0.59	0.00	Nil	33.99	0.00		Ash Handling System	207	Solar water heater- 100 lr (34 nos)	9.42	24.41			400.96	733.01	-1678.44	Decap of MBOA: (-) 86.78 Decap Spares: (-) 100.7 FERV: (-) 2224.02					
								Change in Law	100	Brick making machine	14.99												
								<b>Total</b>	<b>308</b>	<b>Total</b>	<b>24.41</b>								<b>0</b>	<b>0</b>			
2010-11	8.01	0.00	31.50	Nil	33.22	21.04		Ash Handling System	2.36	MBOA Items	28.04	62.46		2487	355	2913	2809	Decap of MBOA: (-) 86.78 Decap Spares: (-) 100.7 FERV: 2487.39 Liability Reversal: (-) 32.52					
								Change in Law	5.65	Energy Management System (EMS)	34.42												
								Other Capital Works	0.00														
								<b>Total</b>	<b>8.01</b>	<b>Total</b>	<b>62.46</b>												
2011-12	0.00	0.00	63.00	Nil	32.45	42.56		Ash Handling System	0.00	Pro-control diagnostic station & Tool Kit STG	63.86	295.97		3664	235	3899	3808	Decap of Spares: (-) 75.32, Decap of MBOA: (-) 14.97, FERVs: 3367.79.					
								Change in Law	0.00	SEWERAGE SYSTEM TOWNSHIP	217.43												
								Other Capital Works	0.00	ASH BRICK PLANT	14.68												
								<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>295.97</b>												
2012-13	702.79	5.06	63.00	Nil	32.45	42.56		Ash handling System	100.81	SEWERAGE SYSTEM TOWNSHIP	8.51	10.2		232.17	979.59	825.19	Decap of Spares: (-) 75.32, Decap of MBOA: (-) 14.97, FERVs: (-) 86.82.						
								Change in Law	636.41	ASH BRICK PLANT	1.69												
								<b>Total</b>	<b>737.22</b>	<b>Total</b>	<b>10.2</b>												
2013-14	1.44	0.00	63.00	Nil	33.99	41.59		Ash handling System	1.44	Up-gradation of Human Machine Interface (HMI)	503.99	509.22		368.5	1247.32	1139.65	Decap of Spares: (-) 105.75, Decap of MBOA: (-) 1.93, FERVs: 368.16						
										SEWERAGE SYSTEM TOWNSHIP	5.23												
								<b>Total</b>	<b>1.44</b>	<b>Total</b>	<b>509.22</b>												

Details of expenditure incurred from Compensation Allowance and Special Allowance during Tariff Period 2014-19

FY Year	Add-cap allowed by the Commission under the provision of Regulation 14 (3)		Compensatory allowance allowed by the Commission, if any	Special allowance allowed by the Commission, if any	Income tax rate (%)	Effective Compensatory allowance available for Expenditure	Effective Special allowance available for Expenditure	Details of Asset/Work wise Capitalisation based on the Expenditure allowed by the Commission in the tariff period 2009-10		Capitalisation out of Compensation allowance in the stations wherever applicable	Capitalisation out of Special Allowance allowed in the stations where applicable		Total Expenditure done under Special and Compensation Allowance	Capitalisation done which has not been claimed/ allowed in the tariff	Difference of Allowed vs Expenditure	Capital Spares	Total Addition during the year	Total Addition during the year as per duly audited Schedule of Fixed Asset	Variation if any to be reconciled justified.	
	Net Cash Basis	Liability Not included in (2)						Asset/work	Rs(Lakh)		Asset/work	Rs(Lakh)- Gross								Asset/work
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=9+12+13+15	17	18	
2014-15	162.76	39.79	84	Nil	20.9605	66.39	Nil	Ash related works	2.43	R&M OF HMI SYSTEM OF PROCONTROL P13/42 DDC MIS FOR STAGE-II	518.82		644.82	0.00	-657.68	310.77	1197.60	873.24	Decap of capital item: (-) 197.99. Decap of Spares: (-) 99.07. Decap of MBOA: (-) 27.32.	
								Inert gas system for CCR & CER	239.58	RETROFITTING OF VOLTAS MAKE 6.6 KV SF6 CIRCUIT BREAKER with Vacuum circuit breaker of some ratings	70.09									
										200 TR Steam Driven Double Effect Vapour Absorption M/C for S-II AC Plant (New Claim)	55.91	...								...
								<b>Total</b>	<b>242.01</b>		<b>644.82</b>	<b>0</b>								<b>0</b>
2015-16	3.99	0.00	147	Nil	21.3416	115.63	Nil	Inert gas system for CCR & CER	3.99	RETROFITTING OF VOLTAS MAKE 6.6 KV SF6 CIRCUIT BREAKER with Vacuum circuit breaker of some ratings	98.52		98.52	0.00	-50.35	402.73	568.71	325.59	Decap of Spares: (-) 108.12. Decap of MBOA: (-) 139.00. Decap of Cap. Item: (-) 20.15 Adjustment: (-) 5.98	
								11KV DOUBLE CKT HT LINE(PKG.NO.035/2083)	87.46											
								<b>Total</b>	<b>71.45</b>		<b>98.52</b>	<b>0</b>								<b>0</b>
2016-17	0.16	7.75	210	Nil	21.3416	165.18	Nil	Real Time Data Transmission to PCB	7.91				0.00	0.00	165.18	461.55	493.03	334.76	Decap of Spares: (-) 110.88. Decap of MBOA: (-) 7.64. Liability Reversal: (-) 0.30 Decap of Asset: (-) 139.44	
								11KV DOUBLE CKT HT LINE(PKG.NO.035/2083)	23.57											
								<b>Total</b>	<b>31.48</b>	<b>Total</b>		<b>0</b>								<b>0</b>
2017-18	90.73	0.00	210	Nil	21.3416	165.18	Nil	111 kv double ckt line for AWRS of Arkha Ash Dyke.	4.24	6.6 KV Overhead Line for Pump House.	12.98		17.35	0.00	234.32	545.44	567.03	325.59	Decap of Spares: (-) 145.31. Decap of MBOA: (-) 0.04.	
										Pump House over Peripheral Drain.	2.77									
										R&M of Human Machine Interface (HMI)	1.60	...								...
		<b>Total</b>	<b>4.24</b>		<b>17.35</b>	<b>0</b>	<b>0</b>													
2018-19	0.00	7.75	210	Nil	21.3416	165.18	Nil			COLD FOG Dust Suppression System for Secondary Crusher	10.15		288.18	901.64	-1024.64	750.11	1939.93	1868.35	Decap of Spares: (-) 59.02. Decap of MBOA: (-) 2.41.	
										Interconnection of CHP Stage-I to Stage-II	278.03									
								<b>Total</b>	<b>0.00</b>	<b>Total</b>		<b>288.18</b>								<b>0</b>

Name of Generating Station : Feroz Gandhi Unchahar Thermal Power Station

Stage: Stage-III

COD of Units/Station : 1.1.2007

Details of expenditure incurred from Compensation Allowance and Special Allowance during Tariff Period 2014-19

FY Year	Add-cap allowed by the Commission under the		Compensatory allowance allowed	Special allowance	Income tax rate (%)	Effective Compensatory	Effective Special	Details of Asset/Work wise Capitalisation based on the Expenditure allowed by the Commission in the tariff period 2009-			Total Expenditure done under Special (Rs. Lakhs)	Capitalisation done which has not been	Difference of Allowed vs	Capital Spares	Total Addition	Total Addition during the year	Variation if any to be reconciled justified.						
	Net Cash Basis	Liability Not included in (2)						Capitalisation out of add cap allowed under Asset/work	Capitalisation out of Compensation allowance in Rs(Lakh)	Capitalisation out of 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					
2017-18	55.19	6.63	42	Nil	21.3416	33.04	Nil	Construction of 'D' type quarters	61.51														
								Installation of CCTV cameras in Plant Premises	0.31								0.00	0.00	26.41	772.16	833.98	730.62	Decap of Spares: (-) 119.17, Decap of MBOA: (-) 5.04, IUT: 20.84
								<b>Total</b>	<b>61.82</b>	<b>0.00</b>	<b>0</b>	<b>0</b>											
2018-19	0.42	0.27	42	Nil	21.3416	33.04	Nil	Effluent Quality Monitoring System	0.69	Procurement of T&P Items	19.93												
										MBOA	0.05												
								<b>Total</b>	<b>0.69</b>	<b>Total</b>	<b>19.98</b>	<b>0</b>	<b>0</b>	19.98	0.00	13.06	546.33	567.00	41.81	Decap of Spares: (-) 419.02, Decap of MBOA: (-) 8.87, Lab. Reversal: (-) 65.83 Decap of Asset: (-) 25.20 IUT: (-) 6.27			

**DETAILS OF WATER CHARGES****Name of the Company:**

NTPC Ltd.

**Name of the Power Station and Stage/Phase:**

Feroz Gandhi Unchahar Thermal Power Station (1550 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)	<b>Plant</b>	Feroz Gandhi Unchahar Thermal Power Station (Non-Pit-head)				
1	Type of Plant	Coal Based Plant				
2	Type of Cooling Tower	Forced Draft				
3	Type of Cooling Water System	Closed Cycle				
4	Any Special Features which may increase/reduce water consumption					
(B)	<b>Quantum of Water : ( Cubic Meter)</b>					
5	Contracted Quantum	105/600 Cusec	105/600 Cusec	105/600 Cusec	105/600 Cusec	105/600 Cusec
6	Allocation of Water	105/600 Cusec	105/600 Cusec	105/600 Cusec	105/600 Cusec	105/600 Cusec
7	Actual water Consumption	45814498.28	36938581.47	47482081.43	46781138.69	43176604.87
8.	Rate of Water Charges	Rs. 12.48/1000Cubic Feet +6 Lac per Cusec/Year	Rs. 12.48/1000Cubic Feet +6 Lac per Cusec/Year	Rs. 12.48/1000Cubic Feet +6 Lac per Cusec/Year	Rs. 12.48/1000Cubic Feet +6 Lac per Cusec/Year	Rs. 12.48/1000Cubic Feet +6 Lac per Cusec/Year
9	Other charges/Fees , if paid as part of Water Charges					
10	<b>Total water Charges Paid</b>	659.0	458.9	536.7	971.6	315.1

**DETAILS OF OPERATIONS AND MAINTENANCE EXPENSES****Name of the Company:****Name of the Power Station or Transmission Region:**

(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	14825.6	19264.9	25200.0	29806.8	33761.3
	...					
(B)	Details of Capital Spares procured during the year	4751.04	6532.63	5365.16	4462.63	3804.89
(C)	Details of capital spares consumed during the year	311.718	597.598	758.284	508.186	621.450
	...					
(D)	Details of capital spares closing at the end of the	19264.937	25199.968	29806.845	33761.289	36944.729

Name of Utility:	NTPC Ltd
Name of Generating Station:	Unchahar-1
Station Configuration:	2x210 MW
Capacity (MW):	420 MW
COD:	22.03.1989

S.N	Particulars	Unit	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	2017-18	2018-19	2019-20	2020-21	2021-22
1	Plant Availability Factor (PAF)	%	91.49	96.54	100.35	94.80	91.77	98.55	99.51	94.47	98.79	99.63	95.55	98.08	90.51	87.96	96.85	95.28	100.50	86.00
2	Plant Load Factors (PLF)	%	90.86	96.26	99.65	94.67	91.17	97.37	94.38	89.25	92.67	87.87	83.29	77.60	73.07	70.40	72.88	60.16	48.18	52.53
2a	Loading factor	%													76.26	76.94	67.29	68.31	71.34	
3	Scheduled Energy	MU	3028.06	3211.18	3324.10	3177.87	3054.00	3278.00	3154.00	2999.00	3136.00	2997.00	2931.00	2808.00	2580.00	2434.20	2507.71	2081.29	1618.41	1813.79
4	Scheduled Generation	MU	3028.06	3211.18	3324.10	3177.87	3054.00	3278.00	3154.00	2999.00	3136.00	2997.00	2931.00	2808.00	2580.00	2434.20	2507.71	2081.29	1618.41	1813.79
5	Actual Generation	MU	3067.40	3253.94	3359.62	3197.92	3081.08	3298.18	3190.19	3017.52	3124.88	2947.06	2787.47	2594.36	2426.42	2589.99	2681.37	2219.62	1772.64	1932.85
	Actual Generation (ex-bus)														2337.21	2418.71	1981.37	1562.02	1707.28	
	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)		3028.1	3211.2	3324.1	3177.9	3054.0	3278.0	3154.0	2999.0	3136.0	2997.0	2931.0	2808.0	2580.0	2398.9	2446.9	2102.4	1659.7	1710.2
6	Quantum of coal consumption	MT	2282600	2398955	2456367	2335401	2152972	2247645	2363494	2370712	2356140	2199130	2032616	1922182	1849033	1694742.8	1731745.4	1548700	1299793	1315746
7	Value of coal	Rs. Lakh					41294	50707	57253	66050	79279	77674	74728	69611	72143	157487	199846	284416	185460	239966
8	Specific Coal Consumption	kg/kWh	0.68	0.68	0.67	0.67	0.64	0.63	0.68	0.72	0.69	0.68	0.66	0.67	0.69	0.654	0.646	0.698	0.733	0.681
9	Gross Calorific Value of Coal	(Kcal/ Kg)	3590.00	3587.00	3607.00	3584.00	3716.00	3805.00	3539.00	3348.00	3476.00	3550.00	3637.26	3622.17	3584.03	3759.67	3875.54	3594.98	3452.77	3709.64
10	Heat Contribution of Coal	(Kcal/ kWh)	2451.34	2429.82	2416.69	2396.48	2393.28	2387.20	2408.72	2410.51	2402.05	2414.95	2412.58	2431.87	2464.93	2460.1	2503.0	2508.3	2531.7	2525.3
11	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)																		
12	Quantum of Oil Consumption	(KL)	2126.05	1558.53	440.30	1201.20	1383.99	667.27	1634.71	3511.88	1968.10	1229.45	1448.91	834.88	755.47	816.535	975.867	4212.311	1624.44	4320.277
13	Value of Oil	(Rs. lakh)														2156	2793	6302	3102	5112
14	Gross calorific value of oil	(kcal/lit)	9986	9990	9990	9990	9990	9990	9990	9990	9990	9990	9600	9901	9669	9884.561642	9506.54	9642.07	9537.75	8168.67
15	Specific Oil Consumption	(ml/kWh)	0.64	0.44	0.12	0.34	0.41	0.19	0.47	1.07	0.58	0.38	0.47	0.29	0.28	0.32	0.36	1.90	0.92	2.24
16	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)																		
17	Heat Contribution of Oil	(Kcal/ kWh)														3.12	3.46	18.30	8.74	18.26
18	Station Heat Rate	(Kcal/ kWh)	2458.00	2434.22	2417.89	2399.92	2397.42	2389.06	2413.42	2421.17	2407.82	2418.75	2417.12	2434.76	2467.65	2463.2	2506.5	2526.6	2540.5	2543.5
19	Auxiliary Energy Consumption	(%)	8.15	8.01	8.30	8.44	7.83	7.71	7.89	8.14	8.14	8.61	8.59	8.86	9.18	9.28	9.44	10.31	11.39	11.13
20	Debt at the end of the year	(Rs. Crore)	0	0	0	0	1.3078	24.9018	20.5645	22.0909	16.8126	11.4587	6	0.611	0	0	0	0	0	0
21	Equity - Average	(Rs. Crore)	472.6598	472.619	472.5497	474.0825	478.5827	480.5214	479.6642	480.5329	480.9278	479.9832	479.2056	478.7683	478.481	478.1224	477.3158	288.796	288.796	288.796
22	Working Capital – finally admitted by CERC	(Rs. Crore)	142.40	139.98	141.54	143.55	145.37	224.44	226.18	228.67	230.58	233.37	316.05	321.13	321.45	330.94	333.81	294.09	295.86	297.87
23	Capital cost – finally admitted by CERC	(Rs. Crore)	945.24	945.11	944.88	949.98	964.99	971.54	968.68	971.57	972.89	969.74	967.66	966.86	966.35	965.63	964.02	962.65	962.65	962.65
24	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	158.60	160.01	162.04	164.77	168.42	230.79	233.84	238.21	244.06	251.98	277.98	291.07	294.51	305.53	313.72	280.42	281.79	285.33
	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009																			

For full capacity of 1550 MW

For full capacity of 1550 MW



Absolute value	(Rs. Crore)	66.17	66.17	66.16	66.37	67.00	112.83	111.33	110.25	110.34	112.70	93.97	94.34	94.28	94.21	94.31	54.24	54.24	54.24
Rate	(%)	0.14	0.14	0.14	0.14	0.14	0.23	0.23	0.23	0.23	0.23	0.20	0.20	0.20	0.20	0.20	0.19	0.19	0.19
(b) Interest on Loan																			
Absolute value	(Rs. Crore)	0.12	-	-	-	0.02	0.69	0.42	0.53	0.65	0.62	0.58	0.24	0.02	0.00	0.00	0.00	0.00	0.00
Rate - Weighted Average Rate	(%)	0.06	0.06	0.08	0.06	0.02	0.03	0.02	0.03	0.03	0.04	0.07	0.07	0.07	0.07	0.08			
(c) Depreciation (finally allowed by CERC)																			
Absolute value	(Rs. Crore)	33.2106	10.3178	10.3227	10.7435	12.1374	4.1499	4.3846	4.7699	5.2783	5.3599	5.4587	5.6278	5.5979	5.704	4.2936	1.8683	0	0
AAD																			
Rate	(%)																		
(d) Interest on working Capital																			
Absolute value	(Rs. Crore)	14.5957	14.3478	14.5074	14.7142	14.9003	27.4933	27.7072	28.0118	28.2466	28.5877	42.6664	43.353	43.396	44.6774	45.0644	35.4376	33.2843	31.2764
Rate	(%)	10.250%	10.250%	10.250%	10.250%	10.250%	12.250%	12.250%	12.250%	12.250%	12.250%	13.500%	13.500%	13.500%	13.500%	13.500%	12.050%	11.250%	10.500%
(e) Operation and maintenance cost (finally admitted by CERC)																			
Absolute value	(Rs. Crore)	43.68	45.444	47.25	49.14	51.114	76.44	80.808	85.428	90.342	95.508	103.7993	114.0128	115.5796	123.0443	129.7576	148.9765	154.3638	159.9148
Rate	(%)																		
(f) Compensation Allowances	(Rs. Crore)						2.73	2.73	2.73	2.73	2.73								
(g) Special Allowance	(Rs. Crore)	ORDER. INCASE										31.5	33.50	35.63	37.89	40.30	39.9	39.9	39.9
(h) Supplementary Tariff - Emission Control																			
Absolute value	(Rs. Crore)																		
Rate	(%)																		
(i) Ash Utilisation Expenses	(Rs. Crore)																		
25 AFC	(Rs./kWh)	0.591	0.596	0.603	0.614	0.627	0.811	0.822	0.837	0.858	0.885	0.984	1.016	1.049	1.074	1.102	0.985	0.990	1.003
26 Energy Charge	(Rs./kWh)	1.114	1.181	1.297	1.334	1.562	1.672	1.876	2.282	2.639	2.727	2.796	2.702	2.928	2.756	2.926	3.566	3.058	3.277
26.1 Supplemental Energy Charges - Emission	(Rs./kWh)																		
27 Total tariff	(Rs. kWh)	1.704	1.777	1.900	1.947	2.189	2.483	2.697	3.119	3.497	3.613	3.780	3.718	3.976	3.830	4.028	4.551	4.048	4.280
28 Revenue realisation before tax	(Rs. Crore)																		
29 Revenue realisation after tax	(Rs. Crore)																		
30 Profit/loss	(Rs. Crore)	224.57	190.22	220.01	317.89	282.57	466.47	466.19	408.29	728.26	462.33	322.13	318.64	403.41	287.97	120.24	839.44	536.22	590.04
31 DSM Generation	(MU)	39.34	42.76	35.52	20.05	27.08	20.18	36.19	18.52	-11.12	-49.94	-143.53	-213.64	-153.58	-96.99	-89.00	-99.92	-56.39	-106.51
32 DSM Rate	(Rs/kWh)																		
33 Revenue from DSM	(Rs. Crore)				-6.07	-8.76	-7.29	-12.16	-8.90	-3.07	2.88	22.16	37.84	26.00	19.8	21.67	11.57	14.34	15.15
34 Compensation received for operation below NAPAF	(Rs Crore)														5.21	18.6	32.72	23	26.65
35 Part load Compensation received from beneficiaries	(Rs Crore)														5.21	18.6	28.22	22.03	26.65
36 Amount received from SCED	(Rs Crore)														0	0	4.83	1.33	0.86

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

For full capacity of 1550

<b>Name of Utility:</b>	NTPC Ltd
<b>Name of Generating Station:</b>	Uncharhar- stage-II
<b>Station Configuration:</b>	2X210
<b>Capacity (MW):</b>	420
<b>COD:</b>	01.01.2001

S.N	Particulars	Unit	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	2017-18	2018-19	2019-20	2020-21	2021-22
1	Plant Availability Factor (PAF)	%	93.05	94.77	92.93	100.10	98.41	95.81	100.36	93.23	100.07	100.22	96.02	101.12	100.00	96.54	95.97	98.69	95.27	93.59
2	Plant Load Factors (PLF)	%	93.45	95.12	92.25	99.16	97.66	94.56	94.46	87.32	92.52	95.34	80.49	76.71	76.95	77.18	76.91	61.58	51.02	60.76
2a	>Loading factor	%																65.53	66.01	68.93
3	Scheduled Energy	MU	3079.02	3147.88	3067.30	3336.04	3261.00	3168.00	3068.00	2887.00	3106.00	2902.00	2786.00	2753.00	2760.00	2587.46	2477.19	2115.94	1666.55	2152.85
4	Scheduled Generation	MU	3079.02	3147.88	3067.30	3336.04	3261.25	3168.00	3068.00	2887.00	3106.00	2902.00	2786.00	2753.00	2760.00	2587.46	2477.19	2115.94	1666.55	2152.85
5	Actual Generation	MU	3125.18	3190.06	3104.07	3355.24	3288.60	3193.09	3161.00	2940.67	3109.86	2875.23	2681.21	2555.72	2569.42	2754.34	2654.116	2271.964	1877.279	2235.42
	Actual Generation (ex-bus)														2494.92	2401.08	2043.48	1668.48	1991.94	
	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short)	MU	3,079.02	3,147.88	3,067.30	3,336.04	3,261.00	3,168.00	3,068.00	2,887.00	3,106.00	2,902.00	2,786.00	2,753.00	2,760.00	2,546.36	2,434.60	2,150.46	1,765.27	2,106.45
6	Quantum of coal consumption	MT	2307491	2335648	2240141	2420843	2307116	2199479	2329966	2308259	2357558	2148022	1955489	1882175	1930754	1795614.5	1702452.5	1580591	1373655.44	1526717
7	Value of coal	Rs. Lakh				44250	49620	56441	64310	79326	75869	71893	68162	75331	157487	199846	284416	185460	239966	239966
8	Specific Coal Consumption	kg/kWh	0.67	0.67	0.66	0.66	0.64	0.63	0.67	0.72	0.69	0.68	0.66	0.67	0.68	0.652	0.641	0.696	0.732	0.683
9	Gross Calorific Value of Coal	(Kcal/ Kg)	3638.00	3631.00	3636.00	3618.00	3706.00	3766.00	3574.00	3364.00	3467.00	3555.00	3651.73	3651.94	3586.11	3758.76	3887.65	3605.69	3452.82	3707.64
10	Heat Contribution of Coal	(Kcal/ kWh)	2441.58	2423.22	2399.80	2394.26	2379.66	2380.95	2396.08	2410.51	2401.13	2410.07	2411.43	2428.91	2445.67	2450.417269	2493.68728	2508.456796	2526.518962	2532.195069
11	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./ kWh)																		
12	Quantum of Oil Consumption	(KL)	800.91	989.85	1197.20	555.03	602.32	676.16	821.23	1521.71	794.17	1146.41	1364.33	580.35	486.11	618.214	1980.386	2474.16	2347.57	2173.811
13	Value of Oil	(Rs. lakh)														2156	2793	6302	3102	5112
14	Gross calorific value of oil	(kcal/lit)	9987	9990	9990	9990	9990	9990	9990	9990	9990	9990	9780	9775	9521	9680.11	9615.32	9638.80	9552.22	7548.367499
15	Specific Oil Consumption	(ml/kWh)	0.23	0.28	0.35	0.15	0.17	0.19	0.24	0.47	0.23	0.36	0.46	0.21	0.17	0.22	0.75	1.09	1.25	0.97
16	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./ kWh)																		
17	Heat Contribution of Oil	(Kcal/ kWh)	2.56	3.10	3.85	1.65	1.83	2.12	2.60	5.17	2.55	3.98	4.98	2.22	1.80	2.17	7.17	10.50	11.95	7.34
18	Station Heat Rate	(Kcal/ kWh)	2443.00	2426.05	2403.32	2395.77	2381.33	2382.90	2398.44	2415.23	2403.46	2413.68	2415.94	2430.91	2447.31	2452.6	2500.9	2519.0	2538.5	2539.5
19	Auxiliary Energy Consumption	(%)	8.99	8.74	8.27	8.28	8.47	8.22	9.05	8.71	8.64	9.25	9.24	9.42	9.00	9.25	9.36	10.04	10.88	10.73
20	Debt at the end of the year	(Rs. Crore)	469.89	431.43	387.51	335.68	282.78	215.06	145.27	75.58	11.05	-	-	-	-	-	-	-	-	-
21	Equity - Average	(Rs. Crore)	389.71	389.71	389.71	389.71	389.71	389.71	389.98	389.93	390.94	391.63	391.70	391.51	391.39	391.32	391.18	391.39	391.76	391.83
22	Working Capital – finally admitted by CERC	(Rs. Crore)	144.29	145.38	146.56	148.63	149.79	238.00	239.44	241.63	243.24	239.84	332.82	336.30	338.97	348.40	351.53	301.26	303.51	305.76
23	Capital cost – finally admitted by CERC	(Rs. Crore)	1,299.04	1,299.04	1,299.04	1,299.04	1,299.04	1,299.22	1,299.93	1,299.75	1,303.15	1,305.45	1,305.68	1,305.05	1,304.63	1,304.39	1,303.92	1,304.64	1,305.86	1,306.09
24	Capacity Charges/ Annual Fixed Cost (AFC)		177.10	176.46	173.83	173.00	186.70	279.49	280.72	283.20	287.31	258.11	259.96	268.08	275.67	283.46	290.85	294.21	298.22	302.36
(a)	Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009																			
	Absolute value	(Rs. Crore)	54.56	54.56	54.56	54.56	54.56	91.52	90.51	89.46	89.70	91.96	76.81	77.15	77.12	77.11	77.29	73.51	73.58	73.59
	Rate	(%)	14.00%	14.00%	14.00%	14.00%	14.00%	23.48%	23.21%	22.94%	22.94%	23.48%	19.61%	19.71%	19.71%	19.71%	19.76%	18.78%	18.78%	18.78%
(b)	interest on Loan																			
	Absolute value	(Rs. Crore)	16.72	14.94	13.28	11.22	8.95	6.16	3.55	1.91	0.72	0.14	-	-	-	-	-	-	-	-
	Rate – Weighted Average Rate	(%)	3.43%	3.32%	3.24%	3.10%	2.89%	2.48%	1.97%	1.73%	1.65%	2.53%	10.26%	9.62%	9.07%	8.03%	8.01%	8.26%	8.26%	8.26%
(c)	Depreciation (finally allowed by CERC)																			
	Absolute value	(Rs. Crore)	48.24	48.24	48.24	48.24	48.24	69.75	69.73	69.69	69.66	34.03	34.08	34.18	34.19	34.17	34.26	34.43	34.63	34.68
	AAD	(%)	3.71%	3.71%	3.71%	3.71%	3.71%	5.99%	5.98%	5.98%	5.96%									
(d)	Interest on working Capital																			
	Absolute value	(Rs. Crore)	14.79	14.90	15.02	15.23	15.35	29.15	29.33	29.60	29.80	29.38	44.93	45.40	45.76	47.03	47.46	36.30	34.15	32.10
	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%	13.50%	13.50%	12.05%	11.25%	10.50%
(e)	Operation and maintenance cost (finally admitted by CERC)																			
	Absolute value	(Rs. Crore)	43.68	45.44	47.25	49.14	51.11	76.44	80.81	85.43	90.34	95.51	103.30	109.89	116.49	123.04	129.75	149.97	155.86	161.98
	Rate	(%)	NA	NA	NA	NA	NA	0.315	0.63	0.63	0.63	0.84	1.47	2.10	2.10	2.10	-	-	-	-
(f)	Compensation Allowances	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(g)	Special Allowance	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(h)	Supplementary Tariff - Emission																			
	Absolute value	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Rate	(%)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(i)	Ash Utilisation Expenses	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25	AFC	(Rs./ kWh)	0.66	0.66	0.65	0.64	0.70	0.98	0.99	0.99	1.01	0.91	0.94	0.96	0.99	1.00	1.02	1.03	1.05	1.06
26	Energy Charge	(Rs./ kWh)	1.72	1.76	1.90	1.92	2.20	2.66	2.91	2.27	2.65	2.71	2.73	2.69	2.91	2.99	3.36	4.19	4.30	4.24
26.1	Supplemental Energy Charges - Emission Control	(Rs./ kWh)																		
27	Total tariff	(Rs. kWh)	2.38	2.42	2.55	2.56	2.90	3.64	3.90	3.26	3.66	3.62	3.67	3.65	3.90	3.99	4.38	5.22	5.35	5.31
28	Revenue realisation before tax	(Rs. Crore)																		
29	Revenue realisation after tax	(Rs. Crore)																		
30	Profit/ loss	(Rs. Crore)	224.57	190.22	220.01	317.89	282.57	466.47	466.19	408.29	728.26	462.33	322.13	318.84	403.41	287.97	120.24	839.44	536.22	590.04
31	DSM Generation (MU)		46.156	42.183	36.772	19.199	27.346	25.085	92.998	53.669	3.865	-26.769	-104.788	-197.282	-190.579	-92.54	-76.11	-72.46	1.93	-160.92
32	DSM Rate (Rs./kWh)																			
33	Revenue from DSM (Rs. Crore)					11.3047	-12.983	-13.4853	-33.1496	24.6692	-6.1667	-0.8557	16.1	34.3	31.2	20.98	21.05	6.63	-0.14	1.7
34	Compensation received for operation below NAPAF (Rs Crore)															2.65	18.75	27.95	24.37	32.23
35	Part load																			

**Remarks:**

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

## Annexure-XIX

Name of Utility:	NTPC Ltd
Name of Generating Station:	Unchahar- stage-III
Station Configuration:	1X210 MW
Capacity (MW):	210
COD:	01.01.2007

S.N	Particulars	Unit	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	Plant Availability Factor (PAF)	%	92.62	102.69	93.10	104.83	95.55	101.95	100.06	97.09	102.56	95.61	105.12	99.21	92.91	102.97	95.02	96.16
2	Plant Load Factors (PLF)	%	53.99	100.79	91.60	102.78	88.72	95.70	93.17	82.20	86.75	71.57	80.10	75.16	67.57	64.98	57.16	66.06
2a	Loading factor	%												76.19	74.86	65.76	62.75	69.20
3	Scheduled Energy	MU	375.05	1710.43	1542.00	1730.00	1479.00	1599.00	1568.00	1388.00	1502.00	1292.00	1446.00	1313.72	1162.40	1126.11	943.51	1127.75
4	Scheduled Generation	MU	375.05	1710.43	1541.06	1730.00	1479.00	1599.00	1568.00	1388.00	1502.00	1292.00	1446.00	1313.72	1162.40	1126.11	943.51	1127.75
5	Actual Generation	MU	381.03	1731.93	1555.29	1745.17	1496.78	1620.42	1576.54	1512.63	1456.15	1202.10	1339.06	1382.695	1242.990	1198.672	1051.535	1215.166
	Actual Generation (ex-bus)													1256.75	1126.63	1082.04	941.44	1094.02
	Actual energy supplied to beneficiaries		375.0549	1710.426813	1542	1730	1479	1599	1568	1388	1502	1446		1,273.78	1,126.48	1,112.59	991.00	1,109.60
6	Quantum of coal consumption	MT	272626	1231626	1077508	1190349	1091588	1266178	1185609	1024538	1052386	877004	1001171	901849.7	794239.3	831208	772522.1	819833.5
7	Value of coal	Rs. Lakh			20667	26854	26443	35277	39893	36187	38690	31760	39062	157487	199846	284416	185460	239966
8	Specific Coal Consumption	kg/kWh	0.67	0.66	0.64	0.63	0.67	0.72	0.69	0.68	0.66	0.66	0.68	0.652	0.639	0.693	0.735	0.675
9	Gross Calorific Value of Coal	(Kcal/ Kg)	3575.00	3587.00	3713.00	3769.00	3569.00	3358.00	3466.00	3549.00	3655.00	3634.07	3593.26	3763.34	3867.71	3602.19	3473.58	3718.28
10	Heat Contribution of Coal	(Kcal/ kWh)	2395.23	2376.15	2374.33	2372.77	2386.98	2408.50	2397.48	2404.56	2410.35	2414.23	2441.39	2454.6	2471.4	2497.9	2551.9	2508.6
11	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)																
12	Quantum of Oil Consumption	(KL)	411.86	381.87	366.59	223.22	351.32	1246.48	691.25	698.18	323.75	366.81	52.97	201.1	814.679	1150.462	536.89	1632.13
13	Value of Oil	(Rs. lakh)												2156	2793	6302	3102	5112
14	Gross calorific value of oil	(kcal/lit)	9990	9990	9990	9990	9990	9990	9990	9990	9623	9894	9604	9447.40	9758.82	9636.21	9551.96	8341.04
15	Specific Oil Consumption	(ml/kWh)	1.01	0.21	0.22	0.12	0.22	0.71	0.40	0.46	0.20	0.28	0.04	0.15	0.66	0.96	0.51	1.34
16	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)																
17	Heat Contribution of Oil	(Kcal/ kWh)	10.80	2.20	2.35	1.28	2.34	7.68	4.38	4.61	2.14	3.02	0.38	1.37	6.40	9.25	4.88	11.20
18	Station Heat Rate	(Kcal/ kWh)	2405.34	2378.20	2376.50	2373.95	2389.13	2415.56	2401.51	2409.17	2412.30	2416.98	2441.74	2456	2478	2507	2560	2521
19	Auxiliary Energy Consumption	(%)	6.36	6.85	7.70	7.70	8.29	8.21	8.02	8.59	8.55	8.65	8.83	9.11	9.36	9.73	10.47	9.97
20	Debt at the end of the year	(Rs. Crore)	571.49	569.38	533.70	469.79	426.19	382.87	337.76	293.37	250.13	205.05	165.88	122.14	75.50	55.75	35.99	16.24
21	Equity - Average	(Rs. Crore)	245.24	255.98	266.78	259.88	260.84	261.53	261.90	262.10	262.83	263.35	264.84	266.80	266.66	266.04	266.04	266.04
22	Working Capital – finally admitted by CERC	(Rs. Crore)	92.45	93.46	97.50	129.19	129.60	130.41	130.63	131.40	169.75	171.13	171.71	176.07	176.97	153.06	153.85	154.61
23	Capital cost – finally admitted by CERC	(Rs. Crore)	817.46	853.25	889.26	866.25	869.46	871.77	873.02	873.65	876.09	877.82	882.79	889.32	888.87	886.81	886.81	886.81
24	Capacity Charges/ Annual Fixed Cost (AFC)		149.12	151.06	171.04	202.79	201.50	201.05	199.57	199.80	194.07	195.11	195.30	197.50	197.27	168.98	168.73	168.50
	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009																	
	Absolute value	(Rs. Crore)	34.33	35.84	37.35	61.02	60.54	60.01	60.09	61.54	51.54	51.89	52.19	52.57	52.69	49.97	49.97	49.97
	Rate	(%)	14.00%	14.00%	14.00%	23.48%	23.21%	22.94%	22.94%	23.48%	19.61%	19.71%	19.71%	19.71%	19.76%	18.78%	18.78%	18.78%
	(b) interest on Loan																	
	Absolute value	(Rs. Crore)	44.86	44.17	44.14	39.74	36.41	33.90	29.81	25.79	22.45	19.18	16.25	13.01	9.24	6.32	4.51	2.58
	Rate – Weighted Average Rate	(%)	7.90%	7.74%	8.00%	8.10%	8.13%	8.38%	8.27%	8.17%	8.26%	8.43%	8.76%	9.04%	9.35%	9.63%	9.84%	9.89%
	(c) Depreciation (finally allowed by CERC)																	
	Absolute value	(Rs. Crore)	36.3608	35.504	52.6951	44.749	45.0386	45.2098	45.2651	45.3808	45.59	45.67	45.89	46.20	46.18	19.76	19.76	19.76
	AAD																	
	Rate	(%)	3.56%	3.56%	3.56%	5.17%	5.18%	5.19%	5.18%	5.19%	5.20%	5.20%	5.20%	5.19%	5.19%			Spread Over
	(d) Interest on working Capital																	
	Absolute value	(Rs. Crore)	9.4766	9.5799	9.9933	15.8261	15.8756	15.9749	16.0016	16.096	22.92	23.10	23.18	23.77	23.89	18.44	17.31	16.23
	Rate	(%)	10.25%	10.25%	10.25%	12.25%	12.25%	12.25%	12.25%	12.25%	13.50%	13.50%	13.50%	13.50%	13.50%	12.05%	11.25%	10.50%
	(e) Operation and maintenance cost (finally admitted by CERC)																	
	Absolute value	(Rs. Crore)	23.625	24.57	25.557	38.22	40.404	42.714	45.171	47.75	51.58	55.25	57.79	61.52	64.85	74.49	77.18	79.96
	Rate	(%)																
	(f) Compensation Allowances	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42	0.42	NA	NA	NA
	(g) Special Allowance	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	(h) Supplementary Tariff - Emission																	
	Absolute value	(Rs. Crore)																
	Rate	(%)																
	(i) Ash Utilisation Expenses	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	89.26	158.17	118.32
25	AFC	(Rs./ kWh)	1.11	1.13	1.28	1.43	1.42	1.41	1.40	1.40	1.38	1.38	1.39	1.39	1.39	1.18	1.19	1.18
26	Energy Charge	(Rs./kWh)	1.32	1.34	1.56	1.68	1.85	2.26	2.64	2.69	2.73	2.66	2.91	2.94	3.51	4.14	4.24	4.05
26.1	Supplemental Energy Charges - Emission Control	(Rs./kWh)																
27	Total tariff	(Rs. kWh)	2.43	2.46	2.84	3.10	3.27	3.68	4.04	4.09	4.11	4.04	4.30	4.33	4.90	5.32	5.42	5.24
28	Revenue realisation before tax	(Rs. Crore)																
29	Revenue realisation after tax	(Rs. Crore)																
30	Profit/ loss	(Rs. Crore)	220.0	317.9	282.6	466.5	466.2	408.3	728.3	462.3	322.1	318.6	403.4	288.0	120.2	839.4	536.2	590.0
31	DSM Generation	(MU)	6.0	21.5	14.2	15.2	17.8	21.4	8.5	124.8	-45.8	-89.9	-106.9	-57.0	-35.8	-44.1	-2.1	-33.7
32	DSM Rate	(Rs./kWh)																
33	Revenue from DSM	(Rs. Crore)							-4.66	-0.79	5.92	14.68	16.97	11.55	8.6	4.57	2.38	3.65

For full capacity of 1550 MW

For full capacity of 1550 MW

For full capacity of 1550 MW

34	Compensation received for operation below NAPAF	(Rs Crore)											0.56	7.55	15.13	20.28	16.98
35	Part load Compensation received from beneficiaries	(Rs Crore)											0.56	7.55	13.73	17.54	16.58
36	Amount received from SCED	(Rs Crore)											0	0	2.44	0.74	0.53

**Remarks:**

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

## Annexure-XIX

Name of Utility:		NTPC Ltd						
Name of Generating Station:		Unchahar Stage-IV						
Station Configuration:		1x500						
Capacity (MW):		500						
COD:		30.09.2017						
S.N	Particulars	Unit	2017-18 (30.09.2017 to 31.03.2018)	2018-19	2019-20	2020-21	2021-22	
1	Plant Availability Factor (PAF)	%	14.34	22.16	95.63	88.49	90.01	
2	Plant Load Factors (PLF)	%	12.35	15.13	64.58	56.06	65.28	
2a	Loading factor	%	71.31	65.31	70.04	66.01	72.82	
3	Scheduled Energy	MU	262.24	616.43	2659.40	2306.70	2754.66	
4	Scheduled Generation	MU	262.24	616.43	2659.40	2306.70	2754.66	
5	Actual Generation	MU	271.11	662.52	2836.35	2455.32	2859.19	
	Actual Generation (ex-bus)	MU	252.43	611.49	2604.28	2289.37	2677.91	
	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	257.90	613.01	2468.72	2311.67	2572.63	
6	Quantum of coal consumption	MT	176558	417676	1908106	1733999	1865539	
7	Value of coal	Rs. Lakh	157487	199846	284416	185460	239966	
8	Specific Coal Consumption	kg/kWh	0.651	0.630	0.673	0.708	0.654	
9	Gross Calorific Value of Coal	(Kcal/ Kg)	3674.65	3756.80	3603.29	3474.47	3708.94	
10	Heat Contribution of Coal	(Kcal/ kWh)	2393.04	2368.42	2424.05	2453.74	2419.97	
11	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)						
12	Quantum of Oil Consumption	(KL)	431.63	2935.82	3397.96	1687.48	1242.10	
13	Value of Oil	(Rs. lakh)	2156	2793	6302	3102	5112	
14	Gross calorific value of oil	(kcal/lit)	7253.80	9659.15	9645.52	9562.14	8889.39	
15	Specific Oil Consumption	(ml/kWh)	1.59	4.43	1.20	0.69	0.43	
16	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)						
17	Heat Contribution of Oil	(Kcal/ kWh)	11.55	42.80	11.56	6.57	3.86	
18	Station Heat Rate	(Kcal/ kWh)	2405	2411	2436	2465	2427	
19	Auxiliary Energy Consumption	(%)	6.86	7.77	6.37	6.71	6.24	
20	Debt at the end of the year	(Rs. Crore)	1622.69	1584.96	1616.00	1532.76	1384.00	
21	Equity - Average	(Rs. Crore)	711.87	743.09	800.46	852.23	868.04	
22	Working Capital – finally admitted by CERC	(Rs. Crore)	417.06	422.01	358.78	362.88	364.48	
23	Capital cost – finally admitted by CERC	(Rs. Crore)	2372.88	2476.98	2668.21	2840.76	2893.47	
24	Capacity Charges/ Annual Fixed Cost (AFC)		525.10	543.73	572.04	591.89	592.31	
	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009		0.00	0.00	0.00	0.00	0.00	
	Absolute value	(Rs. Crore)	140.27	146.82	150.34	160.07	163.04	
	Rate	(%)	0.21	0.22	0.19	0.19	0.19	
	(b) interest on Loan							

For full capacity of 1550 MW

For full capacity of 1550 MW

	Absolute value	(Rs. Crore)	108.32	108.80	110.73	108.90	100.67
	Rate – Weighted Average Rate	(%)	0.07	0.07	0.07	0.07	0.07
	(c) Depreciation (finally allowed by CERC)						
	Absolute value	(Rs. Crore)	127.66	132.15	142.29	151.49	154.30
	AAD						
	Rate	(%)	0.05	0.05	0.05	0.05	0.05
	(d) Interest on working Capital						
	Absolute value	(Rs. Crore)	52.55	53.17	43.23	40.82	38.27
	Rate	(%)	0.14	0.14	0.12	0.11	0.11
	(e) Operation and maintenance cost (finally admitted by CERC)						
	Absolute value	(Rs. Crore)	96.30	102.79	125.45	130.61	136.05
	Rate	(%)					
	(f) Compensation Allowances		NA	NA	NA	NA	NA
	(g) Special Allowance		NA	NA	NA	NA	NA
	h) Supplementary Tariff - Emission Control						
	Absolute value	(Rs. Crore)					
	Rate	(%)					
	i) Ash Utilisation Expenses	(Rs. Crore)					
25	AFC	(Rs./ kWh)	1.99	3.10	2.55	3.27	2.75
26	Energy Charge	(Rs./kWh)	2.41	2.80	3.42	2.93	3.10
26.1	Supplemental Energy Charges - Emission Control	(Rs./kWh)					
27	Total tariff	(Rs. kWh)	4.40	5.90	5.97	6.20	5.85
28	Revenue realisation before tax	(Rs. Crore)					
29	Revenue realisation after tax	(Rs. Crore)					
30	Profit/ loss	(Rs. Crore)	287.97	120.24	839.44	536.22	590.04
31	DSM Generation	(MU)	-9.73	-5.39	-3.64	-16.03	-73.88
32	DSM Rate	(Rs/kWh)					
33	Revenue from DSM	(Rs. Crore)	-4.06	9.13	13.69	5.01	6.10
34	Compensation received for operation below NAPAF	(Rs Crore)	0.00	12.26	29.37	31.25	22.67
35	Part load Compensation received from beneficiariaes	(Rs Crore)	0.00	12.26	29.37	29.94	22.67
36	Amount received from SCED	(Rs Crore)	0.00	0.00	6.73	2.00	1.58

For full capacity of 1550 MW

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

<b>Generating company: NTPC Ltd</b> <b>Name of Generating station: Feroz Gandhi Unchahar Thermal Power Station Stage-IV</b> <b>(Non-Pit-head) Installed Capacity (MW) : 500 MW</b>
<b>Type of Emission Control System:</b> <b>Under Operation/Anticipated Operation Date:</b>

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					
	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					

ECS system under installation.

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	Unchahar Stg-I, II & III		Unchahar Stg-IV							
			Investment Approval	Approved*	Investment Approval	Approved*	Investment Approval	Approved*	Investment Approval	Approved*	Investment Approval	Approved*
1	Capital Cost of Emission Control System											
1.1	Hard Cost	Rs. Crore	814.2		356.95							
1.1.1	Civil Works	Rs. Crore	Incl Above		Incl Above							
1.1.2	Plant and Machinery and others	Rs. Crore	Incl Above		Incl Above							
1.1.3	Initial Spares procured	Rs. Crore	Incl Above		Incl Above							
1.2	IDC	Rs. Crore	75.33		30.72							
1.3	IEDC	Rs. Crore	24.43		10.7							
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost	Rs. Crore	913.96		398.37							

Note - Investment approval was taken based on total bid price including GST and hence Plant & Machinery , Civil and Initial spare cost included in hard cost shown above

\* Wherever cost is yet 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