

## 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 Limited					
2	Name of Station/ Pit head or Non- Pit head Stage		Vindhyachal super thermal station / Pit head Stage-1					
3	Installed Capacity and Configuration	MW	1260MW (210MW X 6)					
3.1	Date of Commercial Operation - Unit Wise		Unit-1 : 01-09-1988, Unit-2 : 01.01.1989,Unit-3 :01.02.1990,Unit-4 :01.09.1990, Unit-5 : 01.04.1991 , Unit-6 :01.02.1992					
3.2	Effective COD		01.02.1992					
	Make of Turbine		Three Cylinder Reheat Condensing Turbine (LMZ)					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Boiler : 670 TPH/ 540 C/540 C/ 140 KSC					
5	Type of BFP		Electrical Driven					
	Quantity	Per Unit	3 BFP					
6	Circulating water system		Closed Cycle					
7	Any other Site specific feature							
	Design Unit heat rate	Kcal/KWH	2,307.60					
	Design Boiler efficiency	%	87.58					
	Design Turbine cycle heat rate	Kcal/KWH	2,021.00					
8	<b>Fuels :</b>							
8.1	<b>Primary Fuel :</b>		Coal					
8.1.1	Annual Allocation under FSA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
	Annual Consumption	LMT	65.46	65.61	66.25	66.87	67.68	
	Annual Requirement at NAPAF	LMT	62.03	62.56	65.99	63.69	64.13	
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Nigahi Silo (G10)/Nigahi WW (G11)/DCH Silo (G10)/JNT Silo(G10)/Amlori WW (G12)					For the Station (4760 MW)
8.1.2.1	FSA	LoA	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
		MoU	0	0	0	0	0	For the Station (4760 MW)
8.1.2.2	Imported*	LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.	Spot Market/e-auction*	LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	12					For the Station (4760 MW)
8.1.4	Mode of Transport		MGR/ Rail					For the Station (4760 MW)
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & LMT	19.5 days/12.76					For the Station (4760 MW)
8.1.6	Maximum stock maintained for primary fuel	MT	19.98					For the Station (4760 MW)
	Date		14-02-2019					For the Station (4760 MW)
8.1.7	Minimum Stock maintained for primary fuel	MT	2.46					For the Station (4760 MW)
	Date		08-10-2021					For the Station (4760 MW)
8.1.8	Average stock maintained for primary fuel	MT	11.18					For the Station (4760 MW)
8.2	<b>Secondary Fuel :</b>		HFO,LDO					For the Station (4760 MW)
8.2.1	Annual Allocation/ Requirement ( ALL 5 STAGES)	KL	17721.48 (full station requirement)					For the Station (4760 MW)
8.2.2	Sources of supply		IOCL /HPCL/BPCL					For the Station (4760 MW)
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400 (Refinery locations)					For the Station (4760 MW)
8.2.4	Mode of Transport		Rail					For the Station (4760 MW)
8.2.5	Maximum Station capability to stock secondary fuels (ALL 5 STAGES)	KL	13902 (full station requirement)					For the Station (4760 MW)
8.2.6	Maximum Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	9,355.18	9,040.98	9,958.55	9,423.20	8,369.39	For the Station (4760 MW)
8.2.7	Minimum Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	5,720.10	4,036.20	4,400.26	4,170.15	4,553.33	For the Station (4760 MW)
8.2.8	Average Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	7,076.03	5,659.12	7,373.24	6,794.84	5,794.70	For the Station (4760 MW)
9.	<b>Cost of Spares :</b>							
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 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)	11,612.66	12,578.85	13,259.38	22,415.25	18,365.47	For the Station (4760 MW)
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	8,756.70	8,103.16	9,442.62	17,053.37	18,177.15	For the Station (4760 MW)
10	<b>Generation :</b>							
10.1	-Actual Gross Generation at generator terminals	MU	9,757.66	9,700.68	9,281.55	9,728.74	9,783.63	

10.2	-Actual Net Generation Ex-bus	MU	8,916.99	8,858.69	8,473.43	8,867.30	8,916.82
10.3	-Scheduled Generation Ex-bus	MU	8,732.35	8,676.02	8,297.52	8,719.86	8,742.89
11	Average Declared Capacity (DC)	MW	1,052.73	1,039.98	996.77	1,040.26	1,050.47
	DC Peak HD %	%	-	-	-	88.05	93.52
	DC Off Peak HD %	%	-	-	-	87.87	93.62
	DC Peak LD %	%	-	-	-	91.79	90.90
	DC Off Peak LD %	%	-	-	-	91.66	90.96
	Actual Declared Capacity	MU	9,221.91	9,110.22	8,755.60	9,112.69	9,202.07
	Deemed Declared Capacity	MU					
12	Actual Auxiliary Energy Consumption excluding colony consumption	MU	834.82	837.71	804.21	857.44	862.40
13	Actual Energy supplied to Colony from the station	MU	5.600	4.281	3.912	3.765	3.899
	Actual energy supplied to construction activities	MU	0.242	-	-	0.241	0.515
	Actual energy supplied to long term and medium term beneficiaries	MU					
	Actual energy supplied in short term	MU					
	Energy supplied under bilateral arrangements	MU					
	Energy supplied through exchahnges	MU	101.45	2.28	0.98	1.41	0.01
	Energy supplied under DSM (AG-SG)	MU	184.64	182.68	175.90	147.44	173.93
	Energy supplied SCED	MU			98.15	113.46	10.51
14	<b>Primary Fuel :</b>						
14.1	Consumption :						
14.1.1	Domestic coal	MT	65,45,876	65,61,150	66,24,918	66,87,193	67,67,722
	From Linked Mines	MT	NA	NA	NA	NA	NA
	From Non-Linkd Mines	MT	NA	NA	NA	NA	NA
	From Integerated Mines	MT	NA	NA	NA	NA	NA
14.1.2	Imported coal	MT	NA	NA	NA	NA	NA
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)	kCal/kg	4,552.29	4,594.40	4,570.19	4,332.72	4,352.68
	(As Billed) - EM Basis as per third party	kCal/kg	3,639.80	3,637.11	3,499.09	3,589.25	3,595.35
	(As Received) - TM Basis as per third						
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	4,552.29	4,594.40	4,570.19	4,332.72	4,352.68
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3,639.80	3,637.11	3,499.09	3,589.25	3,595.35
	Ash content in coal (%)	%	32.63	33.34	35.75	34.90	33.92
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)	2,089	2,126	2,211	2,163	2,105
	Components of landed cost and break up						
	1. Cost of coal,	(Rs/MT)	2,031	2,072	2,117	2,068	2,018
	2. Transportation	(Rs/MT)	41	42	70	68	57
	3. Other charges	(Rs/MT)	17	12	23	27	30
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	NA	NA	NA	NA	NA
	Components of landed cost and break up						
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal	(Rs/MT)	NA	NA	NA	NA	NA
	Components of landed cost and break up						
14.3.4	Weighted Average Landed Price of all the Coals	(Rs/MT)	2,089	2,126	2,211	2,163	2,105
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	12.76 LMT					For the Station (4760 MW)
14.5	Actual daily Average Coal stock maintained		LMT	11.76	17.42	8.44	10.50	7.76	For the Station (4760 MW)
			Days	17.55	26.00	12.60	15.67	11.58	For the Station (4760 MW)
14.5	<b>Actual Transit &amp; Handling Losses for coal/Lignite</b>								For the Station (4760 MW)
14.5.1	<b>Pit- Head Station</b>								For the Station (4760 MW)
14.5.1.1	Transit loss from linked mines		%	0.20	0.20	0.23	0.23	0.29	For the Station (4760 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.		%	-	-	-	-	-	For the Station (4760 MW)
14.5.1.3	Transit loss of imported coal		%	-	-	-	-	-	For the Station (4760 MW)
14.5.2	<b>Non-Pit Head station</b>			NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.3	Transit loss of imported coal		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
15	<b>Secondary Fuel Oil :</b>								
15.1	Consumption	HFO	KL	1,791	2,020	2,775	2,659	2,878	
		LDO	KL	-	-	-	-	-	
15.2	Weighted Average Gross Calorific value (As received)	HFO	(kCal / Lit.)	9,828	9,834	9,835	9,846	9,871	
		LDO	(kCal / Lit.)	-	-	-	-	-	
15.3	Weighted Average Price	HFO	(Rs / KL)	29,981	40,203	39,855	43,342	54,468	
		LDO	(Rs / KL)	47,802	54,337	50,674	53,512	73,802	
15.4	Actual Average stock maintained	HFO (ALL 5 STAGES)	KL	4,845.06	3,462.40	4,840.21	4,531.07	3,041.10	For the Station (4760 MW)
		LDO (ALL 5 STAGES)	KL	2,230.97	2,196.71	2,533.03	2,263.77	2,753.61	For the Station (4760 MW)
16	<b>Weighted average duration of outages( unit-wise details):</b>								
16.1	Planned Outages (for 6 units)		(Days)	18.56	12.46	20.27	16.39	17.16	
16.2	Forced Outages (for 6 units)		(Days)	1.66	7.57	6.04	8.18	6.27	
	Within control of generator		(Days)	0.21	0.09	0.05	0.03	0.07	
	beyond control of generator		(Days)	1.46	7.47	5.99	8.15	6.20	
16.3	Number of tripping		Nos.	13	18	17	18	10	
16.4	Number of start-ups:		Nos.	22	33	33	32	29	
16.4.1	Cold Start-up		Nos.	6	9	6	9	12	
16.4.2	Warm Start-up		Nos.	8	14	16	14	13	
16.4.3	Hot start-up		Nos.	8	10	11	9	4	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by								
17.1	Design value of emission control equipment (specify conditions)		mg/NM3	SOx: 600; 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 <sup>3</sup>	As per 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		LCM					For the Station (4760 MW)	
	Ash pond capacity as on 31st March		Days					For the Station (4760 MW)	
	Fund available in Ash Fund Account as on 31st March			As per Annexure-B					For the Station (4760 MW)
	Amount utilized from Ash Fund Account								For the Station (4760 MW)
19	Detail of Ash utilization % of fly ash produced		Qty Produced	24.60	32.12	31.24	37.68	53.05	For the Station (4760 MW)
	Ash available as on 31st March *		LMT	79.58	81.86	88.57	87.14	82.38	For the Station (4760 MW)
	Ash utilized for construction of ash dyke		LMT	3.99	16.53	19.93	12.71	11.18	For the Station (4760 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.15	0.24	0.29	0.40	0.36	For the Station (4760 MW)
	Ash transported		LMT	-	-	-	1.21	5.08	For the Station (4760 MW)
	Average Distance **		Km	-	-	-	150.00	150.00	For the Station (4760 MW)
19.1	Conversion of value added product		(%)	9.05	4.54	3.76	4.30	5.28	For the Station (4760 MW)
19.2	For making roads &embarkment		(%)	-	-	-	1.39	4.39	For the Station (4760 MW)
19.3	Land filling		(%)	0.19	0.29	3.80	15.38	14.19	For the Station (4760 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	5.02	20.19	22.50	14.59	15.34	For the Station (4760 MW)
19.5	Any other use , Please specify		Qty. and	10.34	7.10	1.17	2.02	13.84	For the Station (4760 MW)

20	Cost of spares actually consumed	( Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 MW)
21	Average stock of spares	(Rs. Lakhs)	27,679.50	30,046.02	36,748.43	39,369.44	40,122.89	For the Station (4760 MW)
22	Number of employees deployed in O&M	Nos.	1,309	1,151	1,069	1,029	963	For the Station (4760 MW)
22.1	- Executives	Nos.	712	625	606	604	568	For the Station (4760 MW)
22.2	- Non Executives	Nos.	597	526	463	425	395	For the Station (4760 MW)
22.3	- Corporate office	Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (4760 MW)
23	Man-MW ratio	Man/MW	0.28	0.24	0.22	0.22	0.20	For the Station (4760 MW)
	Total billed amount							
	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		Stage-1,2,3 = 400KV lines= Jabalpur-1,2 (360 km each), Korba-1,2 (386 km each), Satna-1,2 (262km each), Rewa- 206km, Sasan- 20km, Satna-3,4 -(254 km each) , 132 KV Lines = Waidhan-1,2 (10 Km each) Stage-4,5 = Pooling line-1,2,3,4 (28km each), (All 400KV)					For the Station (4760 MW)
	No. of Bays voltagewise		400 kv bays : stage-1 & 2 = 26 bays, stage-3 =11 bays, stage-4 = 17 bays, stage-5 = 12 bays 132 kv bays : stage-1 & 2 = 14 bays, stage-3 =6 bays					For the Station (4760 MW)
	ICT - nos and rating		Stage-1 & 2 =2 ICTs, stage-3 =1 ICT (All ICTs 400 kv /132 kv)					For the Station (4760 MW)
	Dedicated transmission line - voltage and length		Not Applicable					For the Station (4760 MW)
<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 Limited						
2	Name of Station/ Pit head or Non- Pit head		Vindhyachal super thermal station / Pit head						
	Stage		stage-2						
3	Installed Capacity and Configuration	MW	1000MW (500MW X 2)						
3.1	Date of Commercial Operation - Unit Wise		Unit-7 :01.07.2000, Unit-8 :01.10.2000						
3.2	Effective COD		01.10.2001						
	Make of Turbine		Three Cylinder Reheat Condensing Turbine (KWU)						
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Boiler: 1502 TPH/ 540 C/540 C/ 176 KSC						
5	Type of BFP		Steam Driven BFPs						
	Quantity	Per Unit	Two Steam Driven (2 x 50%) + 1 Motor Driven (50%) per unit						
6	Circulating water system		Closed Cycle						
7	Any other Site specific feature		Ball and tube mill						
	Unit heat rate	design	Kcal/KWH				2,220.50		
	Boiler efficiency	design	%				87.71		
	Turbine cycle heat rate	design	Kcal/KWH				1,947.60		
8	<b>Fuels :</b>								
8.1	<b>Primary Fuel :</b>		Coal						
8.1.1	Annual Allocation under FSA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)	
	Annual Consumption	LMT	50.85	50.72	48.10	51.43	48.48		
	Annual Requirement at NAPAF	LMT	48.13	48.32	50.89	49.56	49.37		
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Nigahi Silo (G10)/Nigahi WW (G11)/DCH Silo (G10)/JNT Silo(G10)/Amlori WW (G12)					For the Station (4760 MW)	
8.1.2.1	FSA	LoA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
		MoU	LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.2	Imported*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.	Spot Market/e-auction*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	12					For the Station (4760 MW)	
8.1.4	Mode of Transport		MGR/ Rail					For the Station (4760 MW)	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & LMT	19.5 days/12.76					For the Station (4760 MW)	
8.1.6	Maximum stock maintained for primary fuel	MT	19.98					For the Station (4760 MW)	
	Date		14-02-2019					For the Station (4760 MW)	
8.1.7	Minimum Stock maintained for primary fuel	MT	2.46					For the Station (4760 MW)	
	Date		08-10-2021					For the Station (4760 MW)	
8.1.8	Average stock maintained for primary fuel	MT	11.18					For the Station (4760 MW)	
8.2	<b>Secondary Fuel :</b>		HFO,LDO					For the Station (4760 MW)	
8.2.1	Annual Allocation/ Requirement (ALL 5 STAGES)	KL	17721.48 (full station requirement)					For the Station (4760 MW)	
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9.	<b>Cost of Spares :</b>								
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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)	11,612.66	12,578.85	13,259.38	22,415.25	18,365.47	For the Station (4760 MW)	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	8,756.70	8,103.16	9,442.62	17,053.37	18,177.15	For the Station (4760 MW)	
10	<b>Generation :</b>								
10.1	-Actual Gross Generation at generator terminals	MU	7,812.11	7,771.67	6,917.96	7,604.70	7,174.47		
10.2	-Actual Net Generation Ex-bus	MU	7,363.49	7,315.34	6,469.53	7,121.40	6,717.75		
10.3	-Scheduled Generation Ex-bus	MU	7,373.51	7,348.51	6,545.07	7,159.61	6,742.29		

11	<b>Average Declared Capacity (DC)</b>		MW	865.77	856.95	788.40	870.88	814.32	
		DC Peak HD %	%	-	-	-	99.90	89.56	
		DC Off Peak HD %	%	-	-	-	99.74	89.66	
		DC Peak LD %	%	-	-	-	91.71	87.06	
		DC Off Peak LD %	%	-	-	-	91.63	86.90	
	Actual Declared Capacity		MU	7,584.14	7,506.89	6,925.33	7,628.92	7,133.48	
	Deemed Declared Capacity		MU						
12	<b>Actual Auxiliary Energy Consumption excluding colony consumption</b>		MU	443.72	452.72	445.36	480.03	453.32	
13	<b>Actual Energy supplied to Colony from the station</b>		MU	4.705	3.609	3.058	3.077	3.007	
	Actual energy supplied to construction activities		MU	0.203	-	-	0.197	0.397	
	Actual energy supplied to long term and medium term beneficiaries		MU	7,362.64	7,343.12	6,459.40	7,158.31	6,815.43	
	Actual energy supplied in short term		MU						
	Energy supplied under bilateral arrangements		MU						
	Energy supplied through excahnges		MU	1.71	4.21	0.51	0.55	-	
	Energy supplied under DSM (AG-SG)		MU	(10.03)	(33.17)	(75.54)	(38.21)	(24.55)	
	Energy supplied SCED		MU			13.82	11.64	(15.77)	
14	<b>Primary Fuel :</b>								
14.1	<b>Consumption :</b>								
14.1.1	Domestic coal	From Linked Mines	MT	50,84,592	50,72,485	48,10,429	51,42,697	48,48,093	
		From Non-Linkd Mines	MT	NA	NA	NA	NA	NA	
		From Integerated Mines	MT	NA	NA	NA	NA	NA	
14.1.2	Imported coal		MT	NA	NA	NA	NA	NA	
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	4,552.29	4,594.40	4,570.19	4,332.72	4,352.68	
		(As Received) - TM Basis as per third	kCal/kg	3,637.37	3,645.07	3,512.78	3,591.16	3,612.72	
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-		kCal/kg	4,552.29	4,594.40	4,570.19	4,332.72	4,352.68	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-		kCal/kg	3,637.37	3,645.07	3,512.78	3,591.16	3,612.72	
	Ash content in coal (%)		%	32.63	33.34	35.75	34.90	33.92	
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)	2,089	2,126	2,211	2,163	2,105	
	Components of landed cost and break up								
		1. Cost of coal,	(Rs/MT)	2,031	2,072	2,117	2,068	2,018	
		2. Transportation	(Rs/MT)	41	42	70	68	57	
		3. Other charges	(Rs/MT)	17	12	23	27	30	
14.3.2	Weighted Average Landed Price of Imported coal		(Rs/MT)	NA	NA	NA	NA	NA	
	Components of landed cost and break up								
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal		(Rs/MT)	NA	NA	NA	NA	NA	
	Components of landed cost and break up								
14.3.4	Weighted Average Landed Price of all the Coals		(Rs/MT)	2,089	2,126	2,211	2,163	2,105	
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			12.76			For the Station (4760 MW)
14.5	Actual daily Average Coal stock maintained		LMT	11.76	17.42	8.44	10.50	7.76	For the Station (4760 MW)
			Days	17.55	26.00	12.60	15.67	11.58	For the Station (4760 MW)

14.5	Actual Transit & Handling Losses for coal/Lignite								For the Station (4760 MW)
14.5.1	Pit- Head Station								For the Station (4760 MW)
14.5.1.1	Transit loss from linked mines		%	0.20	0.20	0.23	0.23	0.29	For the Station (4760 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.		%	-	-	-	-	-	For the Station (4760 MW)
14.5.1.3	Transit loss of imported coal		%	-	-	-	-	-	For the Station (4760 MW)
14.5.2	Non-Pit Head station			NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.3	Transit loss of imported coal		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
15	Secondary Fuel Oil :								
15.1	Consumption	HFO	KL	1,594	1,668	2,463	1,376	2,104	
		LDO	KL	-	30.00	27.00	301.00	379.00	
15.2	Weighted Average Gross Calorific value (As received)	HFO	(kCal / Lit.)	9,851	9,818	9,839	9,813	9,864	
		LDO	(kCal / Lit.)	-	9,484.00	9,477.96	9,558.50	8,941.88	
15.3	Weighted Average Price	HFO	(Rs / KL)	29,981	40,203	39,855	43,342	54,468	
		LDO	(Rs / KL)	47,802	54,337	50,674	53,512	73,802	
15.4	Actual Average stock maintained	HFO (ALL 5 STAGES)	KL	4,845.06	3,462.40	4,840.21	4,531.07	3,041.10	For the Station (4760 MW)
		LDO (ALL 5 STAGES)	KL	2,230.97	2,196.71	2,533.03	2,263.77	2,753.61	For the Station (4760 MW)
16	Weighted average duration of outages( unit-wise details):								
16.1	Planned Outages (for 2 units)		(Days)	13.91	19.09	36.88	25.50	40.89	
16.2	Forced Outages (for 2 units)		(Days)	10.40	11.58	18.94	7.17	7.09	
	Within control of generator		(Days)	0.11	0.17	0.68	-	0.23	
	beyond control of generator		(Days)	10.29	11.41	18.26	7.17	6.85	
16.3	Number of tripping		Nos.	11	10	12	2	8	
16.4	Number of start-ups:		Nos.	15	15	19	8	14	
16.4.1	Cold Start-up		Nos.	3	3	6	4	1	
16.4.2	Warm Start-up		Nos.	4	4	5	2	9	
16.4.3	Hot start-up		Nos.	8	8	8	2	4	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by								
17.1	Design value of emission control equipment (specify conditions)		mg/NM3	SOx: 600; 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	
11.0	Actual emission (Stage-I)	SPM	mg/Nm <sup>3</sup>	As per 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		LCM					For the Station (4760 MW)	
	Ash pond capacity as on 31st March		Days					For the Station (4760 MW)	
	Fund available in Ash Fund Account as on 31st March			As per Annexure-B					For the Station (4760 MW)
	Amount utilized from Ash Fund Account								For the Station (4760 MW)
19	Detail of Ash utilization % of fly ash produced		Qty Produced	24.60	32.12	31.24	37.68	53.05	For the Station (4760 MW)
	Ash available as on 31st March *		LMT	79.58	81.86	88.57	87.14	82.38	For the Station (4760 MW)
	Ash utilized for construction of ash dyke		LMT	3.99	16.53	19.93	12.71	11.18	For the Station (4760 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.15	0.24	0.29	0.40	0.36	For the Station (4760 MW)
	Ash transported		LMT	-	-	-	1.21	5.08	For the Station (4760 MW)
	Average Distance **		Km	-	-	-	150.00	150.00	For the Station (4760 MW)
19.1	Conversion of value added product		(%)	9.05	4.54	3.76	4.30	5.28	For the Station (4760 MW)
19.2	For making roads &embarkment		(%)	-	-	-	1.39	4.39	For the Station (4760 MW)
19.3	Land filling		(%)	0.19	0.29	3.80	15.38	14.19	For the Station (4760 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	5.02	20.19	22.50	14.59	15.34	For the Station (4760 MW)
19.5	Any other use , Please specify		Qty. and	10.34	7.10	1.17	2.02	13.84	For the Station (4760 MW)
20	Cost of spares actually consumed		( Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 MW)
21	Average stock of spares		(Rs. Lakhs)	27,679.50	30,046.02	36,748.43	39,369.44	40,122.89	For the Station (4760 MW)

22	Number of employees deployed in O&M	Nos.	1,309	1,151	1,069	1,029	963	For the Station (4760 MW)
22.1	- Executives	Nos.	712	625	606	604	568	For the Station (4760 MW)
22.2	- Non Executives	Nos.	597	526	463	425	395	For the Station (4760 MW)
22.3	- Corporate office	Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (4760 MW)
23	Man-MW ratio	Man/MW	0.28	0.24	0.22	0.22	0.20	For the Station (4760 MW)
24	Total billed amount		As per Annexure C					
24	Total received amount within due date							
24	Total amount received beyond due date							
24	Total amount pending							
24	Total amount under dispute							
24	Total rebate given							
24	Total LPSC recovered							
24	Generation Switchyard Details		Stage-1,2,3 = 400KV lines= Jabalpur-1,2 (360 km each), Korba-1,2 (386 km each), Satna-1,2 (262km each), Rewa- 206km, Sasan- 20km, Satna-3,4 -(254 km each) , 132 KV Lines = Waidhan-1,2 (10 Km each) Stage-4,5 = Pooling line-1,2,3,4 (28km each), (All 400KV)					For the Station (4760 MW)
24	No. of Bays voltages wise		400 kv bays : stage-1 & 2 = 26 bays, stage-3 =11 bays, stage-4 = 17 bays, stage-5 = 12 bays 132 kv bays : stage-1 & 2 = 14 bays, stage-3 =6 bays					For the Station (4760 MW)
24	ICT - nos and rating		Stage-1 & 2 =2 ICTs, stage-3 =1 ICT (All ICTs 400 kv /132 kv)					For the Station (4760 MW)
24	Dedicated transmission line - voltage and length		Not Applicable					For the Station (4760 MW)
* Total ash generated during the Financial Year given								
** Weighted average distance of Ash Transported given								



## 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		Vindhyachal Super thermal station / Pit head						
	Stage		Stage-3						
3	Installed Capacity and Configuration	MW	1000MW (500MW X 2)						
3.1	Date of Commercial Operation - Unit Wise		Unit-9 :01.12.2006, Unit-10 :15.07.2007						
3.2	Effective COD		15.07.2007						
	Make of Turbine		Three Cylinder Reheat Condensing Turbine (KWU)						
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Boiler: 1502 TPH/ 540 C/540 C/ 176 KSC						
5	Type of BFP		Steam Driven BFPs						
	Quantity	Per Unit	Two Steam Driven (2 x 50%) + 1 Motor Driven (50%) per unit						
6	Circulating water system		Closed Cycle						
7	Any other Site specific feature								
	Unit heat rate	design	Kcal/KWH				2,284.00		
	Boiler efficiency	design	%				85.14		
	Turbine cycle heat rate	design	Kcal/KWH				1,944.60		
8	<b>Fuels :</b>								
8.1	<b>Primary Fuel :</b>		Coal						
8.1.1	Annual Allocation under FSA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)	
	Annual Consumption	LMT	52.15	52.26	52.63	55.56	50.04		
	Annual Requirement at NAPAF	LMT	47.98	48.23	51.45	49.57	49.63		
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Nigahi Silo (G10)/Nigahi WW (G11)/DCH Silo (G10)/JNT Silo(G10)/Amlori WW (G12)					For the Station (4760 MW)	
8.1.2.1	FSA	LoA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
		MoU	LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.2	Imported*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2	Spot Market/e-auction*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	12					For the Station (4760 MW)	
8.1.4	Mode of Transport		MGR/ Rail					For the Station (4760 MW)	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & LMT	19.5 days/12.76					For the Station (4760 MW)	
8.1.6	Maximum stock maintained for primary fuel	MT	19.98					For the Station (4760 MW)	
	Date		14-02-2019					For the Station (4760 MW)	
8.1.7	Minimum Stock maintained for primary fuel	MT	2.46					For the Station (4760 MW)	
	Date		08-10-2021					For the Station (4760 MW)	
8.1.8	Average stock maintained for primary fuel	MT	11.18					For the Station (4760 MW)	
8.2	<b>Secondary Fuel :</b>		HFO,LDO					For the Station (4760 MW)	
8.2.1	Annual Allocation/ Requirement (ALL 5 STAGES)	KL	17721.48 (full station requirement)					For the Station (4760 MW)	
8.2.2	Sources of supply		IOCL /HPCL/BPCL					For the Station (4760 MW)	
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400 (Refinery locations)					For the Station (4760 MW)	
8.2.4	Mode of Transport		Rail					For the Station (4760 MW)	
8.2.5	Maximum Station capability to stock secondary fuels (ALL 5 STAGES)	KL	13902 (full station requirement)					For the Station (4760 MW)	
8.2.6	Maximum Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	9,355.18	9,040.98	9,958.55	9,423.20	8,369.39	For the Station (4760 MW)	
8.2.7	Minimum Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	5,720.10	4,036.20	4,400.26	4,170.15	4,553.33	For the Station (4760 MW)	
8.2.8	Average Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	7,076.03	5,659.12	7,373.24	6,794.84	5,794.70	For the Station (4760 MW)	
9.	<b>Cost of Spares :</b>								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 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)	11,612.66	12,578.85	13,259.38	22,415.25	18,365.47	For the Station (4760 MW)	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	8,756.70	8,103.16	9,442.62	17,053.37	18,177.15	For the Station (4760 MW)	
10	<b>Generation :</b>								
10.1	-Actual Gross Generation at generator terminals	MU	8,025.17	7,991.61	7,518.16	8,246.34	7,393.78		
10.2	-Actual Net Generation Ex-bus	MU	7,590.06	7,568.18	7,103.82	7,800.22	6,975.38		
10.3	-Scheduled Generation Ex-bus	MU	7,571.00	7,584.77	7,208.26	7,765.26	7,011.10		
11	<b>Average Declared Capacity (DC)</b>	MW	898.21	889.89	848.06	928.64	843.20		
		DC Peak HD %	%	-	-	-	93.55	99.97	
		DC Off Peak HD %	%	-	-	-	93.38	100.54	
		DC Peak LD %	%	-	-	-	100.87	86.48	
		DC Off Peak LD %	%	-	-	-	100.97	86.38	
	Actual Declared Capacity	MU	7,868.29	7,795.46	7,449.33	8,134.90	7,386.39		

	Deemed Declared Capacity		MU						
12	Actual Auxiliary Energy Consumption excluding colony		MU	430.00	419.68	410.98	442.52	414.86	
13	Actual Energy supplied to Colony from the station		MU	4.900	3.754	3.366	3.382	3.135	
	Actual energy supplied to construction activities		MU	0.212	-	-	0.216	0.414	
	Actual energy supplied to long term and medium term beneficiaries		MU	7,548.20	7,575.91	6,978.61	7,721.97	7,074.69	
	Actual energy supplied in short term		MU						
	Energy supplied under bilateral arrangements		MU						
	Energy supplied through exchanges		MU	1.78	4.04	5.88	1.14	0.01	
	Energy supplied under DSM	(AG-SG)	MU	19.06	(16.59)	(104.44)	34.96	(35.72)	
	Energy supplied SCED		MU			105.80	48.02	23.22	
14	Primary Fuel :								
14.1	Consumption :								
14.1.1	Domestic coal	From Linked Mines	MT	52,14,718	52,26,066	52,63,474	55,56,285	50,03,672	
		From Non-Linkd Mines	MT	NA	NA	NA	NA	NA	
		From Integerated Mines	MT	NA	NA	NA	NA	NA	
14.1.2	Imported coal		MT	NA	NA	NA	NA	NA	
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	4,552.27	4,594.40	4,570.19	4,332.72	4,352.68	
		(As Received) - TM Basis as per third	kCal/kg	3,641.91	3,630.97	3,493.23	3,587.56	3,605.78	
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-		kCal/kg	4,552.29	4,594.40	4,570.19	4,332.72	4,352.68	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-		kCal/kg	3,641.91	3,630.97	3,493.23	3,587.56	3,605.78	
	Ash content in coal (%)		%	32.63	33.34	35.75	34.90	33.92	
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)	2,089	2,126	2,211	2,163	2,105	
	Components of landed cost and break up								
		1. Cost of coal,	(Rs/MT)	2,031	2,072	2,117	2,068	2,018	
		2. Transportation	(Rs/MT)	41	42	70	68	57	
		3. Other charges	(Rs/MT)	17	12	23	27	30	
14.3.2	Weighted Average Landed Price of Imported coal		(Rs/MT)	NA	NA	NA	NA	NA	
	Components of landed cost and break up								
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal		(Rs/MT)	NA	NA	NA	NA	NA	
	Components of landed cost and break up								
14.3.4	Weighted Average Landed Price of all the Coals		(Rs/MT)	2,089	2,126	2,211	2,163	2,105	
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			12.76			For the Station (4760 MW)
14.5	Actual daily Average Coal stock maintained		LMT	11.76	17.42	8.44	10.50	7.76	For the Station (4760 MW)
			Days	17.55	26.00	12.60	15.67	11.58	For the Station (4760 MW)
14.5	Actual Transit & Handling Losses for coal/Lignite								For the Station (4760 MW)
14.5.1	Pit- Head Station								For the Station (4760 MW)
14.5.1.1	Transit loss from linked mines		%	0.20	0.20	0.23	0.23	0.29	For the Station (4760 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.		%	-	-	-	-	-	For the Station (4760 MW)
14.5.1.3	Transit loss of imported coal		%	-	-	-	-	-	For the Station (4760 MW)
14.5.2	Non-Pit Head station			NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.1	Transit loss from linked mines		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.3	Transit loss of imported coal		%	NA	NA	NA	NA	NA	For the Station (4760 MW)
15	Secondary Fuel Oil :								
15.1	Consumption	HFO	KL	565	1,162	613	479	1,096	
		LDO	KL	158.00	46.00	265.00	271.00	476.00	
15.2	Weighted Average Gross Calorific	HFO	(kCal / Lit.)	9,820	9,833	9,835	9,858	9,843	

15.2	value (As received)	LDO	(kCal / Lit.)	9,430.25	9,442.39	9,463.64	9,468.78	9,202.35	
15.3	Weighted Average Price	HFO	(Rs / KL)	29,981	40,203	39,855	43,342	54,468	
		LDO	(Rs / KL)	47,802	54,337	50,674	53,512	73,802	
15.4	Actual Average stock maintained	HFO (ALL 5 STAGES)	KL	4,845.06	3,462.40	4,840.21	4,531.07	3,041.10	For the Station (4760 MW)
		LDO (ALL 5 STAGES)	KL	2,230.97	2,196.71	2,533.03	2,263.77	2,753.61	For the Station (4760 MW)
16	Weighted average duration of outages( unit-wise details):								
16.1	Planned Outages (for 2 units)		(Days)	15.51	15.75	22.99	6.33	24.84	
16.2	Forced Outages (for 2 units)		(Days)	2.24	4.02	10.58	5.88	17.23	
	Within control of generator		(Days)	-	0.18	0.04	-	-	
	beyond control of generator		(Days)	2.24	3.84	10.53	5.88	17.23	
16.3	Number of tripping		Nos.	5	6	4	2	6	
16.4	Number of start-ups:		Nos.	9	10	8	4	15	
16.4.1	Cold Start-up		Nos.	1	2	3	2	9	
16.4.2	Warm Start-up		Nos.	3	3	3	1	3	
16.4.3	Hot start-up		Nos.	5	5	2	1	3	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by								
17.1	Design value of emission control equipment (specify conditions)		mg/NM3	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	
11.0	Actual emission (Stage-I)	SPM	mg/Nm <sup>3</sup>	As per 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		LCM					For the Station (4760 MW)	
	Ash pond capacity as on 31st March		Days					For the Station (4760 MW)	
	Fund available in Ash Fund Account as on 31st March			As per Annexure-B					For the Station (4760 MW)
	Amount utilized from Ash Fund Account								For the Station (4760 MW)
19	Detail of Ash utilization % of fly ash produced		Qty Produced	24.60	32.12	31.24	37.68	53.05	For the Station (4760 MW)
	Ash available as on 31st March *		LMT	79.58	81.86	88.57	87.14	82.38	For the Station (4760 MW)
	Ash utilized for construction of ash dyke		LMT	3.99	16.53	19.93	12.71	11.18	For the Station (4760 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.15	0.24	0.29	0.40	0.36	For the Station (4760 MW)
	Ash transported		LMT	-	-	-	1.21	5.08	For the Station (4760 MW)
	Average Distance **		Km	-	-	-	150.00	150.00	For the Station (4760 MW)
19.1	Conversion of value added product		(%)	9.05	4.54	3.76	4.30	5.28	For the Station (4760 MW)
19.2	For making roads & embarkment		(%)	-	-	-	1.39	4.39	For the Station (4760 MW)
19.3	Land filling		(%)	0.19	0.29	3.80	15.38	14.19	For the Station (4760 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	5.02	20.19	22.50	14.59	15.34	For the Station (4760 MW)
19.5	Any other use , Please specify		Qty. and	10.34	7.10	1.17	2.02	13.84	For the Station (4760 MW)
20	Cost of spares actually consumed		(Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 MW)
21	Average stock of spares		(Rs. Lakhs)	27,679.50	30,046.02	36,748.43	39,369.44	40,122.89	For the Station (4760 MW)
22	Number of employees deployed in O&M		Nos.	1,309	1,151	1,069	1,029	963	For the Station (4760 MW)
22.1	- Executives		Nos.	712	625	606	604	568	For the Station (4760 MW)
22.2	- Non Executives		Nos.	597	526	463	425	395	For the Station (4760 MW)
22.3	- Corporate office		Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (4760 MW)
23	Man-MW ratio		Man/MW	0.28	0.24	0.22	0.22	0.20	For the Station (4760 MW)
24	Total billed amount			As per Annexure C					
24	Total received amount within due date								
24	Total amount received beyond due date								
24	Total amount pending								
24	Total amount under dispute								
24	Total rebate given								
24	Total LPSC recovered								
24	Generation Switchyard Details			Stage-1,2,3 = 400KV lines= Jabalpur-1,2 (360 km each), Korba-1,2 (386 km each), Satna-1,2 (262km each), Rewa- 206km, Sasan- 20km, Satna-3,4 -(254 km each) , 132 KV Lines = Waidhan-1,2 (10 Km each) Stage-4,5 = Pooling line-1,2,3,4 (28km each), (All 400KV)					For the Station (4760 MW)

24	No. of Bays voltageswise		400 kv bays : stage-1 & 2 = 26 bays, stage-3 =11 bays, stage-4 = 17 bays, stage-5 = 12 bays 132 kv bays : stage-1 & 2 = 14 bays, stage-3 =6 bays	For the Station (4760 MW)
24	ICT - nos and rating		Stage-1 & 2 =2 ICTs, stage-3 =1 ICT (All ICTs 400 kv /132 kv)	For the Station (4760 MW)
24	Dedicated transmission line - voltage and length		Not Applicable	For the Station (4760 MW)
* Total ash generated during the Financial Year given ** Weighted average distance of Ash Transported given				

## 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 Limited						
2	Name of Station/ Pit head or Non- Pit head		Vindhyachal Super thermal station / Pit head						
	Stage		Stage-4						
3	Installed Capacity and Configuration	MW	1000MW (500MW X 2)						
3.1	Date of Commercial Operation - Unit Wise		Unit-11 :01.03.2013, Unit-12 :27.03.2014						
3.2	Effective COD		27.03.2015						
4	Make of Turbine		Three Cylinder Reheat Condensing Turbine (KWU)						
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)		Boiler: 1590 TPH/ 540 C/568 C/ 176 KSC						
5	Type of BFP		Steam Driven BFPs						
	Quantity	Per Unit	Two Steam Driven (2 x 50%) + 1 Motor Driven (50%) per unit						
6	Circulating water system		Closed Cycle						
7	Any other Site specific feature								
	Unit heat rate	design					2,300.20		
	Boiler efficiency	design					84.00		
	Turbine cycle heat rate	design					1,932.20		
8	<b>Fuels :</b>								
8.1	<b>Primary Fuel :</b>		Coal						
8.1.1	Annual Allocation under FSA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)	
	Annual Consumption	LMT	50.26	53.49	54.01	49.72	51.86		
	Annual Requirement at NAPA	LMT	47.65	48.31	50.72	48.99	49.37		
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal		Nigahi Silo (G10)/Nigahi WW (G11)/DCH Silo (G10)/JNT Silo(G10)/Amlori WW (G12)					For the Station (4760 MW)	
8.1.2.1	FSA	LoA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
		MoU	LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.2	Imported*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.	Spot Market/e-auction*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.3	Transportation Distance of the station from the sources of supply	KM	12					For the Station (4760 MW)	
8.1.4	Mode of Transport		MGR/ Rail					For the Station (4760 MW)	
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as	Days & LMT	19.5 days/12.76					For the Station (4760 MW)	
8.1.6	Maximum stock maintained for primary fuel	MT	19.98					For the Station (4760 MW)	
	Date		14-02-2019					For the Station (4760 MW)	
8.1.7	Minimum Stock maintained for primary fuel	MT	2.46					For the Station (4760 MW)	
	Date		08-10-2021					For the Station (4760 MW)	
8.1.8	Average stock maintained for primary fuel	MT	11.18					For the Station (4760 MW)	
8.2	<b>Secondary Fuel :</b>		HFO,LDO					For the Station (4760 MW)	
8.2.1	Annual Allocation/ Requirement (ALL 5 STAGES)	KL	17721.48 (full station requirement)					For the Station (4760 MW)	
8.2.2	Sources of supply		IOCL /HPCL/BPCL					For the Station (4760 MW)	
8.2.3	Transportation Distance of the station from the sources of supply	KM	848/1262/1400 (Refinery locations)					For the Station (4760 MW)	
8.2.4	Mode of Transport		Rail					For the Station (4760 MW)	
8.2.5	Maximum Station capability to stock secondary fuels (ALL 5 STAGES)	KL	13902 (full station requirement)					For the Station (4760 MW)	
8.2.6	Maximum Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	9,355.18	9,040.98	9,958.55	9,423.20	8,369.39	For the Station (4760 MW)	
8.2.7	Minimum Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	5,720.10	4,036.20	4,400.26	4,170.15	4,553.33	For the Station (4760 MW)	
8.2.8	Average Stock of secondary oil actually maintained (ALL 5 STAGES)	KL	7,076.03	5,659.12	7,373.24	6,794.84	5,794.70	For the Station (4760 MW)	
9.	<b>Cost of Spares :</b>								
9.1	Cost of Spares capitalized in the books of accounts	(Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 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)	11,612.66	12,578.85	13,259.38	22,415.25	18,365.47	For the Station (4760 MW)	
9.5	Other spares procured with high lead procurement time	(Rs. Lakh)	8,756.70	8,103.16	9,442.62	17,053.37	18,177.15	For the Station (4760 MW)	
10	<b>Generation :</b>								
10.1	-Actual Gross Generation at generator terminals	MU	7,778.36	8,200.02	7,856.45	7,433.59	7,714.51		
10.2	-Actual Net Generation Ex-bus	MU	7,353.96	7,740.00	7,407.13	7,025.79	7,282.27		
10.3	-Scheduled Generation Ex-bus	MU	7,282.54	7,695.42	7,370.72	6,941.91	7,232.43		
11	<b>Average Declared Capacity (DC)</b>	MW	857.31	903.78	863.64	823.59	864.94		
		DC Peak HD %	%	-	-	-	89.93	101.91	
		DC Off Peak HD %	%	-	-	-	90.28	101.74	
		DC Peak LD %	%	-	-	-	87.12	89.28	
		DC Off Peak LD %	%	-	-	-	87.04	89.01	
	Actual Declared Capacity	MU	7,510.04	7,917.15	7,586.23	7,214.66	7,576.85		
	Deemed Declared Capacity	MU							

12	Actual Auxiliary Energy Consumption excluding colony	MU	419.50	456.22	445.85	404.60	428.59	
13	Actual Energy supplied to Colony from the station	MU	4.693	3.800	3.473	3.008	3.229	
	Actual energy supplied to construction activities	MU	0.203	-	-	0.192	0.426	
	Actual energy supplied to long term and medium term beneficiaries	MU	7,265.73	7,689.24	7,159.29	6,875.49	7,315.23	
	Actual energy supplied in short term	MU						
	Energy supplied under bilateral arrangements	MU						
	Energy supplied through exchahnges	MU	4.88	-	-	12.48	0.93	
	Energy supplied under DSM (AG-SG)	MU	71.42	44.58	36.41	83.88	49.84	
	Energy supplied SCED	MU			119.24	64.84	35.61	
14	Primary Fuel :							
14.1	Consumption :							
14.1.1	Domestic coal	From Linked Mines	MT	50,26,148	53,49,313	54,00,787	49,72,265	51,85,826
		From Non-Linkd Mines	MT	NA	NA	NA	NA	NA
		From Integerated Mines	MT	NA	NA	NA	NA	NA
14.1.2	Imported coal		MT	NA	NA	NA	NA	NA
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	4,552.27	4,594.40	4,570.19	4,332.72	4,352.68
		(As Received) - TM Basis as per third	kCal/kg	3,643.99	3,641.18	3,512.81	3,570.40	3,586.66
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-		kCal/kg	4,552.27	4,594.40	4,570.19	4,332.72	4,352.68
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-		kCal/kg	3,643.99	3,641.18	3,512.81	3,570.40	3,586.66
	Ash content in coal (%)		%	32.63	33.34	35.75	34.90	33.92
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)	2,089	2,126	2,211	2,163	2,105	
	Components of landed cost and break up							
		1. Cost of coal,	(Rs/MT)	2,031	2,072	2,117	2,068	2,018
		2. Transportation	(Rs/MT)	41	42	70	68	57
		3. Other charges	(Rs/MT)	17	12	23	27	30
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	NA	NA	NA	NA	NA	NA
	Components of landed cost and break up							
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal	(Rs/MT)	NA	NA	NA	NA	NA	NA
	Components of landed cost and break up							
14.3.4	Weighted Average Landed Price of all the Coals	(Rs/MT)	2,089	2,126	2,211	2,163	2,105	
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			12.76			For the Station (4760 MW)
14.5	Actual daily Average Coal stock maintained	LMT	11.76	17.42	8.44	10.50	7.76	For the Station (4760 MW)
		Days	17.55	26.00	12.60	15.67	11.58	For the Station (4760 MW)
14.5	Actual Transit & Handling Losses for coal/Lignite							For the Station (4760 MW)
14.5.1	Pit- Head Station							For the Station (4760 MW)
14.5.1.1	Transit loss from linked mines	%	0.20	0.20	0.23	0.23	0.29	For the Station (4760 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%	-	-	-	-	-	For the Station (4760 MW)
14.5.1.3	Transit loss of imported coal	%	-	-	-	-	-	For the Station (4760 MW)
14.5.2	Non-Pit Head station		NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.1	Transit loss from linked mines	%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.	%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.3	Transit loss of imported coal	%	NA	NA	NA	NA	NA	For the Station (4760 MW)
15	Secondary Fuel Oil :							
15.1	Consumption	HFO	KL	862	580	780	1,144	734
		LDO	KL	730.00	392.00	717.00	565.00	362.00
15.2	Weighted Average Gross Calorific value (As received)	HFO	(kCal / Lit.)	9,819	9,826	9,834	9,912	9,884
		LDO	(kCal / Lit.)	9,464	9,468	9,462	9,658	8,981
15.3	Weighted Average Price	HFO	(Rs / KL)	29,981	40,203	39,855	43,342	54,468

15.4	Weighted Average Price	LDO	(Rs / KL)	47,802	54,337	50,674	53,512	73,802	
	Actual Average stock maintained	HFO (ALL 5 STAGES)	KL	4,845.06	3,462.40	4,840.21	4,531.07	3,041.10	For the Station (4760 MW)
		LDO (ALL 5 STAGES)	KL	2,230.97	2,196.71	2,533.03	2,263.77	2,753.61	For the Station (4760 MW)
16	Weighted average duration of outages( unit-wise details):								
16.1	Planned Outages (for 2 units)		(Days)	26.43	12.31	17.24	38.67	23.90	
16.2	Forced Outages (for 2 units)		(Days)	4.61	1.76	9.22	8.27	5.15	
	Within control of generator		(Days)	-	-	-	0.09	-	
	beyond control of generator		(Days)	4.61	1.76	9.22	8.18	5.15	
16.3	Number of tripping		Nos.	4	11	10	9	3	
16.4	Number of start-ups:		Nos.	11	12	15	16	6	
16.4.1	Cold Start-up		Nos.	3	1	1	5	2	
16.4.2	Warm Start-up		Nos.	5	1	6	7	3	
16.4.3	Hot start-up		Nos.	3	10	8	4	1	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by								
17.1	Design value of emission control equipment (specify conditions)		mg/NM3			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	
11.0	Actual emission (Stage-I)	SPM	mg/Nm <sup>3</sup>	As per 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		LCM					For the Station (4760 MW)	
	Ash pond capacity as on 31st March		Days					For the Station (4760 MW)	
	Fund available in Ash Fund Account as on 31st March			As per Annexure-B					For the Station (4760 MW)
	Amount utilized from Ash Fund Account								For the Station (4760 MW)
19	Detail of Ash utilization % of fly ash produced		Qty Produced	24.60	32.12	31.24	37.68	53.05	For the Station (4760 MW)
	Ash available as on 31st March *		LMT	79.58	81.86	88.57	87.14	82.38	For the Station (4760 MW)
	Ash utilized for construction of ash dyke		LMT	3.99	16.53	19.93	12.71	11.18	For the Station (4760 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.15	0.24	0.29	0.40	0.36	For the Station (4760 MW)
	Ash transported		LMT	-	-	-	1.21	5.08	For the Station (4760 MW)
	Average Distance **		Km	-	-	-	150.00	150.00	For the Station (4760 MW)
19.1	Conversion of value added product		(%)	9.05	4.54	3.76	4.30	5.28	For the Station (4760 MW)
19.2	For making roads &embarkment		(%)	-	-	-	1.39	4.39	For the Station (4760 MW)
19.3	Land filling		(%)	0.19	0.29	3.80	15.38	14.19	For the Station (4760 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	5.02	20.19	22.50	14.59	15.34	For the Station (4760 MW)
19.5	Any other use , Please specify		Qty. and	10.34	7.10	1.17	2.02	13.84	For the Station (4760 MW)
20	Cost of spares actually consumed		(Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 MW)
21	Average stock of spares		(Rs. Lakhs)	27,679.50	30,046.02	36,748.43	39,369.44	40,122.89	For the Station (4760 MW)
22	Number of employees deployed in O&M		Nos.	1,309	1,151	1,069	1,029	963	For the Station (4760 MW)
22.1	- Executives		Nos.	712	625	606	604	568	For the Station (4760 MW)
22.2	- Non Executives		Nos.	597	526	463	425	395	For the Station (4760 MW)
22.3	- Corporate office		Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (4760 MW)
23	Man-MW ratio		Man/MW	0.28	0.24	0.22	0.22	0.20	For the Station (4760 MW)
24	Total billed amount			As per Annexure C					
24	Total received amount within due date								
24	Total amount received beyond due date								
24	Total amount pending								
24	Total amount under dispute								
24	Total rebate given								
24	Total LPSC recovered								
24	Generation Switchyard Details			Stage-1,2,3 = 400KV lines= Jabalpur-1,2 (360 km each), Korba-1,2 (386 km each), Satna-1,2 (262km each), Rewa- 206km, Sasan- 20km, Satna-3,4 -(254 km each) , 132 KV Lines = Waidhan-1,2 (10 Km each) Stage-4,5 = Pooling line-1,2,3,4 (28km each), (All 400KV)					For the Station (4760 MW)

24	No. of Bays voltageswise		400 kv bays : stage-1 & 2 = 26 bays, stage-3 =11 bays, stage-4 = 17 bays, stage-5 = 12 bays 132 kv bays : stage-1 & 2 = 14 bays, stage-3 =6 bays	For the Station (4760 MW)
24	ICT - nos and rating		Stage-1 & 2 =2 ICTs, stage-3 =1 ICT (All ICTs 400 kv /132 kv)	For the Station (4760 MW)
24	Dedicated transmission line - voltage and length		Not Applicable	For the Station (4760 MW)
* Total ash generated during the Financial Year given ** Weighted average distance of Ash Transported given				



## 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			Vindhychal super thermal station / Non Pit head					
	Stage			Stage-5					
3	Installed Capacity and Configuration		MW	500MW (500MW X 1)					
3.1	Date of Commercial Operation - Unit Wise			Unit-13 :30.10.2015					
3.2	Effective COD			Unit-13 :30.10.2015					
	Make of Turbine			Three Cylinder Reheat Condensing Turbine (KWU)					
4	Rated Steam Parameters (Also state the type of Steam turbine and Boiler)			Boiler: 1590 TPH/ 540 C/568 C/ 176 KSC					
5	Type of BFP			Steam Driven BFPs					
	Quantity		Per Unit	Two Steam Driven (2 x 50%) + 1 Motor Driven (50%)					
6	Circulating water system			Closed Cycle					
7	Any other Site specific feature								
	Unit heat rate	design	Kcal/KWH	2,287.40					
	Boiler efficiency	design	%	84.47					
	Turbine cycle heat rate	design	Kcal/KWH	1,932.20					
8	<b>Fuels :</b>								
8.1	<b>Primary Fuel :</b>			Coal					
8.1.1	Annual Allocation under FSA		LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
	Annual Consumption		LMT	26.52	25.14	28.17	26.51	24.73	
	Annual Requirement at NAPA		LMT	23.82	23.73	25.23	24.36	24.64	
8.1.2	Sources of supply/ procurement along with contracted quantity and grade of coal			Nigahi Silo (G10)/Nigahi WW (G11)/DCH Silo (G10)/JNT Silo(G10)/Amlori WW (G12)					For the Station (4760 MW)
8.1.2.1	FSA	LoA	LMT	207.39	207.39	207.39	225.90	229.44	For the Station (4760 MW)
		MoU	LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.2	Imported*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.2.	Spot Market/e-auction*		LMT	0	0	0	0	0	For the Station (4760 MW)
8.1.3	Transportation Distance of the station from the sources of supply		KM	12					For the Station (4760 MW)
8.1.4	Mode of Transport			MGR/ Rail					For the Station (4760 MW)
8.1.5	Maximum Station capability to stock primary fuel (for days consider availability as		Days & LMT	19.5 days/12.76					For the Station (4760 MW)
8.1.6	Maximum stock maintained for primary fuel		MT	19.98					For the Station (4760 MW)
	Date			14-02-2019					For the Station (4760 MW)
8.1.7	Minimum Stock maintained for primary fuel		MT	2.46					For the Station (4760 MW)
	Date			08-10-2021					For the Station (4760 MW)
8.1.8	Average stock maintained for primary fuel		MT	11.18					For the Station (4760 MW)
8.2	<b>Secondary Fuel :</b>			HFO,LDO					For the Station (4760 MW)
8.2.1	Annual Allocation/ Requirement (ALL 5 STAGES)		KL	17721.48 (full station requirement)					For the Station (4760 MW)
8.2.2	Sources of supply			IOCL /HPCL/BPCL					For the Station (4760 MW)
8.2.3	Transportation Distance of the station from the sources of supply		KM	848/1262/1400 (Refinery locations)					For the Station (4760 MW)
8.2.4	Mode of Transport			Rail					For the Station (4760 MW)
8.2.5	Maximum Station capability to stock secondary fuels (ALL 5 STAGES)		KL	13902 (full station requirement)					For the Station (4760 MW)
8.2.6	Maximum Stock of secondary oil actually maintained (ALL 5 STAGES)		KL	9,355.18	9,040.98	9,958.55	9,423.20	8,369.39	For the Station (4760 MW)
8.2.7	Minimum Stock of secondary oil actually maintained (ALL 5 STAGES)		KL	5,720.10	4,036.20	4,400.26	4,170.15	4,553.33	For the Station (4760 MW)
8.2.8	Average Stock of secondary oil actually maintained (ALL 5 STAGES)		KL	7,076.03	5,659.12	7,373.24	6,794.84	5,794.70	For the Station (4760 MW)
9.	<b>Cost of Spares :</b>								
9.1	Cost of Spares capitalized in the books of accounts		(Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 MW)
9.2	Cost of spares included in capital cost for the purpose of tariff		(Rs. Lakh)	7950.06					
9.3	Initial spares-list, quantity and cost		(Rs. Lakh)	8978.73					
9.4	Maintenance spares - cost		(Rs. Lakh)	11,612.66	12,578.85	13,259.38	22,415.25	18,365.47	For the Station (4760 MW)
9.5	Other spares procured with high lead procurement time		(Rs. Lakh)	8,756.70	8,103.16	9,442.62	17,053.37	18,177.15	For the Station (4760 MW)
10	<b>Generation :</b>								
10.1	-Actual Gross Generation at generator terminals		MU	4,122.43	3,875.00	4,085.30	3,984.40	3,663.68	
10.2	-Actual Net Generation Ex-bus		MU	3,891.51	3,653.66	3,851.86	3,738.67	3,429.58	
10.3	-Scheduled Generation Ex-bus		MU	3,865.67	3,627.45	3,844.07	3,696.74	3,419.81	
11	<b>Average Declared Capacity (DC)</b>		MW	466.84	432.54	456.99	447.82	420.30	
		DC Peak HD %	%	-	-	-	92.98	102.11	
		DC Off Peak HD %	%	-	-	-	93.19	102.59	
		DC Peak LD %	%	-	-	-	98.11	86.35	
		DC Off Peak LD %	%	-	-	-	97.63	86.68	
	Actual Declared Capacity		MU	4,089.55	3,789.06	4,014.16	3,922.87	3,681.81	
	Deemed Declared Capacity		MU						

12	Actual Auxiliary Energy Consumption excluding colony	MU	228.43	219.55	231.63	244.12	232.57	
13	Actual Energy supplied to Colony from the station	MU	2.487	1.797	1.812	1.613	1.534	
	Actual energy supplied to construction activities	MU						
	Actual energy supplied to long term and medium term beneficiaries	MU	3,846.72	3,620.70	3,660.57	3,645.54	3,467.25	
	Actual energy supplied in short term	MU						
	Energy supplied under bilateral arrangements	MU						
	Energy supplied through exchahnges	MU	3.02	-	-	4.60	0.98	
	Energy supplied under DSM (AG-SG)	MU	25.84	26.21	7.79	41.93	9.77	
	Energy supplied SCED	MU			101.64	50.83	6.82	
14	Primary Fuel :							
14.1	Consumption :							
14.1.1	Domestic coal							
	From Linked Mines	MT	26,52,210	25,13,537	28,16,645	26,51,328	24,72,501	
	From Non-Linkd Mines	MT	NA	NA	NA	NA	NA	
	From Integerated Mines	MT	NA	NA	NA	NA	NA	
14.1.2	Imported coal	MT	NA	NA	NA	NA	NA	
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	4,552.27	4,594.40	4,570.19	4,332.72	4,352.68	
	(As Received) - TM Basis as per third	kCal/kg	3,638.55	3,625.23	3,502.63	3,584.92	3,573.11	
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	4,552.27	4,594.40	4,570.19	4,332.72	4,352.68	
14.2.5	Weighted Average Gross Calorific value (Domestic+Imported+Spot/e-auction) (As Received)	kCal/kg	3,638.55	3,625.23	3,502.63	3,584.92	3,573.11	
	Ash content in coal (%)	%	32.63	33.34	35.75	34.90	33.92	
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)	2,089	2,126	2,211	2,163	2,105	
	Components of landed cost and break up							
	1. Cost of coal,	(Rs/MT)	2,031	2,072	2,117	2,068	2,018	
	2. Transportation	(Rs/MT)	41	42	70	68	57	
	3. Other charges	(Rs/MT)	17	12	23	27	30	
14.3.2	Weighted Average Landed Price of Imported coal	(Rs/MT)	NA	NA	NA	NA	NA	
	Components of landed cost and break up							
14.3.3	Weighted Average Landed Price of Spot market / e-auction coal	(Rs/MT)	NA	NA	NA	NA	NA	
	Components of landed cost and break up							
14.3.4	Weighted Average Landed Price of all the Coals	(Rs/MT)	2,089	2,126	2,211	2,163	2,105	
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			12.76			For the Station (4760 MW)
14.5	Actual daily Average Coal stock maintained	LMT	11.76	17.42	8.44	10.50	7.76	For the Station (4760 MW)
		Days	17.55	26.00	12.60	15.67	11.58	For the Station (4760 MW)
14.5	Actual Transit & Handling Losses for coal/Lignite							For the Station (4760 MW)
14.5.1	Pit- Head Station							For the Station (4760 MW)
14.5.1.1	Transit loss from linked mines	%	0.20	0.20	0.23	0.23	0.29	For the Station (4760 MW)
14.5.1.2	Transit loss from non-linked mines including e-auction coal mines.	%	-	-	-	-	-	For the Station (4760 MW)
14.5.1.3	Transit loss of imported coal	%	-	-	-	-	-	For the Station (4760 MW)
14.5.2	Non-Pit Head station		NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.1	Transit loss from linked mines	%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.2	Transit loss from non-linked mines including e-auction coal mines.	%	NA	NA	NA	NA	NA	For the Station (4760 MW)
14.5.2.3	Transit loss of imported coal	%	NA	NA	NA	NA	NA	For the Station (4760 MW)
15	Secondary Fuel Oil :							
15.1	Consumption							
	HFO	KL	-	-	-	-	-	
	LDO	KL	281.00	1,181.00	298.00	808.00	591.00	
15.2	Weighted Average Gross Calorific	(kCal / Lit.)	-	-	-	-	-	

15.4	value (As received)	LDO	(kCal / Lit.)	9,469.20	9,457.25	9,458.45	9,590.49	9,038.21	
15.3	Weighted Average Price	HFO	(Rs / KL)	29,981	40,203	39,855	43,342	54,468	
		LDO	(Rs / KL)	47,802	54,337	50,674	53,512	73,802	
15.4	Actual Average stock maintained	HFO (ALL 5 STAGES)	KL	4,845.06	3,462.40	4,840.21	4,531.07	3,041.10	For the Station (4760 MW)
		LDO (ALL 5 STAGES)	KL	2,230.97	2,196.71	2,533.03	2,263.77	2,753.61	For the Station (4760 MW)
16	Weighted average duration of outages( unit-wise details):								
16.1	Planned Outages (for 2 units)		(Days)	-	24.61	-	14.58	33.03	
16.2	Forced Outages (for 2 units)		(Days)	2.63	5.80	4.47	5.88	8.31	
	Within control of generator		(Days)	2.62	0.32	-	-	-	
	beyond control of generator		(Days)	0.00	5.47	4.47	5.88	8.31	
16.3	Number of tripping		Nos.	1	3	1	1	0	
16.4	Number of start-ups:		Nos.	1	7	2	5	5	
16.4.1	Cold Start-up		Nos.	1	1	1	3	1	
16.4.2	Warm Start-up		Nos.	0	4	0	1	3	
16.4.3	Hot start-up		Nos.	0	2	1	1	1	
17	NOx , SOx ,and other particulate matter emission in : at conditions specified by								
17.1	Design value of emission control equipment (specify conditions)		mg/NM3	SOx: 200; NOx: 450					Norms as per MOEF&CC
	FGD installation date								
	NOx Control system installation date			NA	NA	NA	NA	NA	
11.0	Actual emission (Stage-I)	SPM	mg/Nm <sup>3</sup>	As per 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		LCM					For the Station (4760 MW)	
	Ash pond capacity as on 31st March		Days					For the Station (4760 MW)	
	Fund available in Ash Fund Account as on 31st March			As per Annexure-B					For the Station (4760 MW)
	Amount utilized from Ash Fund Account							For the Station (4760 MW)	
19	Detail of Ash utilization % of fly ash produced		Qty Produced	24.60	32.12	31.24	37.68	53.05	For the Station (4760 MW)
	Ash available as on 31st March *		LMT	79.58	81.86	88.57	87.14	82.38	For the Station (4760 MW)
	Ash utilized for construction of ash dyke		LMT	3.99	16.53	19.93	12.71	11.18	For the Station (4760 MW)
	Ash utilized within plant premise, other than construction of ash dyke		LMT	0.15	0.24	0.29	0.40	0.36	For the Station (4760 MW)
	Ash transported		LMT	-	-	-	1.21	5.08	For the Station (4760 MW)
	Average Distance **		Km	-	-	-	150.00	150.00	For the Station (4760 MW)
19.1	Conversion of value added product		(%)	9.05	4.54	3.76	4.30	5.28	For the Station (4760 MW)
19.2	For making roads & embarkment		(%)	-	-	-	1.39	4.39	For the Station (4760 MW)
19.3	Land filling		(%)	0.19	0.29	3.80	15.38	14.19	For the Station (4760 MW)
19.4	Used in plant site in one or other form or used in some other site		(%)	5.02	20.19	22.50	14.59	15.34	For the Station (4760 MW)
19.5	Any other use , Please specify		Qty. and	10.34	7.10	1.17	2.02	13.84	For the Station (4760 MW)
20	Cost of spares actually consumed		( Rs. Lakh)	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27	For the Station (4760 MW)
21	Average stock of spares		(Rs. Lakhs)	27,679.50	30,046.02	36,748.43	39,369.44	40,122.89	For the Station (4760 MW)
22	Number of employees deployed in O&M		Nos.	1,309	1,151	1,069	1,029	963	For the Station (4760 MW)
22.1	- Executives		Nos.	712	625	606	604	568	For the Station (4760 MW)
22.2	- Non Executives		Nos.	597	526	463	425	395	For the Station (4760 MW)
22.3	- Corporate office		Nos.	2,568	2,241	2,016	1,815	1,728	For the Station (4760 MW)
23	Man-MW ratio		Man/MW	0.28	0.24	0.22	0.22	0.20	For the Station (4760 MW)
24	Total billed amount			As per Annexure C					
24	Total received amount within due date								
24	Total amount received beyond due date								
24	Total amount pending								
24	Total amount under dispute								
24	Total rebate given								
24	Total LPSC recovered								
24	Generation Switchyard Details								Stage-1,2,3 = 400KV lines= Jabalpur-1,2 (360 km each), Korba-1,2 (386 km each), Satna-1,2 (262km each), Rewa- 206km, Sasan- 20km, Satna-3,4 -(254 km each) , 132 KV Lines = Waidhan-1,2 (10 Km each) Stage-4,5 = Pooling line-1,2,3,4 (28km each), (All 400KV)

24	No. of Bays voltageswise		400 kv bays : stage-1 & 2 = 26 bays, stage-3 =11 bays, stage-4 = 17 bays, stage-5 = 12 bays 132 kv bays : stage-1 & 2 = 14 bays, stage-3 =6 bays	For the Station (4760 MW)
24	ICT - nos and rating		Stage-1 & 2 =2 ICTs, stage-3 =1 ICT (All ICTs 400 kv /132 kv)	For the Station (4760 MW)
24	Dedicated transmission line - voltage and length		Not Applicable	For the Station (4760 MW)
* Total ash generated during the Financial Year given ** Weighted average distance of Ash Transported given				

**Annexure-V (C)**

Name of the Company: NTPC LTD.  
 CoD of Units/Stations: 1.02.1992  
 Name of the Power Station: Vindhyachal STPS Stage-I

Rs. Lakh

**1 Allowance and Special Allowance during the Period 2009-10 to 2021-22**

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	Effective Special allowance	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 on 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 9(2)		Capitalisation out of Compensation allowance in the stations wherever		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	4	5	6	7 = 4* 6	8 = 5 * 6	9		10		11		12=10+11	13	14=(2+3+7+8)-	15	16=9+12+13+15	17	18	
				(%)			Asset/work	(Rs.lakh)	Asset/work	(Rs.lakh)	Asset/work	(Rs.lakh)	(Rs. Lakhs)							
2009-10	220.93	567	Nil	33.99	374.28		Ash Handling System	1.41	Acoustic Leak Detection System (ADLS)	312.00			330.52	0	43.76	471.36	1022.81	558.30	Decap of MBOA: (-) 72.89, Decap Spares: (-) 218.07, ALDS decap: (-) 46.33, (-) 0.09 ERV: (-) 132.17 Works ERV: 5.04	
							AAQMS	121.38	MBOA	2.40										
							DDCMS	13.12	T/S	16.12										
							COLTS	61.68												
							Online bunker	23.34												
							Total	220.93	Total	330.52	0								558.29	
2010-11	4.42	630	Nil	33.22	420.73		COLTS	4.42	GT	955.20			983.65	0	-562.93	718.78	1706.86	1477.06	Decap of MBOA: (-) 17.47, Decap of ERV: (-) 1.11	
									Energy Management Sys	25.74										
									MBOA	2.72										
							Total	4.42	Total	983.65	0									
2011-12	0	756	Nil	32.445	510.72				PLCC	30.36			31.11	0.00	479.61	373.03	404.14	353.26	Decap of spares: (-) 188.06, Decap of ERV: (-) 1.11	
									Supply of Energy Managet	0.54										
									Ambient Air Quality Monitoring System	0.20										
							Total	0	Total	31.11	0									
2012-13	1074.91	819	Nil	32.445	553.28		Ash handling System	1074.91	DVR	93.65			135.46	0	417.82	922.99	2133.36	1604.38	Decap of spares: (-) 388.78 Decap of GT: (-) 173.03, Decap of MBOA: (-) 33.93, rev of	
									Ash brick manufacturing machines	40.58332										
									Permission fee Stage	1.22875										
							Total	1074.91	Total	135.46207	0									
2013-14	291.71	819	Nil	33.99	540.62		Ash handling System	97.1	GT	1015.72										
							RIHAND SUBMERGEN CE LAND	194.61	DVR	117.95			1179.27	0	-638.65	926.01	2396.99	3381.84	Decap of spares-Part of CC: (-) 503.21, Cap spares (notPart of CC): (-) 4.1, IIT: (-) 19.45 5 km	
									Misc capitalisation in Plant & machinery	45.6										
							Total	291.71	Total	1179.27										
2014-15	139.1	840	3150	20.96	663.93	2489.74	Ash Dyke works	139.1	Bio diesel Plant	133.38	Ash related works	236.23	1427.07	0.00	1726.61	1673.30	3239.47	2724.20	3 km scheme: Rs. 27.72 lakhs has been claimed as	
									GT	1018.49										
									MBOA	38.97										
							Total	139.1	Total	1190.84	Total	236.23							3380.31	
2015-16	NIL	630	5025	21.34	495.55	3952.58	NA		GT	888.28			1720.69	0.00	2727.45	1056.97	2777.65	308.03	Decap of spares: (-) 188.06, Decap of ERV: (-) 1.11	





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 14(3)/26(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	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 14 (3)		Capitalisation out of Compensation allowance in the stations wherever applicable		Capitalisation out of Special Allowance allowed in the stations where applicable									
				(%)	7 = 4* 6	8 = 5 * 6	Asset/work	Rs(Lakh)	Asset/work	Rs(Lakh)- Gross	Asset/work	(Rs. lakh)	(Rs. Lakhs)	Excluding items in columns(7,8 &9)						
1	2	4	5	6	7 = 4* 6	8 = 5 * 6	9		10		11		12=10+11	13	14=(+7+8)-(9+12+13)	15	16=9+12+13+15	17	18	
2014-15	1287.39	200		20.96	158.08		Ash dyke raising	979.9												
							Inert Gas Fire Ext.*	249.41	EMS	7.15			7.15	0.00	150.93	958.48	2253.02	1641.37	Decap of spares- (-)601.91 , ERV:-15.07; IUT: - 0.59; Liability Reversal : -117.8	
							Contractors; ERV*	58.08												
							<b>Total</b>	<b>1287.39</b>	<b>Total</b>	<b>7.15</b>										
2015-16	1251.59	200		21.34	157.32		Ash dyke raising	1247.21					0.00	1110.11	-952.79	609.20	2970.90	2444.17	Decap of spares: (-) 301.98; liability reversal -224.75	
							Contractors; ERV*	4.38												
							<b>Total</b>	<b>1251.59</b>	<b>Total</b>	<b>0</b>										
2016-17	1223.9	500		21.34	393.29		Ash dyke raising	1223.9	MBOA	112.6		0	112.60	6576.15	-6182.86	903.15	8815.80	7431.21	Dec. Spares: -1249 ; Mis. Works : 29.65 ; FERV : -1.38 Other Decap. -295.65	
							<b>Total</b>	<b>1223.9</b>		<b>112.6</b>										
2017-18	-0.12	500		21.34	393.29		works ERV	-0.12	Buildings	6.44		0	6.44	3088.35	-2695.06	1154.18	4248.85	3405.74	Dec. Spares: -667.4 ; Other Decap. -175.71	
							<b>Total</b>	<b>-0.12</b>		<b>6.44</b>										
2018-19	0	500		21.34	393.29							0	0.00	3888.79	-3495.50	1021.15	4909.94	4062.17	Dec. Spares: -802.67 ; FERV :- 38.08	
							<b>Total</b>	<b>0</b>		<b>0</b>										
2019-20	809	0	0		0.00		Ash Dyke	809						451.52	-451.52	707.07	1967.59	1605.39	Dec spares: -512.83; Loan FERV: 150.24	
							<b>Total</b>	<b>809</b>												
2020-21	327.07	0	0		0.00		Ash Dyke	327.07					0.00	558.19	-558.19	3323.95	4209.21	2601.45	Dec spares: -1442.53; Loan FERV: 98.29; Other de-cap: -187.34; IUT:-74.21	
							<b>Total</b>	<b>327.07</b>												

Note: Expenditure of MBOA and other items is met from Compensation Allowance , accordingly indicated



Name of Generating Station : Vindhyachal Stage-III (1000 MW)

Stage: III

COD of Units/Station : 15.07.2007

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						Capitalisation done which has not been claimed/ allowed in the tariff	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 9(2)		Capitalisation out of Compensation allowance in the stations wherever applicable		Capitalisation out of Special Allowance allowed in the stations where applicable								Capitalisation done which has not been claimed/ allowed in the tariff	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	Asset/work	(Rs. lakh)	
							Asset/work	Rs(Lakh)	Asset/work	Rs(Lakh)-Gross	Asset/work	Rs. lakh)															
1	2	4	5	6	7 = 4* 6	8 = 5 * 6	9		10		11		12=10+11	13	14=(2+7+8)-(9+12+13)	15	16=9+12+13+15	17	18								
2009-10	3258.85	0.00	0.00	33.99	0.00	0.00	CIVIL WORKS OF ASH DYKE FOR LAGOON V-3	4.83												Inter Unit Transfers	-1342.15						
							work adjustment	259.01																Loan FERV	-3430.98		
							AUGMENTATION OF RAILWAY SLIDING & MGR SYSTEM	2559.16																	Reversal of liability	-176.99	
							Capital Spares	1059.35																	Decapitalisation of MBOA items	-30.50	
							Decapitalisation of spares	-249.17																			
							SUPPLY & INST OF NEW LIFT FOR ADMN BLDG	15.62											593.05	-998.33	739.73	4996.91	16.28				
							COMMISSIONING OF AC IN ADM BUILDING AT NTPC.	3.54																			
							Digital audio conference system for the conference hall of Admn. Bldg	11.80																			
							<b>Total</b>	<b>3664.13</b>						<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>0.00</b>						<b>Total</b>	<b>-4980.63</b>
2010-11	3250.55	0.00	0.00	33.22	0.00	0.00	work adjustment	14.31												I/U Transfer	-136.15						
							Supply and installation of CCTV system	76.53																Decapitalisation of MBOA items	-36.47		
							Locomotive	2952.06											50.52	137.52	358.08	3471.11	2909.86		Loan FERV	-256.74	
							Equipment for Cable TV System(Supply)	9.03																	Reversal of liability	-131.89	
							Cable laying for revamping of cable TV network	10.59																			
							<b>Total</b>	<b>3062.51</b>						<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>0.00</b>						<b>Total</b>	<b>-561.25</b>
2011-12	453.03	0.00	0.00	32.45	0.00	0.00	Work adjustment	2.47		0										Decapitalisation of MBOA	-16.84						
							Supply and installation of CCTV system	0.73		0														Loan FERV	3734.40		
							ED cess	145.70		0															Reversal of liability	-0.67	
							Equipment for Cable TV System(Supply)	0.10		0									22.55	-22.55	177.29	754.72	4471.60				
							Cable laying for revamping of cable TV network	1.19		0																	
							Fire fighting system	404.70		0																	
<b>Total</b>	<b>554.88</b>						<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>0.00</b>						<b>Total</b>	<b>3716.89</b>							
2012-13	441.68	0	0	32.445	0	0	Supply of 50 MVAR shunt reactor with NGR	448.15												Inter unit Transfer	-114.86						
							SAP (ERP -SOFTWARE)	-5.98																Decapitalisation of	-43.21		
							Construction of Parking Shed near Service Building	-0.49											456.88	-456.88	284.37	1182.93	2765.01		Decapitalisation of Spares	-162.44	
																									Loan FERV	1913.88	
							<b>Total</b>	<b>441.68</b>						<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>0.00</b>						<b>Total</b>	<b>1582.08</b>
2013-14	516.04	0.00	0.00	33.99	0.00	0.00	Ash Dyke raising and CIVIL WORKS OF ASH DYKE FOR LAGOON V-3	602.59												Decapitalisation of capital Spares	-154.00						
							ROAD NORTH WEST TOWNSHIP	-39.92											27.41	-27.41	862.43	1452.51	4615.22		Loan FERV	3325.95	
								0																	Reversal of Liability	-9.24	
							<b>Total</b>	<b>562.67</b>						<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>Total</b>	<b>0.00</b>	<b>0.00</b>					<b>Total</b>	<b>3162.71</b>	

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 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 Regulation 14(3)		Expenditure allowed by the Commission in the tariff period 2009- Capitalisation out of Special Allowance in the stations wherever applicable		Capitalisation done which has not been claimed/ allowed in the tariff	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.								
							Asset/work	Rs(Lakh)	Asset/work	Rs(Lakh)-Gross								Asset/work	Rs. lakh						
1	2	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	9130.95	0	0	20.9605	0	0	Ash Dyke	578.28											Loan FERV	1505.43					
							Wagon Tippler	8562.69															Inter Unit Transfer	-844.61	
							SG Area Civil works	-10.02																Decapitalisation of Spares	-1181.98
																								Decapitalisation of MBOA	-0.59
							<b>Total</b>	<b>9130.95</b>						<b>Total</b>	<b>0.00</b>									<b>Total</b>	<b>-521.75</b>
2015-16	2589.26	0.00	0.00	21.34	0.00	0.00	Ash Dyke	7.09											Loan FERV	3218.04					
							Wagon Tippler	2582.17															Decapitalisation of Spares	-365.48	
																								Decapitalisation of MBOA	-38.96
							<b>Total</b>	<b>2589.26</b>					<b>Total</b>	<b>0.00</b>										<b>Total</b>	<b>2813.60</b>
																									De-cap of spares
2016-17	1208.68	0	0	0	0	0	Ash Dyke	708											De-cap of MBOA	-2.73					
							Wagon Tippler	500.68															IUT	-0.5	
							<b>Total</b>	<b>1208.68</b>																<b>Total</b>	<b>-276.4</b>
																									arrears water charges
2017-18	965.04	100	0	21.342	78.658	0	Ash Dyke	794.53											Decap of spares	-496.06					
							Wagon Tippler	170.51															Liability reversal	-26.1	
																								IUT	-4.32
							<b>Total</b>	<b>965.04</b>																<b>Total</b>	<b>2009.51</b>
2018-19	238.8	200	0	21.549	156.902	0	Ash Dyke	19.1											De-cap of spares	-921.7					
							Wagon Tippler	80.6															Liab reversal	-116.7	
							Other claims	139.1																	
							<b>Total</b>	<b>238.8</b>																<b>Total</b>	<b>-1038.4</b>
2019-20	663.21	0	0	0	0	0	Ash Dyke works	663.21											De-cap of spares	-315.99					
																							Adjustment	-91.95	
							<b>Total</b>	<b>663.21</b>															<b>Total</b>	<b>-407.94</b>	
2020-21	553.18	0	0	0	0	0	Ash Dyke works	578.08											De-cap of spares	-877.51					
							cost adjustment	-24.9																IUT	-49.56
							<b>Total</b>	<b>553.18</b>															<b>Total</b>	<b>-927.07</b>	

## DETAILS OF WATER CHARGES

Name of the Company: NTPC Limited

Name of the Power Station and Stage/Phase: Vindhyachal STPS (4760 MW)

(Rs. In Lakhs)

Sl.No.	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
<b>(A)</b>	<b>Plant</b>	Vindhyachal Super Thermal Power Station				
1	Type of Plant	Coal Based Plant				
2	Type of Cooling Tower	Induced draft cooling tower				
3	Type of Cooling Water System	Closed cycle				
4	Any Special Features which may increase/reduce water consumption					
<b>(B)</b>	<b>Quantum of Water : ( Cubic Meter)</b>	For whole station (All 5 stages)				
5	Contracted Quantum	14,91,30,000	14,91,30,000	14,91,30,000	14,91,30,000	14,91,30,000
6	Allocation of Water	14,91,30,000	14,91,30,000	14,91,30,000	14,91,30,000	14,91,30,000
7	Actual water Consumption	12,59,88,396	13,26,84,427	11,20,13,558	10,85,69,786	10,64,97,431
8.	Rate of Water Charges	5.5	5.5	5.5	5.5	6.6
9	Other charges/Fees , if paid as part of Water Charges					
10	<b>Total water Charges Paid</b>	<b>32,937.21</b>	<b>7,724.26</b>	<b>7,402.16</b>	<b>7,381.94</b>	<b>8,902.45</b>

### Details of capital Spares

Name of Company : NTPC Limited

Name of Power station : Vindhyachal STPS

(Rs. In Lakhs)

Sl . No.	ITEM	2017-18	2018-19	2019-20	2020-21	2021-22
(A)	Details of capital spares in Opening stock	39,256.96	48,650.63	57,117.15	64,600.51	72,545.27
(B)	Details of capital spares procured during the year	11,419.42	12,008.00	8,528.26	12,433.16	21,345.27
(C)	Details of capital spares consumed during the year	2,025.75	3,541.48	1,044.91	4,488.41	4,661.37
(D)	Details of capital spares closing at the end of the year	48,650.63	57,117.15	64,600.51	72,545.27	89,229.17



## Annexure-XIX

Name of Utility:	NTPC LTD
Name of Generating Station:	Vindhyachal STPS St-II
Station Configuration:	2 X 500 = 1000 MW
Capacity (MW):	1000 MW
COD:	01.10.2000

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)	%	89.79	94.72	96.36	93.25	95.01	97.05	97.10	89.65	94.17	95.00	85.11	88.39	86.91	91.86	90.92	84.82	93.69	87.61
2	Plant Load Factors (PLF)	%	87.79	92.18	94.59	91.25	93.00	95.69	93.98	87.73	89.67	88.09	79.10	75.46	73.80	89.18	88.72	78.76	86.81	81.90
2a	Loading Factor ^	%													95.54	96.86	92.97	95.35	94.29	
3	Scheduled Energy	MU	7,191.97	7,570.91	7,828.14	7,569.40	7,698.90	7,933.09	7,766.49	7,236.53	7,402.72	7,329.75	6,433.98	6,170.42	6,105.30	7,373.51	7,348.51	6,545.07	7,159.61	6,742.29
4	Scheduled Generation	MU	7,191.97	7,570.91	7,828.14	7,569.40	7,698.90	7,933.09	7,766.49	7,236.53	7,402.72	7,329.75	6,433.98	6,170.42	6,105.30	7,373.51	7,348.51	6,545.07	7,159.61	6,742.29
5	Actual Generation (Gross)	MU														7,812.11	7,771.67	6,917.96	7,604.70	7,174.47
6	Actual Generation (ex-bus)	MU														7,363.49	7,315.34	6,469.53	7,121.40	6,717.75
7	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	7,332.21	7,695.09	7,878.92	7,618.60	7,734.00	7,977.26	7,827.50	7,279.06	7,400.63	7,275.03	6,332.50	6,065.20	5,986.49	7,362.64	7,343.12	6,459.40	7,158.31	6,815.43
8	Quantum of coal consumption	MT	46,31,260	50,85,910	52,84,517	52,34,961	54,71,350	55,49,583	54,59,611	51,58,371	56,40,211	53,07,033	48,38,044	45,71,001	43,46,732	50,84,592	50,72,485	48,10,429	51,42,697	48,48,093
9	Value of coal	Rs. Lakh																		
10	Specific Coal Consumption	kg/kWh	0.60	0.63	0.64	0.65	0.67	0.66	0.66	0.67	0.72	0.69	0.70	0.69	0.67	0.65	0.65	0.70	0.68	0.68
11	Gross Calorific Value of Coal	(Kcal/ Kg)	3,983	3,755	3,686	3,593	3,497	3,538	3,500	3,440	3,271	3,418	3,375	3,421	3,597	3,637	3,645	3,428**	3,506**	3,528**
12	Heat Contribution of Coal	(Kcal/ kWh)	2,399	2,365	2,351	2,347	2,348	2,342	2,321	2,357	2,349	2,351	2,356	2,359	2,419	2,367	2,379	2,384	2,371	2,384
13	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)																		
14	Quantum of Oil Consumption	(KL)	1,147.69	1,279.50	464.11	1,052.52	1,050.30	1,389.97	702.56	1,802.70	953.04	1,247.15	2,231.80	2,771.79	3,098.00	1,594.00	1,698.00	2,490.00	1,677.00	2,483.00
15	Value of Oil	(Rs. lakh)																		
16	Gross calorific value of oil	(kcal/lit)	9,730.00	9,731.00	9,735.00	9,293.90	9,095.91	9,725.33	9,729.45	9,771.10	9,716.42	9,714.32	9,717.03	9,731.08	9,788.52	9,850.88	9,811.81	9,834.72	9,767.12	9,723.36
17	Specific Oil Consumption	(ml/kWh)	0.15	0.16	0.06	0.13	0.13	0.17	0.09	0.23	0.12	0.16	0.32	0.42	0.48	0.20	0.22	0.36	0.22	0.35
18	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)																		
19	Heat Contribution of Oil	(Kcal/ kWh)	1.45	1.54	0.55	1.22	1.17	1.61	0.83	2.29	1.18	1.57	3.13	4.07	4.69	2.01	2.14	3.54	2.15	3.37
20	Station Heat Rate	(Kcal/ kWh)	2,400	2,366	2,351	2,348	2,350	2,344	2,322	2,297	2,352	2,350	2,362	2,423	2,369	2,423	2,369	2,381	2,387	2,373
21	Auxiliary Energy Consumption	(%)	5.94	5.89	5.66	5.64	5.84	5.70	6.00	5.93	5.96	5.80	5.95	5.98	6.33	5.68	5.83	6.44	6.31	6.32
22	Debt at the end of the year	(Rs. Crore)	1,067.13	917.64	761.00	594.92	470.78													
23	Equity - Average	(Rs. Crore)	741.15	744.44	744.54	745.78	747.48	743.03	744.16	744.71	745.32	752.15	761.04	764.96	766.76	765.54	763.25	763.25	765.08	768.39
24	Working Capital – finally admitted by CERC	(Rs. Crore)	252.19	254.24	256.65	259.88	253.96	378.76	380.64	384.31	386.94	379.58	403.02	407.44	410.35	422.05	428.02	397.14	400.59	404.10
25	Working Capital – finally admitted by CERC	(Rs. Crore)	2,551.24	2,551.24	2,551.24	2,551.24	2,551.24	2,476.78	2,480.54	2,482.38	2,484.40	2,507.17	2,536.80	2,549.88	2,555.89	2,551.81	2,544.17	2,544.15	2,550.26	2,563.91
26	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	441.51	444.13	449.64	451.39	398.55	509.20	507.92	512.26	518.14	459.04	444.92	455.74	467.03	479.42	493.07	500.58	507.67	516.88
27	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009																			
28	Absolute value	(Rs. Crore)	107.15	107.15	107.15	107.15	107.15	174.47	172.72	170.87	171.01	176.61	149.24	150.74	151.09	150.85	150.80	143.35	143.70	144.32
29	Rate	(%)	23.48	23.48	23.48	23.48	23.48	23.21	23.21	22.94	22.94	23.48	19.61	19.71	19.71	19.71	19.76	18.78	18.78	18.78
30	(b) interest on Loan																			
31	Absolute value	(Rs. Crore)	70.98	64.13	58.34	46.31	31.73	14.88	7.69	3.88	0.89	-	-	-	-	-	-	-	-	-
32	Rate – Weighted Average Rate	(%)	6.25	6.46	6.95	6.83	5.95	3.83	3.00	2.96	2.61	-	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
33	(c) Depreciation (finally allowed by CERC)																			
34	Absolute value	(Rs. Crore)	92.64	92.64	92.64	92.64	92.64	126.95	126.98	127.08	127.24	55.53	56.35	57.44	58.03	58.64	58.53	59.40	60.43	63.23
35	AAD		51.29	56.85	64.00	73.45	31.50													
36	Rate	(%)	4.74	4.74	4.74	4.74	4.74								4.74					
37	(d) Interest on working Capital																			
38	Absolute value	(Rs. Crore)	25.85	26.06	26.31	26.64	26.03	46.40	46.63	47.08	47.40	46.50	54.41	55.00	55.40	56.98	57.78	47.86	45.07	42.43
39	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
40	(e) Operation and maintenance cost (finally admitted by CERC)																			
41	Absolute value	(Rs. Crore)	93.60	97.30	101.20	105.20	109.50	130.00	137.40	145.30	153.60	162.40	182.92	190.56	197.51	207.96	220.97	249.97	258.48	266.88
42	Rate	(%)																		
43	(f) Compensation Allowances	(Rs. Crore)								1.50	1.50	1.50	2.00	2.00	5.00	5.00	5.00			
44	(g) Special Allowance	(Rs. Crore)																		
45	(h) Supplementary Tariff - Emission Control		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	Absolute value	(Rs. Crore)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	Rate	(%)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
48	(i) Ash Utilisation Expenses *	(Rs. Crore)																	20.71	58.73
49	AFC	(Rs./ kWh)	0.63	0.64	0.65	0.65	0.57	0.73	0.73	0.74	0.74	0.66	0.63	0.65	0.67	0.68	0.70	0.72	0.73	0.75
50	Energy Charge	(Rs./kWh)	0.77	0.84	0.93	0.99	1.18	1.16	1.42	1.55	1.40	1.51	1.57	1.59	1.72	1.55	1.49	1.69	1.59	1.55
51	Supplemental Energy Charges - Emission Control	(Rs./kWh)																		
52	Total tariff	(Rs. kWh)	1.40	1.48	1.58	1.64	1.75	1.89	2.15	2.29	2.14	2.17	2.22	2.24	2.38	2.23	2.19	2.41	2.32	2.30
53	Revenue realisation before tax	(Rs. Crore)																		
54	Revenue realisation after tax	(Rs. Crore)																		
55	Profit/loss *	(Rs. Crore)	477.09	414.75	611.22	891.07	949.03	1,107.48	1,308.06	821.60	1,177.96	1,297.45	1,023.52	1,374.66	1,451.98	1,432.18	1,640.02	1,690.03	1,473.42	2,157.14
56	DSM Generation	(MU)	140.24	124.19	50.78	49.20	35.10	44.17	61.01	42.53	(2.09)	(54.71)	71.72	50.79	2.51	(10.03)	(33.17)	(75.54)	(38.21)	(24.55)

57	DSM Rate	(Rs/kWh)																	
58	Revenue from DSM	(Rs. Crore)			(13.49)	(11.01)	18.11	(18.15)	(10.17)	(3.56)	1.29	(12.92)	(18.50)	(7.20)	(7.24)	(6.73)	1.29	(3.75)	(7.00)
59	Compensation received for operation below NAPAF	(Rs. Crore)													-	-	-	-	-
60	Part load Compensation received from beneficiariaes	(Rs. Crore)													-	-	-	-	-
61	Amount received from SCED	(Rs Crore)													NA	NA	5.65	1.70	0.82

\*\* GCV of coal as received minus 85 kCal/Kg  
^ Additional data related to Loading factor (%) submitted  
\* For entire Vindhyachal Station  
DSM Revenue (-)Received / (+) Paid

## Annexure-XIX

Name of Utility:	NTPC Ltd.
Name of Generating Station:	Vindhyachal STPS St-III
Station Configuration:	2X500 MW
Capacity (MW):	1000 MW
COD:	15.07.2007

S.N	Particulars	Unit	2006-07 (1.12.2006 to 31.03.2007)	2007-08 (01.04.2007 to 14.07.2007)	2007-08 (15.07.2007 to 31.03.2008)	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)	%	93.50	97.93	96.97	99.70	99.42	99.42	97.19	98.97	98.66	88.18	93.59	95.07	95.30	94.42	90.46	99.06	89.94
2	Plant Load Factors (PLF)	%	90.55	94.86	94.16	97.52	95.73	95.73	93.77	93.02	89.30	80.27	84.62	81.79	91.61	91.23	85.59	94.14	84.40
2a	Loading Factor ^	%												96.29	96.45	94.23	97.39	95.40	
3	Scheduled Energy	MU	1,255.82	6,796.60	7,854.10	8,148.63	8,010.37	7,800.52	7,789.47	7,526.92	6,641.68	6,966.46	6,741.23	7,571.00	7,584.77	7,208.26	7,765.26	7,011.10	
4	Scheduled Generation	MU	1,255.82	6,796.60	7,854.10	8,148.63	8,010.37	7,800.52	7,789.47	7,526.92	6,641.68	6,966.46	6,741.23	7,571.00	7,584.77	7,208.26	7,765.26	7,011.10	
5	Actual Generation (Gross)	MU													8,025.17	7,991.61	7,518.16	8,246.34	7,393.78
6	Actual Generation (ex-bus)	MU													7,590.06	7,568.18	7,103.82	7,800.22	6,975.38
7	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	1,240.13	6,840.90	7,893.50	8,200.05	8,055.91	7,854.45	7,783.57	7,472.67	6,537.55	6,851.92	6,620.18	7,548.20	7,575.91	6,978.61	7,721.97	7,074.69	
8	Quantum of coal consumption	MT	8,31,150	46,76,034.00	54,73,645	56,50,143	55,89,135	54,32,119	58,35,832	53,78,820	48,75,877	51,19,397	48,27,054	52,14,718	52,26,066	52,63,474	55,56,285	50,03,672	
9	Value of coal	Rs. Lakh																	
10	Specific Coal Consumption	kg/kWh	0.63	0.66	0.66	0.66	0.67	0.67	0.72	0.69	0.69	0.69	0.69	0.67	0.65	0.65	0.70	0.67	0.68
11	Gross Calorific Value of Coal	(Kcal/ Kg)	3,752	3,578	3,495	3,536	3,512	3,444	3,273	3,412	3,383	3,417	3,554	3,642	3,631	3,408**	3,503**	3,521**	
12	Heat Contribution of Coal	(Kcal/ kWh)	2,372	2,344	2,319	2,339	2,341	2,331	2,344	2,346	2,346	2,354	2,394	2,366	2,374	2,386	2,360	2,383	
13	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)																	
14	Quantum of Oil Consumption	(KL)	614.76	1,736.69	1,414.05	949.15	984.04	859.98	945.72	598.29	1,650.66	1,924.96	2,932.00	723.00	1,208.00	878.00	750.00	1,572.00	
15	Value of Oil	(Rs. lakh)																	
16	Gross calorific value of oil	(kcal/lit)	9,735.00	8,599.10	9,222.99	9,731.00	9,726.00	9,755.00	9,721.20	9,694.56	9,695.25	9,660.51	9,552.95	9,734.78	9,818.34	9,722.82	9,717.82	9,648.85	
17	Specific Oil Consumption	(ml/kWh)	0.47	0.24	0.17	0.11	0.12	0.11	0.12	0.08	0.23	0.26	0.41	0.09	0.15	0.12	0.09	0.21	
18	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)																	
19	Heat Contribution of Oil	(Kcal/ kWh)	4.55	2.09	1.58	1.08	1.14	1.03	1.13	0.74	2.28	2.50	3.91	0.88	1.48	1.14	0.88	2.05	
20	Station Heat Rate	(Kcal/ kWh)	2,376	2,346	2,321	2,340	2,342	2,284	2,347	2,348	2,356	2,398	2,367	2,376	2,387	2,361	2,385		
21	Auxiliary Energy Consumption	(%)	5.68	4.88	4.85	4.69	4.30	4.56	4.93	4.94	5.30	5.75	5.69	5.36	5.25	5.47	5.37	5.61	
22	Debt at the end of the year	(Rs. Crore)	1,291.19	1,304.65	2,310.11	2,265.87	2,003.17	1,845.75	1,667.03	1,486.88	1,310.60	1,179.27	1,012.46	830.06	650.16	461.68	374.02	283.15	197.74
23	Equity - Average	(Rs. Crore)	559.44	565.46	1,024.88	1,053.86	1,045.61	1,056.49	1,062.66	1,064.16	1,066.20	1,078.62	1,094.38	1,100.42	1,103.33	1,104.92	1,105.87	1,107.26	1,108.54
24	Working Capital – finally admitted by CERC	(Rs. Crore)	165.48	166.96	323.33	330.98	425.28	427.12	429.93	430.43	433.10	454.90	455.38	457.09	467.05	472.26	413.48	416.05	418.63
25	Capital cost – finally admitted by CERC	(Rs. Crore)	1,864.81	1,884.88	3,452.97	3,572.76	3,485.38	3,521.64	3,542.21	3,547.22	3,553.99	3,595.41	3,647.92	3,668.05	3,677.76	3,683.08	3,686.25	3,690.87	3,697.76
26	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	313.10	319.74	595.58	627.07	787.90	786.33	785.58	778.67	779.74	748.96	745.94	743.95	743.76	748.00	633.97	633.10	633.04
27	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009																		
28	Absolute value	(Rs. Crore)	78.32	79.17	143.48	147.54	245.52	245.21	243.82	244.16	250.35	211.52	215.65	216.84	217.41	218.31	207.70	207.97	208.20
29	Rate	(%)	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
30	(b) Interest on Loan																		
31	Absolute value	(Rs. Crore)	99.24	102.15	183.39	180.69	163.23	152.57	143.87	128.00	113.39	100.95	89.06	75.81	59.83	44.69	34.38	27.18	19.96
32	Rate – Weighted Average Rate	(%)	7.64	7.83	7.87	7.97	7.85	7.93	8.19	8.12	8.11	8.13	8.23	8.08	8.04	8.23	8.27	8.30	
33	(c) Depreciation (finally allowed by CERC)																		
34	Absolute value	(Rs. Crore)	67.98	68.71	123.90	127.40	180.12	181.91	182.96	183.26	183.61	185.81	188.55	189.62	190.15	190.45	92.33	92.68	93.24
35	AAD	(%)	-	-	-	21.40													
36	Rate	(%)	3.65	3.65	3.63							3.63	5.17	5.17	5.17				
37	(d) Interest on working Capital																		
38	Absolute value	(Rs. Crore)	16.96	17.11	39.61	40.54	52.10	52.32	52.67	52.73	53.05	61.41	61.48	61.71	63.05	63.76	49.82	46.81	43.96
39	Rate	(%)	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
40	(e) Operation and maintenance cost (finally admitted by CERC)																		
41	Absolute value	(Rs. Crore)	50.60	52.60	105.20	109.50	130.00	137.40	145.30	153.60	162.40	189.28	191.21	199.95	212.32	228.80	249.73	258.47	267.60
42	Rate	(%)																	
43	(f) Compensation Allowances	(Rs. Crore)													1.00	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)																20.71	58.73
49	AFC	(Rs. / kWh)	0.97	0.99	0.92	0.97	1.13	1.13	1.13	1.12	1.12	1.07	1.06	1.06	1.06	1.07	0.91	0.91	0.91
50	Energy Charge	(Rs./kWh)	0.95	1.00	1.00	1.18	1.15	1.41	1.56	1.40	1.51	1.55	1.52	1.70	1.45	1.48	1.69	1.57	1.53
51	Supplemental Energy Charges - Emission Control	(Rs./kWh)																	
52	Total tariff	(Rs. kWh)	1.92	1.99	1.92	2.15	2.28	2.54	2.69	2.52	2.63	2.62	2.58	2.76	2.51	2.55	2.60	2.48	2.44



53	Revenue realisation before tax	(Rs. Crore)																
54	Revenue realisation after tax	(Rs. Crore)																
55	Profit/ loss *	(Rs. Crore)	611.22	891.07	949.03	1,107.48	1,308.06	821.60	1,177.96	1,297.45	1,023.52	1,374.66	1,451.98	1,432.18	1,640.02	1,690.03	1,473.42	2,157.14
56	DSM Generation	(MU)	(15.69)	44.30	39.40	51.42	45.54	53.93	(5.90)	(54.25)	100.47	100.03	60.38	19.06	(16.59)	(104.44)	34.96	(35.72)
57	DSM Rate	(Rs/kWh)																
58	Revenue from DSM	(Rs. Crore)		(12.66)	(12.77)	(20.22)	(14.28)	(16.00)	(4.76)	(0.65)	(27.51)	(36.93)	(24.86)	(36.23)	(22.08)	(6.52)	(29.92)	(13.88)
59	Compensation received for operation below NAPAF	(Rs. Crore)												-	-	-	-	-
60	Part load Compensation received from beneficiariaes	(Rs. Crore)												-	-	-	-	-
61	Amount received from SCED	(Rs Crore)												NA	NA	7.19	1.67	0.84

\*\* GCV of coal as received minus 85 kCal/Kg

^ Additional data related to Loading factor (%) submitted

\* For entire Vindhyachal Station

DSM Revenue (-)Received / (+) Paid

## Annexure-XIX

Name of Utility:	NTPC Ltd
Name of Generating Station:	Vindhyachal STPS St-IV
Station Configuration:	2X500 MW
Capacity (MW):	1000 MW
GOD:	27.03.2014

S.N	Particulars	Unit	2012-13 (01.03.13 to 31.03.13)	2013-14 (01.04.2013- 26.03.2014)	2013-14 (27.03.2014- 31.03.2014)	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 ***	2020-21 ***	2021-22 ***
1	Plant Availability Factor (PAF)	%	24.40		91.52	86.44	95.05	97.36	90.96	95.89	92.12	87.85	92.26
2	Plant Load Factors (PLF)	%	25.14		82.44	80.40	82.98	81.06	88.79	93.61	89.44	84.86	88.07
2a	Loading Factor ^	%							97.05	97.36	96.41	97.50	95.68
3	Scheduled Energy	MU	84.86		3,506.34	6,604.63	6,779.78	6,587.90	7,282.54	7,695.42	7,370.72	6,941.91	7,232.43
4	Scheduled Generation	MU	84.86		3,506.34	6,604.63	6,779.78	6,587.90	7,282.54	7,695.42	7,370.72	6,941.91	7,232.43
5	Actual Generation (Gross)	MU							7,778.36	8,200.02	7,856.45	7,433.59	7,714.51
6	Actual Generation (ex-bus)	MU							7,353.96	7,740.00	7,407.13	7,025.79	7,282.27
7	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	79.32		3,440.49	6,607.25	6,779.77	6,559.24	7,265.73	7,689.24	7,159.29	6,875.49	7,315.23
8	Quantum of coal consumption	MT	69,345		25,41,481	48,92,491	50,22,273	47,86,096	50,26,148	53,49,313	54,00,787	49,72,265	51,85,826
9	Value of coal	Rs. Lakh											
10	Specific Coal Consumption	kg/kWh	0.74		0.69	0.69	0.69	0.67	0.65	0.65	0.69	0.67	0.67
11	Gross Calorific Value of Coal	(Kcal/ Kg)	3,188		3,413	3,378	3,417	3,560	3,644	3,641	3428**	3485**	3502**
12	Heat Contribution of Coal	(Kcal/ kWh)	2,364		2,370	2,347	2,354	2,400	2,355	2,375	2,356	2,331	2,354
13	Cost Of Specific Coal Consumption – Finally admitted by CERC (Ex-Bus)	(Rs./kWh)											
14	Quantum of Oil Consumption	(KL)	1,097.00		1,966.90	2,785.55	2,545.61	3,698.00	1,592.00	972.00	1,497.00	1,709.00	1,096.00
15	Value of Oil	(Rs. lakh)											
16	Gross calorific value of oil	(kcal/lit)	9,760.00		9,274.01	9,590.78	9,693.15	9,763.67	9,656.17	9,681.77	9,655.67	9,828.14	9,585.91
17	Specific Oil Consumption	(ml/kWh)	11.73		0.54	0.40	0.35	0.52	0.20	0.12	0.19	0.23	0.14
18	Cost Of Specific Oil Consumption – Finally admitted by CERC	(Rs./kWh)											
19	Heat Contribution of Oil	(Kcal/ kWh)	114.50		4.98	3.79	3.39	5.08	1.98	1.15	1.84	2.26	1.36
20	Station Heat Rate	(Kcal/ kWh)	2,479		2,375	2,351	2,357	2,405	2,357	2,376	2,358	2,334	2,355
21	Auxiliary Energy Consumption	(%)	11.11		5.57	5.53	5.61	5.87	5.39	5.56	5.67	5.44	5.56
22	Debt at the end of the year	(Rs. Crore)	1,625.58	1,756.94	3,201.00	3,342.48	3,289.62	3,074.40	2,826.70	2,576.03	2,543.10	2,224.82	1,977.16
23	Equity - Average	(Rs. Crore)	688.49	755.35	1,427.66	1,515.53	1,649.57	1,714.40	1,740.80	1,761.31	1,912.05	1,927.16	1,951.51
24	Working Capital – finally admitted by CERC	(Rs. Crore)	208.56	216.56	540.07	419.46	432.35	438.14	447.14	449.67	482.96	485.07	487.50
25	Capital cost – finally admitted by CERC	(Rs. Crore)	2,294.96	2,699.39	4,767.07	5,336.46	5,660.68	5,768.68	5,836.68	5,905.40	6,373.49	6,423.88	6,505.03
26	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	516.55	558.16	1,097.72	1,018.11	1,077.89	1,100.10	1,107.33	1,104.99	1,206.75	1,199.13	1,196.49
27	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009												
28	Absolute value	(Rs. Crore)	157.97	177.36	335.23	297.20	325.06	337.83	343.03	347.07	359.12	361.96	366.53
29	Rate	(%)	22.94	23.48	23.48	19.61	19.71	19.71	19.71	1,90,705.00	18.78	18.78	18.78
30	(b) interest on Loan												
31	Absolute value	(Rs. Crore)	131.91	140.36	272.46	266.27	265.13	253.69	240.33	219.85	204.14	181.45	159.96
32	Rate – Weighted Average Rate	(%)	8.24	8.30	8.52	8.14	8.00	7.97	8.15	8.14	7.60	7.61	7.61
33	(c) Depreciation (finally allowed by CERC)												
34	Absolute value	(Rs. Crore)	115.58	124.53	242.21	257.08	279.82	290.82	295.30	298.78	334.99	337.64	341.90
35	AAD												
36	Rate	(%)	5.04	4.95	5.09	5.09	5.09	5.09	5.09	5.09	5.26	5.26	5.26
37	(d) Interest on working Capital												
38	Absolute value	(Rs. Crore)	28.16	29.24	71.29	56.63	58.37	59.15	60.36	60.71	58.20	58.45	58.74
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	140.93	149.52	158.61	168.30	178.59	250.30	259.62	269.35
42	Rate	(%)											
43	(f) Compensation Allowances	(Rs. Crore)											

Not Applicable (NA)

44	(g) Special Allowance	(Rs. Crore)												
45	h) Supplementary Tariff - Emission Control													
46	Absolute value	(Rs. Crore)												
47	Rate	(%)	Not Applicable											
48	i) Ash Utilisation Expenses *	(Rs. Crore)											20.71	58.73
49	AFC	(Rs./ kWh)	1.48	1.60	1.58	1.49	1.57	1.57	1.58	1.57	1.73	1.72	1.71	
50	Energy Charge	(Rs./kWh)	1.47	1.51	1.51	1.57	1.56	1.69	1.45	1.49	1.66	1.56	1.52	
51	Supplemental Energy Charges - Emission Control	(Rs./kWh)												
52	Total tariff	(Rs. kWh)	2.95	3.11	3.09	3.06	3.13	3.26	3.03	3.06	3.39	3.28	3.23	
53	Revenue realisation before tax	(Rs. Crore)												
54	Revenue realisation after tax	(Rs. Crore)												
55	Profit/ loss *	(Rs. Crore)	1,177.96		1,297.45	1,023.52	1,374.66	1,451.98	1,432.18	1,640.02	1,690.03	1,473.42	2,157.14	
56	DSM Generation	(MU)	(5.54)		(65.85)	55.83	110.41	102.33	71.42	44.58	36.41	83.88	49.84	
57	DSM Rate	(Rs/kWh)												
58	Revenue from DSM	(Rs. Crore)	0.82		2.28	(16.57)	(33.63)	(33.95)	(29.19)	(14.45)	(10.73)	(13.22)	(13.88)	
59	Compensation received for operation below NAPAFA	(Rs. Crore)							-	-	-	-	-	
60	Part load Compensation received from beneficiaries	(Rs. Crore)							-	-	-	-	-	
61	Amount received from SCED	(Rs Crore)							NA	NA	6.54	1.63	0.45	

\*\* GCV of coal as received minus 85 kCal/Kg

^ Additional data related to Loading factor (%) submitted

\* For entire Vindhyachal Station

DSM Revenue (-)Received / (+) Paid

\*\*\* Tariff related details for the period 2019-20 to 2021-22 is as per Petition filed before CERC

## Annexure-XIX

Name of Utility:	NTPC LTD
Name of Generating Station:	VSTPS Stage-V
Station Configuration:	1X 500MW
Capacity (MW):	500
COD:	30.10.2015

S.N	Particulars	Unit	2015-16 (30.10.2015- 31.03.2016)	2016-17	2017-18	2018-19	2019-20 ***	2020-21 ***	2021-22 ***
1	Plant Availability Factor (PAF)	%	94.40	90.88	99.07	92.77	98.54	96.56	90.63
2	Plant Load Factors (PLF)	%	73.00	79.65	94.12	88.47	93.02	90.97	83.65
2a	Loading Factor ^	%			94.80	96.51	94.17	96.48	94.33
3	Scheduled Energy	MU	1,246.82	3,295.78	3,865.67	3,627.45	3,844.07	3,696.74	3,419.81
4	Scheduled Generation	MU	1,246.82	3,295.78	3,865.67	3,627.45	3,844.07	3,696.74	3,419.81
5	Actual Generation (Gross)	MU			4,122.43	3,875.00	4,085.30	3,984.40	3,663.68
6	Actual Generation (ex-bus)	MU			3,891.51	3,653.66	3,851.86	3,738.67	3,429.58
7	Actual energy supplied to beneficiaries (Long Term, Medium Term and Short Term)	MU	1,239.46	3,282.65	3,846.72	3,620.70	3,660.57	3,645.54	3,467.25
8	Quantum of coal consumption	MT	9,27,255	23,56,681	26,52,210	25,13,537	28,16,645	26,51,328	24,72,501
9	Value of coal	Rs. Lakh	-	-					
10	Specific Coal Consumption	kg/kWh	0.69	0.68	0.64	0.65	0.69	0.67	0.67
11	Gross Calorific Value of Coal	(Kcal/ Kg)	3,434	3,506	3,639	3,625	3418**	3500**	3488**
12	Heat Contribution of Coal	(Kcal/ kWh)	2,360	2,368	2,341	2,352	2,356	2,329	2,354
13	Cost Of Specific Coal Consumption- Finally admitted by CERC (Ex-Bus)	(Rs./kWh)							
14	Quantum of Oil Consumption	(KL)	1,953.84	2,496.00	281.00	1,181.00	298.00	808.00	591.00
15	Value of Oil	(Rs. lakh)							
16	Gross calorific value of oil	(kcal/lit)	9,147.77	9,366.97	9,469.20	9,457.25	9,458.45	9,590.49	9,038.21
17	Specific Oil Consumption	(ml/kWh)	1.45	0.72	0.07	0.30	0.07	0.20	0.16
18	Cost Of Specific Oil Consumption -Finally admitted by CERC	(Rs./kWh)							
19	Heat Contribution of Oil	(Kcal/ kWh)	13.25	6.70	0.65	2.88	0.69	1.94	1.46
20	Station Heat Rate	(Kcal/ kWh)	2,373	2,375	2,342	2,354	2,357	2,331	2,355
21	Auxiliary Energy Consumption	(%)	5.76	5.58	5.54	5.67	5.67	6.13	6.35
22	Debt at the end of the year	(Rs. Crore)	1,345.23	1,546.76	1,672.40	1,569.78	1,523.47	1,386.92	1,222.28
23	Equity - Average	(Rs. Crore)	604.92	690.36	816.68	884.86	910.91	927.64	935.64
24	Working Capital – finally admitted by CERC	(Rs. Crore)	326.02	339.65	356.27	364.59	264.92	267.02	268.05
25	Capital cost – finally admitted by CERC	(Rs. Crore)	2,016.40	2,301.21	2,722.27	2,949.53	3,036.35	3,092.13	3,120.10
26	Capacity Charges/ Annual Fixed Cost (AFC)	(Rs. Crore)	460.99	513.06	571.55	611.18	633.69	637.46	633.69

27	(a) Return on equity – post tax (admitted by CERC upto 2009) and Pre Tax post 2009								
28	Absolute value	(Rs. Crore)	123.04	140.42	166.12	180.46	176.61	179.85	181.44
29	Rate	(%)	20.34	20.34	20.34	20.40	19.39	19.39	19.39
30	(b) interest on Loan								
31	Absolute value	(Rs. Crore)	107.85	112.36	115.71	122.04	123.41	115.58	103.39
32	Rate – Weighted Average Rate	(%)	7.94	7.77	7.19	7.53	7.76	7.91	7.89
33	(c) Depreciation (finally allowed by CERC)								
34	Absolute value	(Rs. Crore)	104.86	120.12	142.39	154.21	166.39	169.45	170.98
35	AAD								
36	Rate	(%)			5.24	5.24	5.48	5.48	5.48
37	(d) Interest on working Capital								
38	Absolute value	(Rs. Crore)	44.01	45.85	48.09	49.21	31.93	32.18	32.31
39	Rate	(%)	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)	81.21	94.29	99.21	105.23	135.80	140.84	146.09
42	Rate	(%)							
43	(f) Compensation Allowances	(Rs. Crore)	Not Applicable						
44	(g) Special Allowance	(Rs. Crore)	Not Applicable						
45	h) Supplementary Tariff - Emission Control								
46	Absolute value	(Rs. Crore)	Not Applicable						
47	Rate	(%)	Not Applicable						
48	i) Ash Utilisation Expenses *	(Rs. Crore)						20.71	58.73
49	AFC	(Rs./ kWh)	1.31	1.46	1.65	1.76	1.77	1.77	1.77
50	Energy Charge	(Rs./kWh)	1.50	1.69	1.45	1.51	1.70	1.60	1.57
51	Supplemental Energy Charges - Emission Control	(Rs./kWh)			0.02	0.02	0.02	0.02	0.02
52	Total tariff	(Rs. kWh)	2.81	3.15	3.12	3.29	3.49	3.39	3.36
53	Revenue realisation before tax	(Rs. Crore)							
54	Revenue realisation after tax	(Rs. Crore)							
55	Profit/ loss *	(Rs. Crore)	1,374.66	1,451.98	1,432.18	1,640.02	1,690.03	1,473.42	2,157.14
56	DSM Generation	(MU)	28.61	7.54	25.84	26.21	7.79	41.93	9.77
57	DSM Rate	(Rs/kWh)							
58	Revenue from DSM	(Rs. Crore)	(6.00)	(9.12)	(14.85)	(11.79)	(10.35)	(17.28)	(10.86)
59	Compensation received for operation below NAPAF	(Rs. Crore)			-	-	-	-	-
60	Part load Compensation received from beneficiariaes	(Rs. Crore)			-	-	-	-	-
61	Amount received from SCED	(Rs Crore)			NA	NA	5.19	1.30	0.56

\*\* GCV of coal as received minus 85 kCal/Kg

^ Additional data related to Loading factor (%) submitted

\* For entire Vindhyachal 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 Limited

Name of Generating station:Vindhyachal super thermal power station,stage-1

Installed Capacity (MW) :1260MW (210MW X 6)

Type of Emission Control System: FGD not yet operational

Under Operation/Anticipated Operation Date: FY 24-25

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU	9,757.66	9,700.68	9,281.55	9,728.74	9,783.63
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 maintenace spares consumed^	Rs. Crore	NA	NA	NA	NA	NA
7	Initial Spares consumed*	Rs. Crore	NA	NA	NA	NA	NA

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&amp;M expenses and Pls specify list of the same

(in Rs Lakhs)

S.No.	Particulars	Units	2017-18		2018-19		2019-20		2020-21		2021-22	
			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 incl GST *	Rs. Crore										1,286.59
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										86.09
1.3	IEDC *	Rs. Crore										38.60
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost as per Investment Approval*	Rs. Crore										1,411.28

\* Total Cost of FGD of Vindhyachal Stage 1 (1260 MW) &amp; Vindhyachal Stage 2 (1000 MW)

**DETAILS OF EMISSION CONTROL SYSTEM**

Generating company: NTPC Ltd

Name of Generating station:Vindhyachal super thermal power station,Stage-2

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

Type of Emission Control System: FGD not yet operational

Under Operation/Anticipated Operation Date: FY 24-25

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU	7,812.11	7,771.67	6,917.96	7,604.70	7,174.47
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 maintenace spares consumed^	Rs. Crore	NA	NA	NA	NA	NA
7	Initial Spares consumed*	Rs. Crore	NA	NA	NA	NA	NA

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&amp;M expenses and Pls specify list of the same

(in Rs Lakhs)

S.No.	Particulars	Units	2017-18		2018-19		2019-20		2020-21		2021-22	
			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 incl GST *	Rs. Crore										1,286.59
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										86.09
1.3	IEDC *	Rs. Crore										38.60
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost as per Investment Approval*	Rs. Crore										1,411.28

\* Total Cost of FGD of Vindhyachal Stage 1 (1260 MW) &amp; Vindhyachal Stage 2 (1000 MW)



**DETAILS OF EMISSION CONTROL SYSTEM**

Generating company: NTPC Ltd

Name of Generating station:Vindhyachal super thermal power station,Stage-3

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

Type of Emission Control System: FGD not yet operational

Under Operation/Anticipated Operation Date: FY 24-25

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU	8,025.17	7,991.61	7,518.16	8,246.34	7,393.78
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 maintenace spares consumed^	Rs. Crore	NA	NA	NA	NA	NA
7	Initial Spares consumed*	Rs. Crore	NA	NA	NA	NA	NA

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&amp;M expenses and Pls specify list of the same

(in Rs Lakhs)

S.No.	Particulars	Units	2017-18		2018-19		2019-20		2020-21		2021-22	
			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 incl GST *	Rs. Crore										950.51
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										59.96
1.3	IEDC *	Rs. Crore										28.52
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost as per Investment Approval*	Rs. Crore										1,038.99

\* Total Cost of FGD of Vindhyachal Stage 3 (1000 MW) &amp; Vindhyachal Stage 4 (1000 MW)

**DETAILS OF EMISSION CONTROL SYSTEM**

Generating company: NTPC Ltd

Name of Generating station: Vindhyachal super thermal power station, Stage-4

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

Type of Emission Control System: FGD not yet operational

Under Operation/Anticipated Operation Date: FY 24-25

S.No.	Particulars	Units	2017-18	2018-19	2019-20	2020-21	2021-22
A							
1	Gross Generation	MU	7,778.36	8,200.02	7,856.45	7,433.59	7,714.51
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

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&amp;M expenses and Pls specify list of the same

(in Rs Lakhs)

S.No.	Particulars	Units	2017-18		2018-19		2019-20		2020-21		2021-22	
			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 incl GST *	Rs. Crore										950.51
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										59.96
1.3	IEDC *	Rs. Crore										28.52
1.4	Others. Pls specify	Rs. Crore										
1.4	Completed Cost as per Investment Approval*	Rs. Crore										1,038.99

\* Total Cost of FGD of Vindhyachal Stage 3 (1000 MW) &amp; Vindhyachal Stage 4 (1000 MW)

## DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Limited

Name of Generating station: Vindhyachal super thermal power station, stage-1

Installed Capacity (MW) : 1260MW (210MW X 6)

Reagent Type FGD not yet operational

Type of Emission Control System: Not Applicable

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
<b>A.</b>								
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>B.</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	9,757.66	9,700.68	9,281.55	9,728.74	9,783.63	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel	%	0.38	0.39	0.37	0.39	0.37	
14	Gross SHR	kCal/kWh						
15	Design SO <sub>2</sub> removal efficiency (Applicable for Wet FGD)	%	SO <sub>2</sub> Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO <sub>2</sub> removal norm (100/200/600 mg/Nm <sup>3</sup> )	mg/Nm <sup>3</sup>	600	600	600	600	600	
17	Weigthed Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					

## DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Limited

Name of Generating station: Vindhyachal super thermal power station, stage-2

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

Reagent Type FGD not yet operational

Type of Emission Control System: Not Applicable

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
<b>A.</b>								
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>B.</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	7,812.11	7,771.67	6,917.96	7,604.70	7,174.47	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel	%	0.38	0.39	0.37	0.39	0.37	
14	Gross SHR	kCal/kWh						
15	Design SO <sub>2</sub> removal efficiency (Applicable for Wet FGD)	%	SO <sub>2</sub> Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO <sub>2</sub> removal norm (100/200/600 mg/Nm <sup>3</sup> )	mg/Nm <sup>3</sup>	600	600	600	600	600	
17	Weigthed Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					

## DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Limited

Name of Generating station: Vindhyachal super thermal power station, Stage-3

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

Reagent Type FGD not yet operational

Type of Emission Control System: Not Applicable

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
<b>A.</b>								
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>B.</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	8,025.17	7,991.61	7,518.16	8,246.34	7,393.78	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel	%	0.38	0.39	0.37	0.39	0.37	
14	Gross SHR	kCal/kWh						
15	Design SO <sub>2</sub> removal efficiency (Applicable for Wet FGD)	%	SO <sub>2</sub> Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO <sub>2</sub> removal norm (100/200/600 mg/Nm <sup>3</sup> )	mg/Nm <sup>3</sup>	200	200	200	200	200	
17	Weigthed Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					

## DETAILS OF REAGENT USED FOR EMISSION CONTROL

Generating company: NTPC Limited

Name of Generating station: Vindhyachal super thermal power station, Stage-4

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

Reagent Type FGD not yet operational

Type of Emission Control System: Not Applicable

S.No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	
<b>A.</b>								
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>B.</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	7,778	8,200	7,856	7,434	7,715	
12	Fuel Type (coal/lignite)		Coal					
13	Sulphur content of Fuel	%	0.38	0.39	0.37	0.39	0.37	
14	Gross SHR	kCal/kWh						
15	Design SO2 removal efficiency (Applicable for Wet FGD)	%	SO2 Efficiency guaranty is taken considering applicable New Environmental norm of that plant.					
16	SO2 removal norm (100/200/600 mg/Nm3)	mg/Nm3	200	200	200	200	200	
17	Weighthed Average Gross GCV of Fuel Received	kCal/kg	As per Annexure I					