

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		NTPC Ltd.					
2	Name of Station/ Pit head or Non- Pit head		Rihand Super Thermal Power Station Stage-I					
	Stage		Single Stage					
3	Installed Capacity and Configuration	MW	2 X 500 = 1000 MW					
3.1	Date of Commercial Operation - Unit Wise		U1- 01-01-1990, U2- 01-01-1991					
3.2	Effective COD		01-01-1991					
	Make of Turbine		NEI/ GE UK					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Turbine : NEI / GE UK Boiler : Balance draught, radiant surface, controlled circulation, tilting Tangential fired : SH Outlet Pr : 176.52 KSc, Temp :540 Deg C : MS Pr : 169.79 KSc, Temp : 538 Deg C					
5	Type of BFP		Electric Driven					
	Quantity		Stage-1: 3 MDBFP in each unit					
6	Circulating water system		Open Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/Kwh	Stage-1: 2239					
	Design Boiler efficiency	%	Stage-1: 86.99%					
	Design Turbine cycle heat rate	Kcal/Kwh	Stage-1: 1948					
8	Fuels :							
8.1	Primary Fuel :		Coal					
8.1.1	Annual Allocation under FSA	MMT	Annual allocation through FSA dated 02.09.2013 with NCL for Rihand-III - 3.54 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Rihand- I&II 10.84 MMT					For the Station (3000 MW)
	Annual Consumption	LMT	47.48	42.49	44.00	42.40	47.47	
	Annual Requirement at NAPAF	LMT	45.20	42.44	43.79	43.39	44.07	
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Source: NCL G7 to G10					For the Station (3000 MW)
8.1.2.1	FSA	LMT	143.55	133.23	131.33	142.56	140.75	For the Station (3000 MW)
	LoA	LMT	-	-	-	-	-	For the Station (3000 MW)
	MoU	LMT	0.04	0.25	-	1.22	0.57	For the Station (3000 MW)
	Diverted/ Other NTPC Plant FSA	LMT	-	-	-	-	-	For the Station (3000 MW)
8.1.2.2	Imported*	LMT	-	-	-	-	-	For the Station (3000 MW)
8.1.2.	Spot Market/e-auction*	LMT	-	-	-	-	-	For the Station (3000 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	40 to 55 (NCL)					For the Station (3000 MW)
8.1.4	Mode of Transport		MGR/RAIL					For the Station (3000 MW)
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & LMT	26 days & 9.60 LMT					For the Station (3000 MW)
8.1.6	Maximum stock maintained for primary fuel	LMT	10.32	11.36	10.32	8.08	11.99	For the Station (3000 MW)
	Date		14.04.2017	25.02.2019	01.04.2019	19.12.2020	31.03.2022	For the Station (3000 MW)
8.1.7	Minimum Stock maintained for primary fuel	LMT	3.89	8.34	1.33	0.62	0.99	For the Station (3000 MW)
	Date		09.11.2017	01.04.2018	12.10.2019	04.07.2020	21.08.2021	For the Station (3000 MW)
8.1.8	Average stock maintained for primary fuel	LMT	7.35	9.97	5.17	3.73	4.82	For the Station (3000 MW)
8.2	Secondary Fuel :							For the Station (3000 MW)
8.2.1	Annual Allocation/ Requirement	KL	11200 / 5500					For the Station (3000 MW)
8.2.2	Sources of supply		IOCL					For the Station (3000 MW)
8.2.3	Transportation Distance of the station from the sources of supply	KM	1188					For the Station (3000 MW)
8.2.4	Mode of Transport		Rail					For the Station (3000 MW)
8.2.5	Maximum Station capability to stock secondary fuels	KL	23370					For the Station (3000 MW)
8.2.6	Maximum Stock of secondary oil actually maintained	KL	8600					For the Station (3000 MW)
8.2.7	Minimum Stock of secondary oil actually maintained	KL	3500					For the Station (3000 MW)
8.2.8	Average Stock of secondary oil actually maintained	KL	6111					For the Station (3000 MW)
9.	Cost of Spares :							
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	3,475.58	9,448.65	4,794.21	5,896.64	2,049.98	For the Station (3000 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)	N/A					
9.4	Maintenance spares - cost	(Rs. Lakh)	8,826.61	9,660.38	14,363.42	11,599.60	8,425.10	For the Station (3000 MW)
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)						
10	Generation :							
10.1	-Actual Gross Generation at generator terminals	MU	7,754.55	7,365.09	7,412.06	7,145.17	7,946.38	
10.2	-Actual Net Generation Ex-bus	MU	7,129.31	6,768.77	6,793.02	6,579.55	7,303.48	
10.3	-Scheduled Generation Ex-bus	MU	7,152.26	6,768.28	6,848.14	6,603.19	7,343.87	

11	Average Declared Capacity (DC)	MW	848.60	815.07	808.80	775.62	880.72	
	DC Peak HD %	%	-	-	-	92.41	81.45	
	DC Off Peak HD %	%	-	-	-	91.47	82.22	
	DC Peak LD %	%	-	-	-	81.89	100.23	
	DC Off Peak LD %	%	-	-	-	81.83	100.35	
	Actual Declared Capacity	MU	7,433.71	7,139.98	7,104.53	6,794.40	7,715.14	
	Deemed Declared Capacity	MU						
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	602.24	574.29	596.88	542.96	621.02	
13	Actual Energy supplied to Colony from the station	MU	22.99	22.03	21.99	20.80	21.28	
	Actual energy supplied to construction activities	MU	-	-	0.17	1.87	0.60	
	Actual energy supplied to long term and medium term beneficiaries	MU	7,100.91	6,728.02	6,426.09	6,182.32	7,073.79	
	Actual energy supplied in short term	MU	-	-	-	-	-	
	Energy supplied under bilateral arrangements	MU	-	-	-	-	-	
	Energy supplied through exchanges	MU	5.493	3.672	2.649	4.193	0.402	
	Energy supplied under DSM	MU	(22.94)	0.49	(55.12)	(23.64)	(40.39)	
	Energy supplied SCED	MU			204.76	379.83	289.07	
14	Primary Fuel :							
14.1	Consumption :							
14.1.1	Domestic coal	MT	47,48,475	42,48,762	43,99,775	42,40,440	47,46,638	
	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	-	-	-	-	-	
14.2	Gross Calorific Value (GCV) :							
14.2.1	Domestic Coal (for each type)	kCal/kg	4,323	4,623	4,500	4,535	4,587	
	(As Billed) - EM Basis as per third party	kCal/kg	4,323	4,623	4,500	4,535	4,587	
	(As Received) - TM Basis as per third party	kCal/kg	3,800	4,054	4,004	3,962	4,048	
14.2.2	Imported Coal	kCal/kg	NA	NA	NA	NA	NA	
	(As Billed) - ADB Basis	kCal/kg	NA	NA	NA	NA	NA	
	(As Received) - ADB Basis	kCal/kg	NA	NA	NA	NA	NA	
14.2.3	Spot market/e- auction coal	kCal/kg	NA	NA	NA	NA	NA	
	(As Billed)	kCal/kg	NA	NA	NA	NA	NA	
	(As Received)	kCal/kg	NA	NA	NA	NA	NA	
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	4,323	4,623	4,500	4,535	4,587	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3,800	4,054	4,004	3,962	4,048	
14.2.6	Ash content in coal (%)	%	30.94	27.68	28.08	29.26	28.05	
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)	1,916	2,088	2,104	2,145	2,177	
	Components of landed cost and break up							
	1. Cost of coal,	(Rs/MT)	1,845	2,008	2,038	2,040	2,100	
	2. Transportation	(Rs/MT)	42	46	30	65	36	
	3. Other charges	(Rs/MT)	29	34	35	39	41	
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	0	0	0	0	0	
	Components of landed cost and break up							
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal	(Rs/MT)	0	0	0	0	0	
	Components of landed cost and break up							
14.3.4	Weighted Average Landed Price of all the Coals	(Rs/MT)	1,916	2,088	2,104	2,145	2,177	
14.4	Blending :	% and MT (of the total coal consumed)						
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal	0	0	0	0	0	
14.4.2	Proportion of e-auction coal in the blending	% & MT	0	0	0	0	0	
	Coal stockyard capacity	LMT	9.60	9.60	9.60	9.60	9.60	For the Station (3000 MW)
14.5	Actual daily Average Coal stock maintained	LMT	7.35	9.97	5.17	3.73	4.82	For the Station (3000 MW)
		Days	18.55	27.75	13.58	9.70	13.05	For the Station (3000 MW)
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.21	0.22	0.20	0.19	0.22	For the Station (3000 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%	-	-	-	-	-	For the Station (3000 MW)
14.5.1.3	Transit loss of imported coal	%	-	-	-	-	-	For the Station (3000 MW)

14.5.2	Non-Pit Head station								For the Station (3000 MW)
14.5.2.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
14.5.2.3	Transit loss of imported coal		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
15	Secondary Fuel Oil :								
15.1	Consumption	HFO	KL	989.99	2,353.03	-	-	-	
		HSD	KL	-	679.20	1,731.12	2,317.48	1,862.00	
15.2	Weighted Average Gross Calorific value (As received)	HFO	(kCal / Lit.)	9,770.87	9,790.00	-	-	-	
		HSD	(kCal / Lit.)	-	9,598.20	9,611.17	9,490.16	9,270.42	
15.3	Weighted Average Price	HFO	(Rs / KL)	31,487.83	32,771.11				
		HSD	(Rs / KL)	49,936.65	55,150.29	53,095.13	45,321.56	55,415.96	
15.4	Actual Average stock maintained	HFO	KL	7,388.00	4,854.00				For the Station (3000 MW)
		HSD	KL	335.00	1,861.00	4,875.00	5,626.00	5,614.00	For the Station (3000 MW)
16.0	Weighted average duration of outages(unit-wise details):								
16.1	Planned Outages		(Days)	15.10	27.72	28.99	28.58	4.69	
16.2	Forced Outages		(Days)	5.03	9.41	11.30	27.74	12.29	
	Within control of generator		(Days)	-	-	-	-	-	
	beyond control of generator		(Days)	5.03	9.41	11.30	27.74	12.29	
16.3	Number of tripping		Nos.	10	15	13	15	15	
16.4	Number of start-ups:		Nos.	12	16	15	16	15	
16.4.1	Cold Start-up		Nos.	3	5	4	5	2	
16.4.2	Warm Start-up		Nos.	3	5	5	5	11	
16.4.3	Hot start-up		Nos.	6	6	6	6	2	
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)		mg/Nm ³	SOx: 200; NOx: 600					Norms as per MOEF&CC
	FGD installation date			FGD installation work is under progress					
	NOX Control system installation date			NA	NA	NA	NA	NA	
17.2	Actual emission (Stage-I)	SPM	mg/Nm ³	As per Annexure-A					For the Station (3000 MW)
		NOX	mg/Nm ³						For the Station (3000 MW)
		SOX	mg/Nm ³						For the Station (3000 MW)
	Actual emission (Stage-II)	SPM	mg/Nm ³						For the Station (3000 MW)
		NOX	mg/Nm ³						For the Station (3000 MW)
		SOX	mg/Nm ³						For the Station (3000 MW)
Ash dyke capacity as on 31st March									
Ash pond capacity as on 31st March									
Fund available in Ash Fund Account as on 31st March				As per Annexure B					For the Station (3000 MW)
Amount utilized from Ash Fund Account									For the Station (3000 MW)
19	Detail of Ash utilization % of fly ash produced		%	31.04	37.10	42.58	52.04	59.29	For the Station (3000 MW)
	Ash available as on 31st March *		LMT	43.45	35.16	39.01	39.22	37.09	For the Station (3000 MW)
	Ash utilized for construction of ash dyke		LMT	3.70	3.39	2.35	5.10	4.19	For the Station (3000 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.08	0.10	0.17	0.23	0.12	For the Station (3000 MW)
	Ash transported		LMT	-	-	-	2.90	7.72	For the Station (3000 MW)
	Average Distance **		Km	-	-	-	150	150	For the Station (3000 MW)
19.1	Conversion of value added product		(%)	21.47	25.49	2.56	5.74	6.63	For the Station (3000 MW)
19.2	For making roads &embarkment		(%)	-	-	-	7.39	20.81	For the Station (3000 MW)
19.3	Land filling		(%)	0.18	0.28	30.50	18.10	14.34	For the Station (3000 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	8.51	9.65	6.02	13.00	11.30	For the Station (3000 MW)
19.5	Any other use , Please specify		%	0.89	1.68	3.49	7.80	6.20	For the Station (3000 MW)
20	Cost of spares actually consumed		(Rs. Lakh)	619.80	1,005.50	345.68	3,758.39	1,291.04	For the Station (3000 MW)
21	Average stock of spares		(Rs. Lakhs)	52,046.71	53,644.92	47,544.09	42,915.29	55,333.29	For the Station (3000 MW)
22	Number of employees deployed in O&M		Nos.	867	763	661	629	581	For the Station (3000 MW)
22.1	- Executives		Nos.	473	399	351	338	317	For the Station (3000 MW)
22.2	- Non Executives		Nos.	394	364	310	291	264	For the Station (3000 MW)
22.3	- Corporate office		Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (3000 MW)
23	Man-MW ratio		Man/MW	0.29	0.25	0.22	0.21	0.19	For the Station (3000 MW)
	Total billed amount								For the Station (3000 MW)
	Total received amount within due date								For the Station (3000 MW)
	Total amount received beyond due date								For the Station (3000 MW)
	Total amount pending								For the Station (3000 MW)
	Total amount under dispute								For the Station (3000 MW)
	Total rebate given								For the Station (3000 MW)
	Total LPSC recovered								For the Station (3000 MW)

24	Generation Switchyard Details		400kV & 132kV, Allahabad-1,2-400kV,280km,HVDC-1,2-400kV,1km Singrauli-1,2-400kV,42km, Pooling Stn-1,2400kV,32km	For the Station (3000 MW)
	No. of Bays voltage wise		400kV-12 bays, 132kV -5 Bays	
	ICT - nos and rating		1 no. -200MVA, 400kV/132kV/33kV	
	Dedicated transmission line - voltage and length		Not Applicable	
<p>* Total ash generated during the Financial Year given ** Weighted average distance of Ash Transported given</p>				

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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		NTPC Ltd.						
2	Name of Station/ Pit head or Non- Pit head		Rihand Super Thermal Power Station Stage-II						
	Stage		Single Stage						
3	Installed Capacity and Configuration	MW	2 X 500 = 1000 MW						
3.1	Date of Commercial Operation - Unit Wise		U3- 15-08-2005, U4- 01-04-2006						
3.2	Effective COD		01-04-2006						
	Make of Turbine		2 X 500 (BHEL)						
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Turbine : BHEL, Single flow HP Cylinder, double flow IP cylinder & double flow LP Cylinder. Boiler : BHEL Ltd, Balance draught, controlled circulation, Tangentially fired, dry bottom SH Outlet Pr : 176.3 KSC, Temp : 540 Deg C MS Pr : 170 KSC, Temp : 537 Deg C						
5	Type of BFP		Stage-II - Steam Driven						
	Quantity		(2 TDBFP + 1 MDBFP) per unit						
6	Circulating water system		Closed Cycle						
7	Any other Site specific feature								
	Design Unit heat rate	Kcal/Kwh	Stage-2: 2225						
	Design Boiler efficiency	%	Stage-2: 87.41						
	Design Turbine cycle heat rate	Kcal/Kwh	Stage-2: 1945						
8	Fuels :								
8.1	Primary Fuel :		Coal						
8.1.1	Annual Allocation under FSA	MMT	Annual allocation through FSA dated 02.09.2013 with NCL for Rihand-III - 3.54 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Rihand- I&II 10.84 MMT					For the Station (3000 MW)	
	Annual Consumption	LMT	48.23	44.38	44.38	50.11	39.32		
	Annual Requirement at NAPA	LMT	45.70	42.69	43.77	44.57	43.84		
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Source: NCL G7 to G10					For the Station (3000 MW)	
8.1.2.1	FSA	LoA	LMT	143.55	133.23	131.33	142.56	140.75	For the Station (3000 MW)
		MoU	LMT	-	-	-	-	-	For the Station (3000 MW)
		Diverted/ Other NTPC Plant FSA	LMT	0.04	0.25	-	1.22	0.57	For the Station (3000 MW)
8.1.2.2	Imported*	LMT	-	-	-	-	-	-	For the Station (3000 MW)
8.1.2	Spot Market/e-auction*	LMT	-	-	-	-	-	-	For the Station (3000 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	40 to 55 (NCL)					For the Station (3000 MW)	
8.1.4	Mode of Transport		MGR/RAIL					For the Station (3000 MW)	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & MT	26 days & 9.60 LMT					For the Station (3000 MW)	
8.1.6	Maximum stock maintained for primary fuel	LMT	10.32	11.36	10.32	8.08	11.99	For the Station (3000 MW)	
	Date		14.04.2017	25.02.2019	01.04.2019	19.12.2020	31.03.2022	For the Station (3000 MW)	
8.1.7	Minimum Stock maintained for primary fuel	LMT	3.89	8.34	1.33	0.62	0.99	For the Station (3000 MW)	
	Date		09.11.2017	01.04.2018	12.10.2019	04.07.2020	21.08.2021	For the Station (3000 MW)	
8.1.8	Average stock maintained for primary fuel	LMT	7.35	9.97	5.17	3.73	4.82	For the Station (3000 MW)	
8.2	Secondary Fuel :							For the Station (3000 MW)	
8.2.1	Annual Allocation/ Requirement	KL	11200 / 5500					For the Station (3000 MW)	
8.2.2	Sources of supply		IOCL					For the Station (3000 MW)	
8.2.3	Transportation Distance of the station from the sources of supply	KM	1188					For the Station (3000 MW)	
8.2.4	Mode of Transport		Rail					For the Station (3000 MW)	
8.2.5	Maximum Station capability to stock secondary fuels	KL	23370					For the Station (3000 MW)	
8.2.6	Maximum Stock of secondary oil actually maintained	KL	8600					For the Station (3000 MW)	
8.2.7	Minimum Stock of secondary oil actually maintained	KL	3500					For the Station (3000 MW)	
8.2.8	Average Stock of secondary oil actually maintained	KL	6111					For the Station (3000 MW)	
9.	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	9,448.65	4,794.21	5,896.64	2,049.98	-	For the Station (3000 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)	N/A						
9.4	Maintenance spares - cost	(Rs. Lakh)	8,826.61	9,660.38	14,363.42	11,599.60	8,425.10	For the Station (3000 MW)	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)							
10	Generation :								
10.1	-Actual Gross Generation at generator terminals	MU	7,816.48	7,678.31	7,456.80	8,315.24	6,564.94		
10.2	-Actual Net Generation Ex-bus	MU	7,359.81	7,246.56	7,040.45	7,826.13	6,166.39		
10.3	-Scheduled Generation Ex-bus	MU	7,299.54	7,199.48	7,000.31	7,801.10	6,131.38		

11	Average Declared Capacity (DC)		MW	863.81	861.48	829.63	913.25	754.98	
		DC Peak HD %	%	-	-	-	98.76	79.20	
		DC Off Peak HD %	%	-	-	-	98.39	78.91	
		DC Peak LD %	%	-	-	-	97.31	81.15	
		DC Off Peak LD %	%	-	-	-	97.02	81.04	
	Actual Declared Capacity		MU	7,566.94	7,546.56	7,287.48	8,000.08	6,613.66	
	Deemed Declared Capacity		MU						
12	Actual Auxiliary Energy Consumption excluding colony consumption		MU	456.67	431.74	416.34	489.11	398.56	
13	Actual Energy supplied to Colony from the station		MU						
	Actual energy supplied to construction activities		MU						
	Actual energy supplied to long term and medium term beneficiaries		MU	7,254.24	7,159.86	6,615.46	7,447.43	6,073.01	
	Actual energy supplied in short term		MU						
	Energy supplied under bilateral arrangements		MU						
	Energy supplied through exchanges		MU	3.591	4.257	1.235	9.859	0.808	
	Energy supplied under DSM		MU	60.27	47.08	40.14	25.03	35.01	
	Energy supplied SCED		MU			213.29	316.86	177.71	
14	Primary Fuel :								
14.1	Consumption :								
14.1.1	Domestic coal	From Linked Mines	MT	48,23,157	44,38,342	44,38,259	50,11,101	39,31,895	
		From Non-Linkd Mines	MT	-	-	-	-	-	
		From Integerated Mines	MT	-	-	-	-	-	
14.1.2	Imported coal		MT	-	-	-	-	-	
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	4,323	4,623	4,500	4,535	4,587	
		(As Received) - TM Basis as per third party	kCal/kg	3,774	4,059	4,021	3,963	4,057	
14.2.2	Imported Coal	(As Billed) - ADB Basis	kCal/kg	NA	NA	NA	NA	NA	
		(As Received) - ADB Basis	kCal/kg	NA	NA	NA	NA	NA	
14.2.3	Spot market/e- auction coal	(As Billed)	kCal/kg	NA	NA	NA	NA	NA	
		(As Received)	kCal/kg	NA	NA	NA	NA	NA	
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)		kCal/kg	4,323	4,623	4,500	4,535	4,587	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)		kCal/kg	3,774	4,059	4,021	3,963	4,057	
14.2.6	Ash content in coal (%)		%	30.94	27.68	28.08	29.26	28.05	
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)	1,916	2,088	2,104	2,145	2,177	
	Components of landed cost and break up								
		1. Cost of coal,	(Rs/MT)	1,845	2,008	2,038	2,040	2,100	
		2. Transportation	(Rs/MT)	42	46	30	65	36	
		3. Other charges	(Rs/MT)	29	34	35	39	41	
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)	1,916	2,088	2,104	2,145	2,177	
14.4	Blending :		% and MT (of the total coal consumed)						
	Blending ratio of imported coal with domestic coal		Equivalent to domestic coal	0	0	0	0	0	
14.4.2	Proportion of e-auction coal in the blending		% & MT	0	0	0	0	0	
	Coal stockyard capacity		LMT	9.60	9.60	9.60	9.60	9.60	For the Station (3000 MW)
14.5	Actual daily Average Coal stock maintained		LMT	7.35	9.97	5.17	3.73	4.82	For the Station (3000 MW)
			Days	18.55	27.75	13.58	9.70	13.05	For the Station (3000 MW)
14.5	Actual Transit & Handling Losses for coal/Lignite								
14.5.1	Pit- Head Station								
14.5.1.1	Transit loss from linked mines		%	0.21	0.22	0.20	0.19	0.22	For the Station (3000 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.		%	-	-	-	-	-	For the Station (3000 MW)
14.5.1.3	Transit loss of imported coal		%	-	-	-	-	-	For the Station (3000 MW)

14.5.2	Non-Pit Head station								For the Station (3000 MW)
14.5.2.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
14.5.2.3	Transit loss of imported coal		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
15	Secondary Fuel Oil : (If more than one fuel used then give details of all the fuels separately)								
15.1	Consumption	HFO	KL	965.65	1,189.75	-	-	-	
		HSD	KL	92.00	904.75	2,079.04	1,515.11	2,494.49	
15.2	Weighted Average Gross Calorific value (As received)	HFO	(kCal / Lit.)	9,765.83	9,790.00	-	-	-	
		HSD	(kCal / Lit.)	9,642.61	9,607.31	9,613.41	9,496.05	9,262.29	
15.3	Weighted Average Price	HFO	(Rs / KL)	31,487.83	32,771.11				
		HSD	(Rs / KL)	49,936.65	55,150.29	53,095.13	45,321.56	55,415.96	
15.4	Actual Average stock maintained	HFO	KL	7,388.00	4,854.00				For the Station (3000 MW)
		HSD	KL	335.00	1,861.00	4,875.00	5,626.00	5,614.00	For the Station (3000 MW)
16.0	Weighted average duration of outages(unit-wise details):								
16.1	Planned Outages		(Days)	26.02	23.81	38.28	2.46	67.50	
16.2	Forced Outages		(Days)	3.61	9.69	12.41	6.19	12.57	
	Within control of generator		(Days)	-	-	-	-	-	
	beyond control of generator		(Days)	3.61	9.69	12.41	6.19	12.57	
16.3	Number of tripping		Nos.	6	19	13	6	12	
16.4	Number of start-ups:		Nos.	8	20	16	8	13	
16.4.1	Cold Start-up		Nos.	2	3	4	3	2	
16.4.2	Warm Start-up		Nos.	2	10	6	4	11	
16.4.3	Hot start-up		Nos.	4	7	6	1	0	
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)		mg/Nm ³	SOx: 200; NOx: 450					Norms as per MOEF&CC
	FGD installation date			FGD installation work is under progress					
	NOX Control system installation date			NA	NA	NA	NA	NA	
17.2	Actual emission (Stage-I)	SPM	mg/Nm ³	As per Annexure-A					For the Station (3000 MW)
		NOX	mg/Nm ³						For the Station (3000 MW)
		SOX	mg/Nm ³						For the Station (3000 MW)
	Actual emission (Stage-II)	SPM	mg/Nm ³						For the Station (3000 MW)
		NOX	mg/Nm ³						For the Station (3000 MW)
		SOX	mg/Nm ³						For the Station (3000 MW)
	Ash dyke capacity as on 31st March								
	Ash pond capacity as on 31st March								
	Fund available in Ash Fund Account as on 31st March			As per Annexure B					For the Station (3000 MW)
	Amount utilized from Ash Fund Account								For the Station (3000 MW)
19	Detail of Ash utilization % of fly ash produced		%	31.04	37.10	42.58	52.04	59.29	For the Station (3000 MW)
	Ash available as on 31st March *		LMT	43.45	35.16	39.01	39.22	37.09	For the Station (3000 MW)
	Ash utilized for construction of ash dyke		LMT	3.70	3.39	2.35	5.10	4.19	For the Station (3000 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.08	0.10	0.17	0.23	0.12	For the Station (3000 MW)
	Ash transported		LMT	-	-	-	2.90	7.72	For the Station (3000 MW)
	Average Distance **		Km	-	-	-	150	150	For the Station (3000 MW)
19.1	Conversion of value added product		(%)	21.47	25.49	2.56	5.74	6.63	For the Station (3000 MW)
19.2	For making roads &embarkment		(%)	-	-	-	7.39	20.81	For the Station (3000 MW)
19.3	Land filling		(%)	0.18	0.28	30.50	18.10	14.34	For the Station (3000 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	8.51	9.65	6.02	13.00	11.30	For the Station (3000 MW)
19.5	Any other use , Please specify		Qty. and	0.89	1.68	3.49	7.80	6.20	For the Station (3000 MW)
20	Cost of spares actually consumed		(Rs. Lakh)	619.80	1,005.50	345.68	3,758.39	1,291.04	For the Station (3000 MW)
21	Average stock of spares		(Rs. Lakhs)	52,046.71	53,644.92	47,544.09	42,915.29	55,333.29	For the Station (3000 MW)
22	Number of employees deployed in O&M		Nos.	867	763	661	629	581	For the Station (3000 MW)
22.1	- Executives		Nos.	473	399	351	338	317	For the Station (3000 MW)
22.2	- Non Executives		Nos.	394	364	310	291	264	For the Station (3000 MW)
22.3	- Corporate office		Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (3000 MW)
23	Man-MW ratio		Man/MW	0.29	0.25	0.22	0.21	0.19	For the Station (3000 MW)
	Total billed amount								For the Station (3000 MW)
	Total received amount within due date								For the Station (3000 MW)
	Total amount received beyond due date								For the Station (3000 MW)
	Total amount pending			As per Annexure C					For the Station (3000 MW)
	Total amount under dispute								For the Station (3000 MW)
	Total rebate given								For the Station (3000 MW)

	Total LPSC recovered			For the Station (3000 MW)
24	Generation Switchyard Details		400kV & 132kV, Allahabad-1,2-400kV,280km,HVDC-1,2-400kV,1km Singrauli-1,2-400kV,42km, Pooling Stn-1,2400kV,32kM	For the Station (3000 MW)
	No. of Bays voltage wise		400kV-14bays,	
	ICT - nos and rating		1 no. -200MVA, 400kV/132kV/33kV	
	Dedicated transmission line - voltage and length		Not Applicable	
<p>* Total ash generated during the Financial Year given ** Weighted average distance of Ash Transported given</p>				

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		NTPC Ltd.						
2	Name of Station/ Pit head or Non- Pit head		Rihand Super Thermal Power Station Stage-III						
	Stage		Single Stage						
3	Installed Capacity and Configuration	MW	2 X 500 = 1000 MW						
3.1	Date of Commercial Operation - Unit Wise		U5- 19-11-2012, U6- 27-03-2014						
3.2	Effective COD		27-03-2014						
	Make of Turbine		2 X 500 (BHEL)						
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Turbine : BHEL, Single flow HP Cylinder, double flow IP cylinder & double flow LP Cylinder. Boiler : BHEL Ltd, Balance draught,controlled circulation,Tangentially fired,dry bottom : SH Outlet Pr :176.6 KSc, Temp :540 Deg C : MS Pr : 170 KSc, Temp : 537 Deg C						
5	Type of BFP		Stage-III -Steam Driven						
	Quantity		(2 TDBFP + 1 MDBFP)						
6	Circulating water system		Closed Cycle						
7	Any other Site specific feature								
	Design Unit heat rate	Kcal/Kwh	Stage-3: 2276						
	Design Boiler efficiency	%	Stage-3: 84.87						
	Design Turbine cycle heat rate	Kcal/Kwh	Stage-3: 1932						
8	Fuels :								
8.1	Primary Fuel :		Coal						
8.1.1	Annual Allocation under FSA	MMT	Annual allocation through FSA dated 02.09.2013 with NCL for Rihand-III - 3.54 MMT Annual allocation through modified FSA dated 08.09.2016 with NCL for Rihand- I&II 10.84 MMT					For the Station (3000 MW)	
	Annual Consumption	LMT	48.87	44.29	50.63	47.72	48.04		
	Annual Requirement at NAPA F	LMT	45.33	42.66	43.75	44.08	44.62		
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Source: NCL G7 to G10					For the Station (3000 MW)	
8.1.2.1	FSA	LoA	LMT	143.55	133.23	131.33	142.56	140.75	For the Station (3000 MW)
		MoU	LMT	-	-	-	-	-	For the Station (3000 MW)
		MoU	LMT	0.04	0.25	-	1.22	0.57	For the Station (3000 MW)
8.1.2.2	Imported*	LMT	-	-	-	-	-	-	For the Station (3000 MW)
8.1.2.	Spot Market/e-auction*	LMT	-	-	-	-	-	-	For the Station (3000 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	40 to 55 (NCL)					For the Station (3000 MW)	
8.1.4	Mode of Transport		MGR/RAIL					For the Station (3000 MW)	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & MT	26 days & 9.60 LMT					For the Station (3000 MW)	
8.1.6	Maximum stock maintained for primary fuel	LMT	10.32	11.36	10.32	8.08	11.99	For the Station (3000 MW)	
	Date		14.04.2017	25.02.2019	01.04.2019	19.12.2020	31.03.2022	For the Station (3000 MW)	
8.1.7	Minimum Stock maintained for primary fuel	LMT	3.89	8.34	1.33	0.62	0.99	For the Station (3000 MW)	
	Date		09.11.2017	01.04.2018	12.10.2019	04.07.2020	21.08.2021	For the Station (3000 MW)	
8.1.8	Average stock maintained for primary fuel	LMT	7.35	9.97	5.17	3.73	4.82	For the Station (3000 MW)	
8.2	Secondary Fuel :							For the Station (3000 MW)	
8.2.1	Annual Allocation/ Requirement	KL	11200 / 5500					For the Station (3000 MW)	
8.2.2	Sources of supply		IOCL					For the Station (3000 MW)	
8.2.3	Transportation Distance of the station from the sources of supply	KM	1188					For the Station (3000 MW)	
8.2.4	Mode of Transport		Rail					For the Station (3000 MW)	
8.2.5	Maximum Station capability to stock secondary fuels	KL	23370					For the Station (3000 MW)	
8.2.6	Maximum Stock of secondary oil actually maintained	KL	8600					For the Station (3000 MW)	
8.2.7	Minimum Stock of secondary oil actually maintained	KL	3500					For the Station (3000 MW)	
8.2.8	Average Stock of secondary oil actually maintained	KL	6111					For the Station (3000 MW)	
9.	Cost of Spares :								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	9,448.65	4,794.21	5,896.64	2,049.98	-	For the Station (3000 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)	N/A						
9.4	Maintenance spares - cost	(Rs. Lakh)	8,826.61	9,660.38	14,363.42	11,599.60	8,425.10	For the Station (3000 MW)	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)							
10	Generation :								
10.1	-Actual Gross Generation at generator terminals	MU	7,959.50	7,643.36	8,490.41	7,938.25	7,895.01		
10.2	-Actual Net Generation Ex-bus	MU	7,529.62	7,238.29	8,093.53	7,524.61	7,480.42		
10.3	-Scheduled Generation Ex-bus	MU	7,423.41	7,116.73	8,031.53	7,448.36	7,364.91		

11	Average Declared Capacity (DC)	MW	890.76	874.31	948.18	881.74	904.29	
	DC Peak HD %	%	-	-	-	101.35	100.93	
	DC Off Peak HD %	%	-	-	-	101.46	100.73	
	DC Peak LD %	%	-	-	-	91.36	94.91	
	DC Off Peak LD %	%	-	-	-	91.61	95.03	
	Actual Declared Capacity	MU	7,803.08	7,658.96	8,328.78	7,724.08	7,921.61	
	Deemed Declared Capacity	MU						
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	429.88	405.07	396.88	413.64	414.59	
13	Actual Energy supplied to Colony from the station	MU						
	Actual energy supplied to construction activities	MU						
	Actual energy supplied to long term and medium term beneficiaries	MU	7,356.69	7,056.18	7,578.60	7,176.22	7,236.93	
	Actual energy supplied in short term	MU						
	Energy supplied under bilateral arrangements	MU						
	Energy supplied through exchahnges	MU	-	-	-	3.740	40.992	
	Energy supplied under DSM	MU	106.21	121.56	62.00	76.25	115.51	
	Energy supplied SCED	MU			207.71	241.75	221.80	
14	Primary Fuel :							
14.1	Consumption :							
14.1.1	Domestic coal							
	From Linked Mines	MT	48,86,796	44,29,114	50,63,084	47,71,795	48,04,250	
	From Non-Linkd Mines	MT						
	From Integerated Mines	MT						
14.1.2	Imported coal	MT	-	-	-	-	-	
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	4,323	4,623	4,500	4,535	4,587	
	(As Received) - TM Basis as per third party	kCal/kg	3,800	4,058	4,015	3,948	4,028	
14.2.2	Imported Coal							
	(As Billed) - ADB Basis	kCal/kg	NA	NA	NA	NA	NA	
	(As Received) - ADB Basis	kCal/kg	NA	NA	NA	NA	NA	
14.2.3	Spot market/e- auction coal							
	(As Billed)	kCal/kg	NA	NA	NA	NA	NA	
	(As Received)	kCal/kg	NA	NA	NA	NA	NA	
14.2.4	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Billed)	kCal/kg	4,323	4,623	4,500	4,535	4,587	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3,800	4,058	4,015	3,948	4,028	
14.2.6	Ash content in coal (%)	%	30.94	27.68	28.08	29.26	28.05	
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)	1,916	2,088	2,104	2,145	2,177	
	Components of landed cost and break up							
	1. Cost of coal,	(Rs/MT)	1,845	2,008	2,038	2,040	2,100	
	2. Transportation	(Rs/MT)	42	46	30	65	36	
	3. Other charges	(Rs/MT)	29	34	35	39	41	
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)	1,916	2,088	2,104	2,145	2,177	
14.4	Blending :	% and MT (of the total coal consumed)						
	Blending ratio of imported coal with domestic coal	Equivalent to domestic coal	0	0	0	0	0	
14.4.2	Proportion of e-auction coal in the blending	% & MT	0	0	0	0	0	
	Coal stockyard capacity	LMT	9.60	9.60	9.60	9.60	9.60	For the Station (3000 MW)
14.5	Actual daily Average Coal stock maintained	LMT	7.35	9.97	5.17	3.73	4.82	For the Station (3000 MW)
		Days	18.55	27.75	13.58	9.70	13.05	For the Station (3000 MW)
14.5	Actual Transit & Handling Losses for coal/Lignite							
14.5.1	Pit- Head Station							
14.5.1.1	Transit loss from linked mines	%	0.21	0.22	0.20	0.19	0.22	For the Station (3000 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%	-	-	-	-	-	For the Station (3000 MW)
14.5.1.3	Transit loss of imported coal	%	-	-	-	-	-	For the Station (3000 MW)

14.5.2	Non-Pit Head station								For the Station (3000 MW)
14.5.2.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
14.5.2.3	Transit loss of imported coal		%	NA	NA	NA	NA	NA	For the Station (3000 MW)
15	Secondary Fuel Oil : (If more than one fuel used then give details of all the fuels separately)								
15.1	Consumption	HFO	KL	1,100.00	-	-	-	-	
		HSD	KL	165.47	1,248.13	682.98	1,632.48	1,073.00	
15.2	Weighted Average Gross Calorific value (As received)	HFO	(kCal / Lit.)	9,759.65	-	-	-	-	
		HSD	(kCal / Lit.)	9,655.43	9,518.93	9,613.06	9,406.97	9,254.71	
15.3	Weighted Average Price	HFO	(Rs / KL)						
		HSD	(Rs / KL)						
15.4	Actual Average stock maintained	HFO	KL	7,388.00	4,854.00				For the Station (3000 MW)
		HSD	KL	335.00	1,861.00	4,875.00	5,626.00	5,614.00	For the Station (3000 MW)
16.0	Weighted average duration of outages(unit-wise details):								
16.1	Planned Outages		(Days)	14.03	21.70	2.03	26.03	22.06	
16.2	Forced Outages		(Days)	5.56	6.89	4.65	4.71	5.23	
	Within control of generator		(Days)	-	-	-	-	-	
	beyond control of generator		(Days)	5.56	6.89	4.65	4.71	5.23	
16.3	Number of tripping		Nos.	6	9	8	5	5	
16.4	Number of start-ups:		Nos.	7	9	9	7	6	
16.4.1	Cold Start-up		Nos.	3	3	1	2	2	
16.4.2	Warm Start-up		Nos.	1	3	4	3	4	
16.4.3	Hot start-up		Nos.	3	3	4	2	0	
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)		mg/Nm ³	SOx: 200; NOx: 450					Norms as per MOEF&CC
	FGD installation date			FGD installation work is under progress					
	NOX Control system installation date			NA	NA	NA	NA	NA	
17.2	Actual emission (Stage-I)	SPM	mg/Nm ³	As per Annexure-A					For the Station (3000 MW)
		NOX	mg/Nm ³						For the Station (3000 MW)
		SOX	mg/Nm ³						For the Station (3000 MW)
	Actual emission (Stage-II)	SPM	mg/Nm ³						For the Station (3000 MW)
		NOX	mg/Nm ³						For the Station (3000 MW)
		SOX	mg/Nm ³						For the Station (3000 MW)
Ash dyke capacity as on 31st March									
Ash pond capacity as on 31st March									
Fund available in Ash Fund Account as on 31st March				As per Annexure B					For the Station (3000 MW)
Amount utilized from Ash Fund Account								For the Station (3000 MW)	
19	Detail of Ash utilization % of fly ash produced		%	31.04	37.10	42.58	52.04	59.29	For the Station (3000 MW)
	Ash available as on 31st March *		LMT	43.45	35.16	39.01	39.22	37.09	For the Station (3000 MW)
	Ash utilized for construction of ash dyke		LMT	3.70	3.39	2.35	5.10	4.19	For the Station (3000 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.08	0.10	0.17	0.23	0.12	For the Station (3000 MW)
	Ash transported		LMT	-	-	-	2.90	7.72	For the Station (3000 MW)
	Average Distance **		Km	-	-	-	150	150	For the Station (3000 MW)
19.1	Conversion of value added product		(%)	21.47	25.49	2.56	5.74	6.63	For the Station (3000 MW)
19.2	For making roads &embarkment		(%)	-	-	-	7.39	20.81	For the Station (3000 MW)
19.3	Land filling		(%)	0.18	0.28	30.50	18.10	14.34	For the Station (3000 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	8.51	9.65	6.02	13.00	11.30	For the Station (3000 MW)
19.5	Any other use , Please specify		Qty. and	0.89	1.68	3.49	7.80	6.20	For the Station (3000 MW)
20	Cost of spares actually consumed		(Rs. Lakh)	619.80	1,005.50	345.68	3,758.39	1,291.04	For the Station (3000 MW)
21	Average stock of spares		(Rs. Lakhs)	52,046.71	53,644.92	47,544.09	42,915.29	55,333.29	For the Station (3000 MW)
22	Number of employees deployed in O&M		Nos.	867	763	661	629	581	For the Station (3000 MW)
22.1	- Executives		Nos.	473	399	351	338	317	For the Station (3000 MW)
22.2	- Non Executives		Nos.	394	364	310	291	264	For the Station (3000 MW)
22.3	- Corporate office		Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (3000 MW)
23	Man-MW ratio		Man/MW	0.29	0.25	0.22	0.21	0.19	For the Station (3000 MW)
	Total billed amount								For the Station (3000 MW)
	Total received amount within due date								For the Station (3000 MW)
	Total amount received beyond due date								For the Station (3000 MW)
	Total amount pending								For the Station (3000 MW)
	Total amount under dispute								For the Station (3000 MW)
	Total rebate given								For the Station (3000 MW)

As per Annexure C

	Total LPSC recovered			For the Station (3000 MW)
24	Generation Switchyard Details		400kV & 132kV, Allahabad-1,2-400kV,280km,HVDC-1,2-400kV,1km Singrauli-1,2-400kV,42kM, Pooling Strn-1,2400kV,32kM	For the Station (3000 MW)
	No. of Bays voltageswise		400kV-14bays	
	ICT - nos and rating		2 no. Station Transformers-80MVA, 400/11kV	
	Dedicated transmission line - voltage and length		Not Applicable	
<p>* Total ash generated during the Financial Year given ** Weighted average distance of Ash Transported given</p>				

Name of Generating Station : RIHAND STAGE-I
 Stage: Stage-I (2 x 500 MW)
 COD of Units/Station : 01.01.1991

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

All Figs in Rs. Lakh

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 Compensations (Rs. Lakhs)	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	Variation if any to be reconciled /justified.
								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								
								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	6.40	193.05	350.00	NIL	33.99	231.04	NIL	Central Ash Dyke Raising	3.36	Capitalization of R&M & Non R&M works	583.46			583.78	0	-352.74	149.25	932.48	741.93	Loan ERV: (-) Rs 76.59 Lakh, IUT: Rs 0.37 Lakh, Decap against items not allowed : (-) Rs 114.34
								Renovation of PLC system	2.73	MBOAs	0.32									
								Freehold Land-Plant/office	191.44			NIL	NIL							
								M G R COAL TPT SYS	1.72											
								Renovation of Breakers in 400KV SYD	0.19											
								Total	199.45	Total	583.78	Total	0.00							
2010-11	327.38	0.00	500	NIL	33.218	333.91	NIL	Forest Land (Leasehold Land)	327.38	Capitalization of R&M & Non R&M works	2068.10			2068.10	8.55	-1742.74	422.95	2826.98	2032.99	Loan ERV: Rs 1.26 Lakh, IUT: (-) Rs 0.61 Lakh, Decap against items not allowed : (-) Rs 526.36 lakh, Decap of Spares: (-) Rs 39.39 lakh, Decap of MBOAs: (-) Rs 7.78 Lakh, Decap of LOCOs and Wagons: (-) Rs 221.11 lakh
								Total	327.38	Total	2068.10	Total	0.00							
2011-12	170.15	24.45953	650	NIL	32.445	439.1075	NIL	Phasing Out of Halon Fire Fighting System with Alternate Inert Gas	194.61	Capitalization of R&M & Non R&M works	314.06			314.06	18.42	106.63	3915.54	4442.63	4211.93	Loan ERV: Rs 7.87 Lakh, Decap against items not allowed : (-) Rs 62.77 Lakh, Decap of Spares: (-) Rs 27.16 lakh, Decap of MBOAs: (-) Rs 29.02 Lakh, Decap of LOCOs and Wagons: (-) Rs 64.88 lakh, Condemned Assets: Rs 0.50 lakh, Decap of Halon Fire Fighting System: (-) Rs 55.23 lakh
								Total	194.61	Total	314.06									
2012-13	0	0	650	NIL	32.445	439.1075	NIL	Capitalization of R&M & Non R&M works	518.45					518.45	20.98	-100.32	1839.52	2378.95	2250.44	Loan ERV: Rs 198.29 Lakh, Decap against items not allowed : (-) Rs 152.51 Lakh, Decap of Spares: (-) Rs 139.80 lakh, Decap of MBOAs: (-) Rs 9.13 Lakh, Liability Reversal: (-) Rs 20.62 Lakh, SAP Licence (Adjustment): (-) Rs 4.73 Lakh
								Total	0	Total	518.45	Total	0							

2013-14	752.38	188.94	650	NIL	33.99	429.065	NIL	IST RAISING OF CENTRAL ASH DYKE LAGOON-II	768.50	Capitalization of R&M & Non R&M works	531.21	NIL	NIL	531.21	0.00	-102.15	3478.62	4951.16	4391.72	Loan ERV: Rs 223.55 Lakh, Decap against items not allowed : (-) Rs 153.15 Lakh, Decap of Spares: (-) Rs 501.86 lakh, Liability Reversal: (-) Rs 8.38 Lakh, Decap of Wagons: (-) Rs 119.59 Lakh.
								LEASE HOLD LAND PLANT/OFFICE	23.24											
								Submergence Land (MGR+Ash dvke)	148.90											
								Free Hold Land-Plant and Office	0.68											
								Total	941.32	Total	531.21									

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 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 Compens	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	Variation if any to be reconciled /justified.
								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								
								Asset/work	Rs(Lakh)	Asset/work	Rs(Lakh)- Gross	Asset/work	(Rs. lakh)							
Net Basis	Liability included in (2)			(%)	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				
2014-15	0.00		1000.00	0.00	20.96	790.40		0.00	Actual Capitalization (as per Annexure)	1329.13			0.00	-538.74	550.66	1879.79	1691.93	Loan FERV: Rs 55.70 Lakh, Decap of Spares: (-) Rs 205.57 lakh, Decap of MBOAs: (-) Rs 23.79 Lakh, Decap of Wagons: (-) Rs 14.19 Lakh.		
2015-16	0.00		500	3988.13	21.3416	393.292	3137.00	0	Actual Capitalization	0	Actual Capitalization (as per Annexure)	3424.82	3424.82	0.00	105.47	855.25	4280.07	3187.74	Loan FERV: Rs 63.36 Lakh, Decap of Spares: (-) Rs 174.96 lakh, Decap of MBOAs: (-) Rs 4.64 Lakh, IUT: (-) Rs 0.32 Lakh, Liability Reversal: (-) Rs 207.44 Lakh, Decap of Assets: (-) Rs 768.33 Lakh	
2016-17	0.00		0.00	8482.74	21.3416	0	6672.39	0.00	Actual Capitalization	0.00	Actual Capitalization (as per Annexure)	15986.93	15986.93	0.00	-9314.55	1308.94958	17295.88	11994.05	Loan FERV: (-) Rs 513.14 Lakh, Contractor FERV: (-) Rs 106.07 Lakh, Decap of Spares: (-) Rs 326.64 lakh, Decap of MBOAs: (-) Rs 4355.29 Lakh, IUT: (-) Rs 0.50 Lakh, Liability Reversal: (-) Rs 7.20 Lakh	
2017-18	0.00		0.00	9021.40	21.342%		7096.05		Actual Capitalization		Actual Capitalization (as per Annexure)	3739.73	3739.73	0.00	3356.32	1317.36292	5057.09	5685.95482	Decap of Spares: Part of Capital Cost-87.92 Loan ERV 943.92 Inter Unit Transfer:9.91 Reversal of Liability:8.95 Decap of Spares: Not Part of Capital Cost-30.73 Decap of MBOAs: -159.52 Asset decap-37.85	
2018-19	0.00			9594.25	21.549%		7526.81		Actual Capitalization		Actual Capitalization (as per Annexure)	3633.04	3633.04	0.00	3893.76	7729.51143	11362.56	10706.5928	Decap of Spares: Part of Capital Cost-205.82 Loan ERV-128.99 Inter Unit Transfer-57.91 Reversal of Liability-194.84 Decap of Spares: Not Part of Capital Cost-13.36 Decap of MBOAs: -7.39 Asset decap-47.66	

Details of expenditure incurred from Compensation Allowance and Special Allowance during Tariff Period 2014-17

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 Compens	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	Variation if any to be reconciled /justified.
								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								
								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
2019-20		-	-	9,500.00	17.47		7,840.16		-	Actual Capitalization		Actual Capitalization (as per Annexure)	2,142.57	2,142.57	-	5,697.59	2,948.40	5,090.97	5,232.44	Decap of Spares: Part of Capital Cost (100.87) Loan ERV 482.91 Reversal of Liability (0.03) Decap of Spares: Not Part of Capital Cost (153.55) Decap of MBOAs: (86.99)
2020-21				9,500.00	17.47		7,840.16		-	Actual Capitalization		Actual Capitalization (as per Annexure)	7,701.21	7,701.21	-	138.95	935.92	8,637.14	7,071.67	Decap of Spares: Part of Capital Cost (367.48) Loan ERV 138.96 Capital Spares 935.92 Inter Unit Transfer (6.12) Reversal of Liability (17.26) Decap of Spares: Not Part of Capital Cost (1,249.01) Decap of MBOAs: (64.94)

NOTE : Closing CWIP as on 31.03.2021 in respect off Rihand Stage- 1 is Rs. 4408.32 Lakhs

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		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 2014-19						Total Expenditure done under Special and Compensation	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.
								Capitalisation out of add cap allowed under Regulation		Capitalisation out of Compensation allowance in the stations wherever applicable		Capitalisation out of Special Allowance allowed in the stations where applicable								
								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			
2014-15	0		0	0	20.96	0	0	Nil	0	N/A	N/A	N/A	N/A	6.11	-6.11	1776.56	1782.67	2576.23	Liability Reversal: (-) 7.94, Liability restatement due to ERV: 311.16, Decap of MBOA: (-) 13.49, Decap of Wagons: (-) 138.64, Decap Spares: (-) 200.28 , IUT: 842.74	
2015-16	238.70	23.76	0	0	21.34	0	0	Details as per Annexure	262.46	N/A	N/A	N/A	N/A	130.30	-130.30	412.31	805.07	-481.89	Liability Reversal: (-)21.72, Liability restatement due to ERV: 215.16, Decap of MBOA: (-) 136.50, Decap Spares: (-) 368.03, IUT (includes one Loco): (-) 975.86	
2016-17	0		200	0	21.34	157.32	0	Nil	0		0	0	0	157.32	528.44	528.44	-7.27	Liability Reversal: (-)16.11, Liability restatement due to ERV: (-)32.09, Decap of MBOA: (-) 222.67, Decap Spares: (-) 264.85688		
2017-18	0.00		200.00		21.34	157.32	0.00	Nil	0		0	0	0	0	157.32	1387.19	1387.19	133.33	LD Adjustment (-) 17,594,984, Liability Reversal: (-) 943,821,2316, Liability restatement due to ERV: (-) 4,3154, Decap of MBOA: (-) 51,33924, Decap Spares: (-)	
									Total	0.00	Total	0.00	Total	0.00						
2018-19			200.00		21.55	156.90	0.00	Nil	0		0	0	0	0	156.90	120.19	120.19	133.33	LD Adjustment (-) 17,594,984, Liability Reversal: (-) 943,821,2316, Liability restatement due to ERV: (-) 4,3154, Decap of MBOA: (-) 53,45205, Decap Spares: (-)	
									Total	0.00	Total	0.00	Total	0.00						
Details of expenditure incurred from Compensation Allowance and Special Allowance during Tariff Period 2019-24																				
FY Year	Add-cap allowed by the Commission under the provision of Regulation		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 2019-24						Total Expenditure done under Special and Compensation	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.
								Capitalisation out of add cap allowed under Regulation		Capitalisation out of Compensation allowance in the stations wherever applicable		Capitalisation out of Special Allowance allowed in the stations where applicable								
								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			
2019-20	0.00		0.00	0.00	17.47	0.00	0.00				0.00	0.00	0.00	3.19	-3.19	1198.09	1201.27	348.91	Liability restatement due to ERV: (-)75.36412, Decap of MBOA: (-) 742.52897, Decap Spares: (-) 34.47323.	
									Total	0.00	Total	0.00	Total	0.00						
												0.00		0.00					LD Adjustment (allowed works)- (-) 74.34744, Liability reversal: (-)	

DETAILS OF WATER CHARGES

Name of the Company:

NTPC Ltd.

Name of the Power Station and Stage/Phase:

Rihand Super Thermal Power Station (3000 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	Rihand Super Thermal Power Station (3000 MW)				
1	Type of Plant	Coal Based Plant				
2	Type of Cooling Tower	Stage I: Open Cycle; Stage 2 & 3: Closed Cycle (IDCT)				
3	Type of Cooling Water System					
4	Any Special Features which may increase/reduce water consumption					
(B)	Quantum of Water :	For complete 3000 MW Station				
5	Contracted Quantum (Cusec)	37.19	37.19	37.19	37.19	37.19
6	Contracted Quantum (Cusec)	37.19	37.19	37.19	37.19	37.19
7	Actual water Consumption					
8	Rate of Water Charges (Rs/kWh)	8.06	8.26	8.87	8.87	8.87
9	Other charges/Fees , if paid as part of Water Charges					
10	Total water Charges Paid (Rs Lakh)	1,271.56	1,302.91	1,398.71	1,398.71	1,398.71

Details of capital Spares

Name of Company : NTPC Limited

Name of Power station : Rihand STPS (3000 MW)

(Rs. In Lakhs)

Sl . No.	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
(A)	Details of capital spares in Opening stock	45,352.64	48,208.42	56,651.57	61,100.10	63,238.36
(B)	Details of capital spares procured during the year	3,475.58	9,448.65	4,794.21	5,896.64	2,049.98
(C)	Details of capital spares consumed during the year	619.80	1,005.50	345.68	3,758.39	1,291.04
(D)	Details of capital spares closing at the end of the year	48,208.42	56,651.57	61,100.10	63,238.36	63,997.29

Name of Utility:	NTPC Ltd.
Name of Generating Station:	Rihand STPS, Stage II
Station Configuration:	2 X 500 = 1000 MW
Capacity (MW):	1000 MW
COD:	01-04-2006

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)	%	91.84	91.45	97.45	96.06	101.95	91.79	100.45	92.20	100.94	91.70	88.19	92.66	98.97	91.65	91.40	88.49	97.41	80.53
2	Plant Load Factors (PLF)	%	90.58	95.73	94.35	94.35	99.99	91.01	97.70	90.42	97.17	83.40	85.10	84.29	90.44	89.23	87.65	84.89	94.92	74.94
2a	Loading Factor ^	%														97.29	96.51	98.54	97.58	96.00
3	Scheduled Energy	MU	2,318.82	7,853.53	7,786.59	8,235.40	7,493.76	7,906.65	7,382.58	7,952.01	6,803.13	6,907.26	6,888.58	7,418.58	7,299.54	7,199.48	7,000.31	7,801.10	6,131.38	6,131.38
4	Scheduled Generation	MU	2,318.82	7,853.53	7,786.59	8,235.40	7,493.76	7,906.65	7,382.58	7,952.01	6,803.13	6,907.26	6,888.58	7,418.58	7,299.54	7,199.48	7,000.31	7,801.10	6,131.38	6,131.38
5	Actual Generation (Gross)	MU													7,816.48	7,678.31	7,456.80	8,315.24	6,564.94	6,564.94
6	Actual Generation (ex-bus)	MU													7,359.81	7,246.56	7,040.45	7,826.13	6,166.39	6,166.39
7	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	2,318.82	7,853.53	7,786.59	8,235.40	7,493.76	7,906.65	7,382.58	7,952.01	6,803.13	6,907.26	6,888.58	7,418.58	7,254.24	7,159.86	6,615.46	7,447.43	6,073.01	6,073.01
8	Quantum of coal consumption	MT	16,00,113	53,39,545	53,26,050	56,39,120	52,69,189	56,39,192	54,28,792	59,14,902	52,20,563	51,88,853	50,50,042	52,82,817	48,23,157	44,38,342	44,38,259	50,11,101	39,31,895	39,31,895
9	Value of coal	Rs. Lakh				88,269.15	84,317.56	1,09,084.53	1,15,562.70	97,330.25	94,799.66	1,16,176.83	1,16,724.16	1,18,106.41	2,74,341.96	2,77,883.59	2,75,621.11	3,07,474.21	3,06,917.50	3,06,917.50
10	Specific Coal Consumption	kg/kWh	0.64	0.64	0.64	0.64	0.66	0.66	0.68	0.69	0.71	0.70	0.68	0.67	0.62	0.58	0.60	0.60	0.60	0.60
11	Gross Calorific Value of Coal	(Kcal/ Kg)	3,667	3,691	3,635	3,620	3,532	3,590	3,454	3,383	3,326	3,380	3,454	3,550	3,774	4,059	3,956**	3,878**	3,872**	3,872**
12	Heat Contribution of Coal	(Kcal/ kWh)	2,357	2,350	2,336	2,330	2,334	2,365	2,361	2,351	2,377	2,353	2,356	2,367	2,329	2,346	2,342	2,337	2,379	2,379
13	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)																		
14	Quantum of Oil Consumption	(KL)	966.34	1,269.06	896.16	826.45	1,853.55	855.02	2,131.23	1,315.52	2,336.36	1,603.70	1,655.20	936.30	1,057.65	2,094.50	2,079.04	1,515.11	2,494.49	2,494.49
15	Value of Oil	(Rs. lakh)													1,125.20	4,038.04	1,764.72	2,550.82	3,959.84	3,959.84
16	Gross calorific value of oil	(kcal/lit)	9,650.00	9,650.00	9,650.00	9,650.00	9,650.00	9,650.00	9,650.00	9,811.65	9,895.63	10,151.63	10,247.36	10,059.11	9,761.09	9,755.11	9,711.09	9,613.41	9,496.05	9,262.29
17	Specific Oil Consumption	(ml/kWh)	0.39	0.15	0.11	0.09	0.23	0.10	0.27	0.15	0.32	0.22	0.22	0.12	0.14	0.27	0.28	0.18	0.38	0.38
18	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)																		
19	Heat Contribution of Oil	(Kcal/ kWh)	3.75	1.46	1.04	0.91	2.24	0.96	2.63	1.53	3.25	2.20	2.25	1.15	1.32	2.65	2.68	1.73	3.52	3.52
20	Station Heat Rate	(Kcal/ kWh)	2,361	2,351	2,337	2,331	2,337	2,366	2,364	2,352	2,380	2,355	2,358	2,368	2,330	2,349	2,345	2,339	2,383	2,383
21	Auxiliary Energy Consumption	(%)	5.67	5.52	5.55	5.34	5.46	5.87	5.71	5.95	6.45	6.71	6.45	6.23	5.84	5.62	5.58	5.88	6.07	6.07
22	Debt at the end of the year	(Rs. Crore)	1,075.11	1,781.07	1,636.04	1,480.92	1,298.33	1,185.51	1,035.32	900.18	757.94	602.73	446.62	294.25	139.08	90.36	32.72			
23	Equity - Average	(Rs. Crore)	468.81	845.59	859.71	871.45	856.80	863.98	871.43	875.38	882.59	885.95	886.23	886.37	885.75	886.89	888.39	890.64	895.49	895.49
24	Working Capital – finally admitted by CERC	(Rs. Crore)	155.65	297.27	303.30	306.00	414.31	416.27	419.96	421.20	424.73	387.68	391.26	393.14	401.58	389.10	361.79	365.12	368.29	368.29
25	Capital cost – finally admitted by CERC	(Rs. Crore)	1,562.69	2,818.64	2,865.71	2,904.84	2,855.99	2,879.95	2,904.76	2,917.93	2,941.95	2,953.18	2,954.11	2,954.56	2,952.51	2,956.28	2,961.33	2,976.24	2,993.71	2,993.71
26	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	302.65	541.39	561.85	564.51	652.80	652.00	656.25	654.02	660.22	603.13	602.64	599.70	598.32	503.43	514.97	519.24	526.11	526.11
27	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009																			
28	Absolute value	(Rs. Crore)	65.63	118.38	120.36	122.00	201.18	200.53	199.94	200.85	207.24	173.74	174.63	174.66	174.54	175.23	166.85	167.21	168.02	168.02
29	Rate	(%)	14.00%	14.00%	14.00%	14.00%	0.23	23.21%	22.94%	22.94%	23.46%	19.61%	19.71%	19.71%	19.71%	19.76%	18.78%	18.78%	18.78%	18.78%
30	(b) Interest on Loan																			
31	Absolute value	(Rs. Crore)	80.28	138.79	131.02	120.71	104.54	95.45	90.58	78.31	67.62	55.88	42.42	29.63	17.30	9.21	4.74	1.25	-	-
32	Rate – Weighted Average Rate	(%)	7.538%	7.465%	7.478%	7.605%	7.616%	7.686%	8.157%	8.092%	8.156%	8.214%	8.063%	7.968%	7.984%	8.027%	7.698%	7.620%	7.620%	7.620%
33	(c) Depreciation (finally allowed by CERC)																			
34	Absolute value	(Rs. Crore)	92.13	152.54	174.19	180.93	150.02	151.31	152.62	153.35	154.62	155.16	155.16	155.00	154.76	57.19	57.71	58.34	59.85	59.85
35	AAD																			
36	Rate	(%)	3.622%	3.612%	3.612%	3.612%	5.253%	5.254%	5.254%	5.256%	5.256%	5.256%	5.254%	5.252%	5.246%	5.242%	1.935%	1.949%	1.965%	2.005%
37	(d) Interest on working Capital																			
38	Absolute value	(Rs. Crore)	15.95	30.47	31.09	31.37	50.75	50.99	51.44	51.60	52.03	52.34	52.82	53.07	54.21	52.53	43.60	41.08	38.67	38.67
39	Rate	(%)	10.25%	10.25%	10.25%	10.25%	0.12	12.25%	12.25%	12.25%	12.25%	13.50%	13.50%	13.50%	13.50%	13.50%	12.05%	11.25%	10.50%	10.50%
40	(e) Operation and maintenance cost (finally admitted by CERC)																			
41	Absolute value	(Rs. Crore)	48.65	101.20	105.20	109.50	130.00	137.40	145.30	153.60	162.40	166.02	177.61	187.33	197.51	209.27	242.07	251.37	259.57	259.57
42	Rate	(%)																		
43	(f) Compensation Allowances	(Rs. Crore)													2.00	2.00	2.00			
44	(g) Special Allowance	(Rs. Crore)																		
45	(h) Supplementary Tariff - Emission Control																			
46	Absolute value	(Rs. Crore)																		
47	Rate	(%)																		
48	(i) Ash Utilisation Expenses *	(Rs. Crore)																	31.25	72.29
49	AFC	(Rs./ kWh)	0.93	0.84	0.87	0.87	0.94	0.94	0.94	0.94	0.95	0.87	0.87	0.87	0.85	0.72	0.73	0.74	0.75	0.75
50	Energy Charge	(Rs./kWh)	0.93	0.93	1.01	1.19	1.17	1.33	1.43	1.25	1.25	1.40	1.69	1.67	1.59	1.27	1.31	1.36	1.41	1.43
51	Supplemental Energy Charges - Emission Control	(Rs./kWh)																		
52	Total tariff	(Rs. kWh)	1.86	1.76	1.87	2.06	2.11	2.27	2.37	2.19	2.34	2.56	2.53	2.46	2.13	2.03	2.09	2.15	2.17	2.17
53	Revenue realisation before tax	(Rs. Crore)																		
54	Revenue realisation after tax	(Rs. Crore)																		
55	Profit/ loss *	(Rs. Crore)	281.41	459.47	735.34	622.15	767.59	1,044.91	895.53	1,057.94	885.27	698.23	1,079.31	1,097.94	1,165.54	1,161.83	1,351.23	1,006.78	1,232.95	1,232.95
56	DSM Generation	(MU)	25.28	69.02	42.54	54.43	19.63	137.01	91.92	29.99	1.78	54.23	16.19	(17.69)	60.27	47.08	40.14	25.03	35.01	35.01
57	DSM Rate	(Rs/kWh)																		
58	Revenue from DSM	(Rs. Crore)	(14.00)	(18.66)	(13.65)	(40.61)	(28.07)	(20.30)	(15.29)	(19.36)	(21.60)	(17.54)	(15.49)	(14.25)	(10.76)					

Annexure-XIX

Name of Utility:	NTPC Ltd.
Name of Generating Station:	Rihand STPS, Stage III
Station Configuration:	2 X 500 = 1000 MW
Capacity (MW):	1000 MW
COD:	27-03-2014

S.N	Particulars	Unit	2012-13 (19.11.2012 to 31.3.2013)	2013-14 (01.04.2013 to 26.03.2014)	2013-14 (27.03.2014 to 31.03.2014)	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20***	2020-21***	2021-22***
1	Plant Availability Factor (PAF)	%	62.65	90.39	83.42	85.74	94.18	94.51	92.77	101.14	94.05	96.46	96.46
2	Plant Load Factors (PLF)	%	59.88	81.25	77.56	77.40	85.91	90.86	87.25	96.66	90.62	90.13	90.13
2a	Loading Factor ^	%						96.14	94.67	98.45	99.08	97.41	97.41
3	Scheduled Energy	MU	895.16	3,407.85	6,380.59	6,421.71	7,114.70	7,423.41	7,116.73	8,031.53	7,448.36	7,364.91	7,364.91
4	Scheduled Generation	MU	895.16	3,407.85	6,380.59	6,421.71	7,114.70	7,423.41	7,116.73	8,031.53	7,448.36	7,364.91	7,364.91
5	Actual Generation (Gross)	MU						7,959.50	7,643.36	8,490.41	7,938.25	7,895.01	7,895.01
6	Actual Generation (ex-bus)	MU						7,529.62	7,238.29	8,093.53	7,524.61	7,480.42	7,480.42
7	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	895.16	3,407.85	6,380.59	6,421.71	7,114.70	7,356.69	7,056.18	7,578.60	7,176.22	7,236.93	7,236.93
8	Quantum of coal consumption	MT	6,63,291	25,02,930	47,26,271	43,48,438	49,26,665	48,86,796	44,29,114	50,63,084	47,71,795	48,04,250	48,04,250
9	Value of coal	Rs. Lakh		23,391.53	3,36,935.97	3,23,900.79	3,27,258.65	2,74,341.96	2,77,883.59	2,75,621.11	3,07,474.21	3,06,917.50	3,06,917.50
10	Specific Coal Consumption	kg/kWh	0.69	0.69	0.70	0.64	0.65	0.61	0.58	0.60	0.60	0.61	0.61
11	Gross Calorific Value of Coal	(Kcal/ Kg)	3,475	3,400	3,407	3,677	3,609	3,800	4,058	3,930**	3,863**	3,943**	3,943**
12	Heat Contribution of Coal	(Kcal/ kWh)	2,412	2,359	2,370	2,352	2,363	2,333	2,352	2,343	2,322	2,400	2,400
13	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)											
14	Quantum of Oil Consumption	(KL)	3,108.97	2,697.68	4,306.50	1,778.33	1,952.64	1,265.47	1,248.13	682.98	1,632.48	1,073.00	1,073.00
15	Value of Oil	(Rs. lakh)		6,392.30	4,502.75	1,666.82	2,530.64	1,125.20	4,038.04	1,764.72	2,550.82	3,959.84	3,959.84
16	Gross calorific value of oil	(kcal/lit)	9,360.00	9,728.58	10,188.70	10,003.41	9,757.42	9,746.02	9,518.93	9,613.06	9,406.97	9,254.71	9,254.71
17	Specific Oil Consumption	(ml/kWh)	3.25	0.75	0.63	0.26	0.26	0.16	0.16	0.08	0.21	0.14	0.14
18	Cost Of Specific Oil Consumption –Finally admitted by CERC	(Rs./kWh)											
19	Heat Contribution of Oil	(Kcal/ kWh)	30.45	7.27	6.46	2.62	2.53	1.55	1.55	0.77	1.93	1.26	1.26
20	Station Heat Rate	(Kcal/ kWh)	2,442	2,366	2,377	2,354	2,365	2,335	2,353	2,344	2,324	2,401	2,401
21	Auxiliary Energy Consumption	(%)	7.00	5.91	5.95	5.46	5.55	5.40	5.30	4.67	5.21	5.25	5.25
22	Debt at the end of the year	(Rs. Crore)	1,556.97	1,858.22	3,080.86	2,914.13	2,830.79	2,605.14	2,367.47	2,076.80	1,971.43	1,707.62	1,438.94
23	Equity - Average	(Rs. Crore)	625.21	780.08	1,399.52	1,421.76	1,483.33	1,536.84	1,560.33	1,571.25	1,665.88	1,680.65	1,694.13
24	Working Capital – finally admitted by CERC	(Rs. Crore)	233.72	251.58	500.85	399.02	405.10	410.25	418.63	420.37	434.33	436.19	437.74
25	Capital cost – finally admitted by CERC	(Rs. Crore)	2,084.27	2,600.57	4,662.01	4,807.97	5,080.91	5,164.70	5,237.51	5,237.51	5,550.22	5,582.36	5,639.86
26	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	473.77	574.57	1,047.20	983.47	1,003.45	1,020.76	1,026.33	1,019.13	1,073.06	1,064.12	1,057.87
27	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009												
28	Absolute value	(Rs. Crore)	143.46	183.19	328.41	278.82	292.31	302.85	307.48	309.63	312.73	314.27	316.64
29	Rate	(%)	22.94%	23.48%	23.48%	19.61%	19.71%	19.71%	19.71%	19.71%	18.78%	18.78%	18.78%
30	(b) interest on Loan												
31	Absolute value	(Rs. Crore)	121.75	142.20	255.93	247.53	233.24	220.31	206.08	184.10	162.64	141.00	120.83
32	Rate – Weighted Average Rate	(%)	8.463%	8.327%	8.318%	8.258%	8.120%	8.106%	8.289%	8.285%	7.668%	7.665%	7.680%
33	(c) Depreciation (finally allowed by CERC)												
34	Absolute value	(Rs. Crore)	111.72	146.20	258.72	263.01	274.40	284.30	288.64	290.66	303.18	304.93	308.07
35	AAD												
36	Rate	(%)	5.360%	5.622%	5.550%	5.550%	5.550%	5.550%	5.550%	5.550%	5.462%	5.462%	5.462%
37	(d) Interest on working Capital												
38	Absolute value	(Rs. Crore)	31.55	33.96	66.11	53.87	54.69	55.38	56.52	56.75	52.34	52.56	52.75
39	Rate	(%)	13.50%	13.50%	13.20%	13.50%	13.50%	13.50%	13.50%	13.50%	12.05%	12.05%	12.05%
40	(e) Operation and maintenance cost (finally admitted by CERC)												
41	Absolute value	(Rs. Crore)	65.28	69.02	138.04	140.24	148.82	157.92	167.61	177.98	242.18	251.37	259.57
42	Rate	(%)											

NOT APPLICABLE

43	(f) Compensation Allowances	(Rs. Crore)												
44	(g) Special Allowance	(Rs. Crore)	NOT APPLICABLE											
45	h) Supplementary Tariff - Emission Control		NOT APPLICABLE											
46	Absolute value	(Rs. Crore)	NOT APPLICABLE											
47	Rate	(%)	NOT APPLICABLE											
48	i) Ash Utilisation Expenses *	(Rs. Crore)											31.25	72.29
49	AFC	(Rs./ kWh)	1.36	1.65	1.50	1.44	1.47	1.49	1.46	1.45	1.53	1.52	1.51	
50	Energy Charge	(Rs./kWh)	1.24	1.38	1.38	1.70	1.62	1.57	1.28	1.32	1.34	1.39	1.40	
51	Supplemental Energy Charges - Emission Control	(Rs./kWh)												
52	Total tariff	(Rs. kWh)	2.60	3.03	2.88	3.14	3.09	3.06	2.74	2.77	2.87	2.91	2.91	
53	Revenue realisation before tax	(Rs. Crore)												
54	Revenue realisation after tax	(Rs. Crore)												
55	Profit/ loss *	(Rs. Crore)	1,057.94		885.27	698.23	1,079.31	1,097.94	1,165.54	1,161.83	1,351.23	1,006.78	1,232.95	
56	DSM Generation	(MU)	(5.96)		(29.98)	10.03	5.63	1.88	106.21	121.56	62.00	76.25	115.51	
57	DSM Rate	(Rs/kWh)												
58	Revenue from DSM	(Rs. Crore)	0.24		(2.01)	(6.72)	(15.86)	(18.18)	(34.07)	(26.77)	(19.63)	(20.77)	(23.02)	
59	Compensation received for operation below NAPAF	(Rs. Crore)									11.07	2.97	1.57	
60	Part load Compensation received from beneficiariaes	(Rs. Crore)									-	-	-	
61	Amount received from SCED	(Rs Crore)									11.07	2.97	1.57	
** GCV of coal as received minus 85 kCal/Kg ^ Additional data related to Loading factor (%) submitted * For entire Rihand Station DSM Revenue (-)Received / (+) Paid *** Tariff related details for the period 2019-20 to 2021-22 is as per Petition filed before CERC														

DETAILS OF EMISSION CONTROL SYSTEM :

Generating company: NTPC Ltd

Name of Generating station: Rihand Super Thermal Power Station Stage-II

Installed Capacity (MW) : 1000 MW

Type of Emission Control System: Wed based FGD System

Under Operation/Anticipated Operation Date: FGD not yet operational

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU	7816.48	7678.31	7456.80	8315.24	6564.94
2	Auxiliary Consumption - emission control	MU	NA	NA	NA	NA	NA
	Auxiliary Consumption - emission control	%	NA	NA	NA	NA	NA
3	Auxiliary Consumption (Normative)	%	NA	NA	NA	NA	NA
4	Hours of Operation	Hrs	NA	NA	NA	NA	NA
5	O&M Expenses (Actual) with Breakup as per format	Rs. Crore	NA	NA	NA	NA	NA
6	Other maintenace spares consumed^	Rs. Crore	NA	NA	NA	NA	NA
7	Initial Spares consumed*	Rs. Crore	NA	NA	NA	NA	NA

S.No.	Particulars	Units	2017-18		2018-19		2019-20		2020-21		2021-22	
			Investment Approval	Approved								
1	Capital Cost of Emission Control System											
1.1	Hard Cost incl GST *	Rs. Crore										904.62
1.1.1	Civil Works *	Rs. Crore										Incl Above
1.1.2	Plant and Machinery and others *	Rs. Crore										Incl Above
1.1.3	Initial Spares procured *	Rs. Crore										Incl Above
1.2	IDC *	Rs. Crore										57.07
1.3	IEDC *	Rs. Crore										27.14
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost as per Investment Approval*	Rs. Crore										988.83

* Total Cost of FGD of Rihand Stage 2 (1260 MW) & Rihand Stage 3 (1000 MW)

DETAILS OF EMISSION CONTROL SYSTEM :

Generating company: NTPC Ltd

Name of Generating station: Rihand Super Thermal Power Station Stage-III

Installed Capacity (MW) : 1000 MW

Type of Emission Control System: Wet based FGD System

Under Operation/Anticipated Operation Date: FGD not yet operational

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU	7959.50	7643.36	8490.41	7938.25	7895.01
2	Auxiliary Consumption - emission control	MU	NA	NA	NA	NA	NA
	Auxiliary Consumption - emission control	%	NA	NA	NA	NA	NA
3	Auxiliary Consumption (Normative)	%	NA	NA	NA	NA	NA
4	Hours of Operation	Hrs	NA	NA	NA	NA	NA
5	O&M Expenses (Actual) with Breakup as per	Rs. Crore	NA	NA	NA	NA	NA
6	Other maintenance spares consumed^	Rs. Crore	NA	NA	NA	NA	NA
7	Initial Spares consumed*	Rs. Crore	NA	NA	NA	NA	NA

S.No.	Particulars	Units	2017-18		2018-19		2019-20		2020-21		2021-22	
			Investment Approval	Approved								
1	Capital Cost of Emission Control System											
1.1	Hard Cost incl GST *	Rs. Crore										904.62
1.1.1	Civil Works *	Rs. Crore										Incl Above
1.1.2	Plant and Machinery and others *	Rs. Crore										Incl Above
1.1.3	Initial Spares procured *	Rs. Crore										Incl Above
1.2	IDC *	Rs. Crore										57.07
1.3	IEDC *	Rs. Crore										27.14
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost as per Investment Approval*	Rs. Crore										988.83

* Total Cost of FGD of Rihand Stage 2 (1260 MW) & Rihand Stage 3 (1000 MW)

DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Ltd

Name of Generating station: Rihand Super Thermal Power Station Stage-I

Installed Capacity (MW) : 1000 MW (2 x 500 MW)

Reagent Type: FGD not yet operational

Type of Emission Control System

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
A.								
1	Average Stock of Reagent	MT	NA	NA	NA	NA	NA	
2	Maximum Storage at Site	MT	NA	NA	NA	NA	NA	
3	Maximum Storage at Site	Days	NA	NA	NA	NA	NA	
B.								
1	Opening Stock of Reagent as on 1st April	MT	NA	NA	NA	NA	NA	
2	Purity of Opening Stock (Reagent)	%	NA	NA	NA	NA	NA	
3	Quantity of Reagent Supplied by Supplier	MT	NA	NA	NA	NA	NA	
4	Adjustment (+/-) in Quantity Supplied	MT	NA	NA	NA	NA	NA	
5	Net Quantity of Reagent Received	MT	NA	NA	NA	NA	NA	
6	Total Cost of Reagent Received	Rs. Crore	NA	NA	NA	NA	NA	
7	Cost of Reagent Received	Rs./MT	NA	NA	NA	NA	NA	
8	Qty of Reagent Consumed	MT	NA	NA	NA	NA	NA	
9	Closing Stock of Reagent as on 31st March	MT	NA	NA	NA	NA	NA	
10	Purity of Reagent received	%	NA	NA	NA	NA	NA	
11	Gross Generation	MU	7,755	7,365	7,412	7,145	7,946	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel (Air Dried Basis)	%	0.36	0.37	0.37	0.33	0.30	
14	Gross SHR	kCal/kWh						
15	Design SO ₂ removal efficiency (Applicable for Wet FGD)	%	SO ₂ Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO ₂ removal norm (100/200/600 mg/Nm ³)	mg/Nm ³	200	200	200	200	200	
17	Weighth Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					

** NA = Not Applicable

DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Ltd

Name of Generating station: Rihand Super Thermal Power Station Stage-II

Installed Capacity (MW) : 1000 MW

Reagent Type: FGD not yet operational

Type of Emission Control System

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
A.								
1	Average Stock of Reagent	MT	NA	NA	NA	NA	NA	
2	Maximum Storage at Site	MT	NA	NA	NA	NA	NA	
3	Maximum Storage at Site	Days	NA	NA	NA	NA	NA	
B.								
1	Opening Stock of Reagent as on 1st April	MT	NA	NA	NA	NA	NA	
2	Purity of Opening Stock (Reagent)	%	NA	NA	NA	NA	NA	
3	Quantity of Reagent Supplied by Supplier	MT	NA	NA	NA	NA	NA	
4	Adjustment (+/-) in Quantity Supplied	MT	NA	NA	NA	NA	NA	
5	Net Quantity of Reagent Received	MT	NA	NA	NA	NA	NA	
6	Total Cost of Reagent Received	Rs. Crore	NA	NA	NA	NA	NA	
7	Cost of Reagent Received	Rs./MT	NA	NA	NA	NA	NA	
8	Qty of Reagent Consumed	MT	NA	NA	NA	NA	NA	
9	Closing Stock of Reagent as on 31st March	MT	NA	NA	NA	NA	NA	
10	Purity of Reagent received	%	NA	NA	NA	NA	NA	
11	Gross Generation	MU	7,816	7,678	7,457	8,315	6,565	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel (Air Dried Basis)	%	0.36	0.37	0.37	0.33	0.30	
14	Gross SHR	kCal/kWh						
15	Design SO ₂ removal efficiency (Applicable for Wet FGD)	%	SO ₂ Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO ₂ removal norm (100/200/600 mg/Nm ³)	mg/Nm ³	200	200	200	200	200	
17	Weigthed Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					

** NA = Not Applicable

DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Ltd

Name of Generating station: Rihand Super Thermal Power Station Stage-III

Installed Capacity (MW) : 1000 MW

Reagent Type: FGD not yet operational

Type of Emission Control System

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
A.								
1	Average Stock of Reagent	MT	NA	NA	NA	NA	NA	
2	Maximum Storage at Site	MT	NA	NA	NA	NA	NA	
3	Maximum Storage at Site	Days	NA	NA	NA	NA	NA	
B.								
1	Opening Stock of Reagent as on 1st April	MT	NA	NA	NA	NA	NA	
2	Purity of Opening Stock (Reagent)	%	NA	NA	NA	NA	NA	
3	Quantity of Reagent Supplied by Supplier	MT	NA	NA	NA	NA	NA	
4	Adjustment (+/-) in Quantity Supplied	MT	NA	NA	NA	NA	NA	
5	Net Quantity of Reagent Received	MT	NA	NA	NA	NA	NA	
6	Total Cost of Reagent Received	Rs. Crore	NA	NA	NA	NA	NA	
7	Cost of Reagent Received	Rs./MT	NA	NA	NA	NA	NA	
8	Qty of Reagent Consumed	MT	NA	NA	NA	NA	NA	
9	Closing Stock of Reagent as on 31st March	MT	NA	NA	NA	NA	NA	
10	Purity of Reagent received	%	NA	NA	NA	NA	NA	
11	Gross Generation	MU	7,959	7,643	8,490	7,938	7,895	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel (Air Dried Basis)	%	0.36	0.37	0.37	0.33	0.30	
14	Gross SHR	kCal/kWh						
15	Design SO ₂ removal efficiency (Applicable for Wet FGD)	%	SO ₂ Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO ₂ removal norm (100/200/600 mg/Nm ³)	mg/Nm ³	200	200	200	200	200	
17	Weigthed Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					

** NA = Not Applicable