

TARIFF FILING FORMS (THERMAL)

FOR DETERMINATION OF TARIFF

FOR

Sipat STPS Stage-I

(From 01.04.2019 to 31.03.2024)

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of tariff of ***Sipat Super Thermal Power Station Stage-I(3*660MW)*** for the period from **01.04.2019 to 31.03.2024.**

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BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
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AND
IN THE MATTER OF

Petitioner: : NTPC Ltd.
NTPC Bhawan
Core-7, Scope Complex
7, Institutional Area, Lodhi Road
New Delhi-110 003.

Respondents

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Vidyut Nagar,
Jabalpur 482 008
2. Maharashtra State Electricity Distribution Co Ltd.
Prakashgad, Bandra (East),
Mumbai 400 051
3. Gujarat UrjaVikas Nigam Ltd.(GUVNL)
VidyutBhavan, Race Course
Vadodara – 390 007
4. Chattisgarh State Power Distribution Co. Ltd.,
(Successor of Chattisgarh State Electricity Board)
P.O. Sundar Nagar,
Danganiya, Raipur – 492013
5. Government of Goa,
Through its Chief Engineer (Electricals)
Electricity Department, VidyutBhawan,
Panaji, Goa



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6 Electricity Department,
Administration of Daman & Diu
Daman-396 210

7 Electricity Department,
Administration of Dadra & Nagar Haveli,
Silvasa.

The Petitioner humbly states that:

- 1) The Petitioner herein NTPC Ltd. (hereinafter referred to as '**Petitioner**' or '**NTPC**'), is a company incorporated under provisions of the Company Act, 1956 and a Government Company as defined under Section 2(45) of the Companies Act, 2013. Further, NTPC is a 'Generating Company' as defined under Section 2(28) of the Electricity Act, 2003.
- 2) In terms of Section 79(1)(a) of Electricity Act, 2003, the Hon'ble Commission has been vested with the functions to regulate the tariff of NTPC, being a Generating Company owned and controlled by the Central Government. The regulation of the tariff of NTPC is as provided under Section 79(1)(a) read with Section 61, 62 and 64 of the Electricity Act, 2003 and the Regulations notified by the Hon'ble Commission in exercise of powers under Section 178 read with Section 61 of the Electricity Act, 2003.
- 3) The Petitioner is having power stations/ projects at different regions and places in the country. Sipat Super Thermal Power Station Stage -I (3X 660 MW) (hereinafter referred to as SIPAT-I) is one such station located in the State of Chhattisgarh. The power generated from SIPAT-I is being supplied to the respondents herein above.
- 4) The Hon'ble Commission has notified the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (hereinafter 'Tariff Regulations 2019') which came into force from 01.04.2019, specifying the terms & conditions and methodology of tariff determination for the period 01.04.2019 to 31.03.2024.
- 5) Regulation 9(2) of Tariff Regulations 2019 provides as follows:



"(2) In case of an existing generating station or unit thereof, or transmission system or element thereof, the application shall be made by the generating company or the transmission licensee, as the case may be, by 31.10.2019, based on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2019-24 along with the true up petition for the period 2014-19 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2014."

The date of filing of Tariff Petition for the period 2019-24 has subsequently been extended by Hon'ble Commission vide order dated 28.10.2019 in Petition No. 331/MP/2019.

In terms of above, the Petitioner is filing the present petition for determination of tariff for SIPAT-I for the period from 01.04.2019 to 31.03.2024 as per the Tariff Regulations 2019.

- 6) The tariff of the SIPAT-I for the tariff period 1.4.2014 to 31.3.2019 was determined by the Hon'ble Commission vide its order dated 29.03.2017 in Petition No. 337/GT/2014 in accordance with the CERC (Terms & Conditions of Tariff) Regulations 2014. Further, the Petitioner thereafter had filed an Appeal (being No. 180 of 2017) in Appellate Tribunal of Electricity on certain aspects of the order dated 03.03.2017. The appeal is under consideration of the Hon'ble Appellate Tribunal of Electricity. The petitioner vide affidavit dated 07.01.2020 had filed a separate true up petition for the period from 01.04.2014 to 31.03.2019 for revision of tariff in line with the applicable provisions of Tariff Regulations 2014.
- 7) It is submitted that Hon'ble Commission vide order dated 29.03.2017 in Petition no 337/GT/2014 has allowed a capital cost of Rs 9204.0116Cr. as on 31.03.2019 based on the admitted projected capital expenditure for the 2014-19 period. However, the actual closing capital cost as on 31.03.2019 has been worked out in the aforesaid true-up petition as Rs. 9263.98 Crs based on the actual expenditure after truing up exercise for

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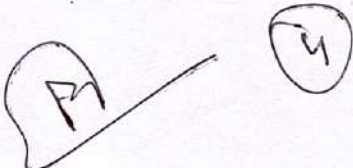
the period 2014-19. Accordingly, the Petitioner has adjusted an amount of (+) Rs. 59.9605 Cr to the admitted capital cost as on 31.03.2019 and accordingly the opening capital cost as on 01.04.2019 has been considered as Rs 9263.9721 Cr in the instant petition. The Hon'ble Commission may be pleased to accordingly adopt this adjustment in the admitted capital cost as on 31.3.2019 and determine the tariff in the present petition for the period 2019-24.

- 8) The capital cost claimed in the instant petition is based on the opening capital cost as on 01.04.2019 considered as above and projected estimated capital expenditures for the period 2019-24 under Regulation 19 and Regulation 24, 25 and 26 (*mention as per the applicability*) of the Tariff Regulations, 2019.
- 9) The Petitioner further respectfully submits that as per Regulation 35(1)(6) of the Tariff Regulations 2019, the water charges, security expenses and capital spares consumed for thermal generating stations are to be allowed separately. The details in respect of water charges such as type of cooling water system, water consumption, rate of water charges as applicable for 2018-19 have been furnished below. Accordingly, water charges may be allowed in tariff based on the same for the 2019-24. In accordance with provision of the Regulations, the petitioner shall be furnishing the details of actual for the relevant year at the time of truing up and the same shall be subject to retrospective adjustment.

Description	Remarks
Type of Plant	Coal based Thermal Power Plant
Type of cooling water system	Closed Circuit Cooling System
Allocation of Water*	120 MCM
Consumption of Water*	78.38 MCM
Rate of Water charges*	Rs 12.25/Cubic Meter
Total Water Charges**	7567 Lakh

*As per truing up petition filed for the instant station for Sipat-I&Sipat-II, ,

** For Sipat-I for 2018-19, escalation@3.5% considered wef FY 2019-20 in Form-3A.



- 10) Similarly, the Petitioner is claiming the security expenses based on the estimated expenses for the period 2019-24, the same shall be subject to retrospective adjustment based on actuals at the time of true-up. In respect of capital spares consumption, it is submitted that the same shall be claimed at the time of true-up in terms of the proviso to the Regulation 35 (1)(6) based on actual consumption of spares during the period 2019-24
- 11) The present petition is filed on the basis of norms specified in the Tariff Regulations 2019. It is submitted that the petitioner is in the process of installing the Emission Control Systems (ECS) in compliance of the Revised Emission Standards as notified by MOEF vide notification dated 07.12.2015 as amended. Completion of these schemes in compliance of revised emission norms will effect the station APC, Heat Rate, O&M expenses etc. In addition the availability of the unit/ station would be also effected due to shutdown of the units for installation of ECS. The petitioner would be filing the details of the same in a separate petition in terms of the Regulation 29 of Tariff Regulations 2019. The tariff of the instant petition would undergo changes consequent to the order of the Hon'ble Commission in the said ECS petition.
- 12) It is submitted that a notification dated 25.01.2016 has been issued by Government of India, Ministry of Environment, Forest & Climate Change (MOEFCC) under the statutory provisions of Environment (Protection) Act 1986. The said notification of MOEFCC prescribed for bearing the transportation cost of Fly Ash generated at power stations with the users of Fly Ash. In this regard, Petitioner filed a petition, being no. 172/MP/2016, before the Hon'ble Commission seeking reimbursement of the additional expenditure for Fly Ash Transportation directly from the beneficiaries as the same was in the nature of statutory expense. Hon'ble Commission vide order dated 05.11.2018 disposed of the said petition and directed as follows :

"31. Accordingly, we in exercise of the regulatory power hold that the actual additional expenditure incurred by the Petitioner towards transportation of ash in terms of the MOEFCC Notification is admissible under "Change in Law" as additional O&M expenses. However, the admissibility of the claims is subject to prudence check of the following conditions on case to case basis for each station:

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- a) Award of fly ash transportation contract through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.
- b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.
- c) Details of the Revenue generated from sale of fly ash/ fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.
- d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification.

32. The Petitioner is granted liberty to approach the Commission at the time of revision of tariff of the generating stations based on true-up exercise for the period 2014-19 in terms of Regulation 8 of the 2014 Tariff Regulations along with all details / information, duly certified by auditor."

Petitioner has claimed the additional expenditure towards ash transportation charges for the period 2017-18 and 2018-19 in the true-up petition filed vide affidavit dated 07.01.2020 in respect of the instant station.

The expenditure towards the ash transportation charges are recurring in nature. The Petitioner has been incurring ash transportation expenditure in some of its stations in the current tariff period also. In case the same is permitted to be recovered at the end of the tariff period 2019-24, there will be additional liability on the beneficiary on account of the interest payment for the period till the time the true-up petitions for the period 2019-24 is decided. To avoid the interest payment liability of the beneficiaries it is prayed that the petitioner may be allowed to recover/ pass on the ash transportation charges after adjusting the revenue earned from sale of ash at the end of each quarter of financial year subject to true-up at the end of the period.

- 13) It is submitted that the Petitioner has already paid the requisite filing fee vide UTR No. CMS1106438370 on 22.04.2019 for the year 2019-20 and the details of the same have been duly furnished to the Hon'ble Commission vide our letter dtd. 25.04.2019. For the subsequent years, it shall be paid as per the provisions of the CERC (Payment of Fees) Regulations, 2012 as amended. Further Regulation 70 (1) of Tariff Regulations 2019 provides that the application fee and publication expenses may be allowed to be recovered directly from the beneficiaries at the discretion of the Hon'ble Commission.

Accordingly, it is prayed that Hon'ble Commission may be pleased to allow recover filing fee and publication fee directly from the beneficiaries.

- 14) The petitioner has accordingly calculated the tariff for 2019-24 period based on the above and the same is enclosed as **Appendix-I** to this petition.
- 15) It is submitted the Petitioner has served the copy of the Petition on to the Respondents mentioned herein above and has posted the Petition on the company website i.e. www.ntpc.co.in
- 16) It is submitted that the petitioner is filing this tariff petition subject to the outcome of its various appeals/ petitions pending before different courts. Besides, the petitions filed by NTPC for determination of capital base as on 31.3.2019 through true-up exercise are pending before the Hon'ble Commission and would take some time. The Petitioner, therefore, reserves its right to amend the tariff petition as per the outcome in such appeals/ petitions, if required.

Prayers

In the light of the above submissions, the Petitioner, therefore, prays that the Hon'ble Commission may be pleased to:

- i) Approve tariff of SIPAT-I for the tariff period 01.04.2019 to 31.03.2024.
- ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries.
- iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries quarterly on net basis.
- iv) Pass any other order as it may deem fit in the circumstances mentioned above.



Petitioner

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.....

IN THE MATTER OF : Petition Under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of tariff of **Sipat Super Thermal Power Station Stage-I(3x660 MW) for the period from 01.04.2019 to 31.03.2024.**

AND

IN THE MATTER OF

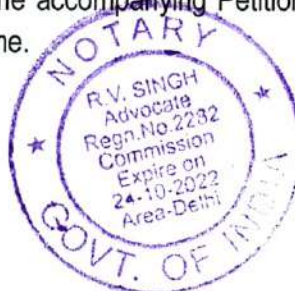
Petitioner: : NTPC Ltd.
NTPC Bhawan
Core-7, Scope Complex
7, Institutional Area, Lodhi Road
New Delhi-110 003


Respondents: 1. Madhya Pradesh Power Management
Company Limited,
Shakti Bhawan, Vidyut Nagar,
Jabalpur 482 008 and Others

AFFIDAVIT

I, Parimal Piyush, son of Late Shri Bharat Mishra aged about 44 years, resident of MP2/402, Magnolia Park, Eldeco Aamantran , Sector-119, Noida-201301 do solemnly affirm and state as under:

1. That I am the Deputy General Manager (Commercial) in NTPC Ltd. and am well conversant with the facts of the case and am competent to swear the present affidavit.
2. That I have read the contents of the accompanying Petition filed by NTPC and have understood the contents of the same.







3. That the contents of the accompanying Petition being filed by NTPC are based on information available with the petitioner in the normal course of business and believed by the deponent to be true.

(Deponent)

Verification:

I, Parimal Piyush, the deponent above named, do hereby verify that the contents of the above affidavit are true to the best of my knowledge, no part of it is false and nothing material has been concealed therefrom.

Verified at New Delhi on thisday of January 2020

(Deponent)



Solemnly affirmed before me, read
over & explained to the deponent:

Notary Public. DELHI

28 JAN 2020

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APPENDIX-I

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Checklist of Main Tariff Forms and other information for tariff filing for Thermal Stations

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM- 1	Summary of Tariff	✓
FORM -1 (I)	Statement showing claimed capital cost	✓
FORM -1 (II)	Statement showing Return on Equity	✓
FORM-2	Plant Characteristics	✓
FORM-3	Normative parameters considered for tariff computations	✓
FORM-3A**	Statement showing O&M Expenses	✓
FORM-3B**	Statement of Special Allowance	NA
FORM- 4	Details of Foreign loans	✓
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	✓
FORM-5A**	Abstract of Claimed Capital Cost for the existing Projects	✓
FORM- 6	Financial Package upto COD	NA
FORM- 7	Details of Project Specific Loans	NA
FORM- 8	Details of Allocation of corporate loans to various projects	✓
FORM-9A**	Summary of Statement of Additional Capitalisation claimed during the period	✓
FORM-9 ##	Statement of Additional Capitalisation after COD	NA
FORM- 10	Financing of Additional Capitalisation	✓
FORM- 11	Calculation of Depreciation on original project cost	✓
FORM- 12	Statement of Depreciation	✓
Form-12A	Statement of Unrecovered Depreciation	✓
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	✓
FORM- 14	Draw Down Schedule for Calculation of IDC & Financing Charges	NA
FORM- 15	Details of Fuel for Computation of Energy Charges	✓
FORM- 15A	Details of Secondary Fuel for Computation of Energy Charges	✓
FORM- 15B	Computation of Energy Charges	✓
FORM- 16	Details of Limestone for Computation of Energy Charge Rate	NA
FORM-17	Details of Capital Spares	***
FORM- 18	Non-Tariff Income	***
FORM-19	Details of Water Charges	***
FORM-20	Details of Statutory Charges	***

Provided yearwise for the period 2019-24

PART-I

List of Supporting Forms / documents for tariff filing for Thermal Stations

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM-A	Abstract of Capital Cost Estimates	NA
FORM-B	Break-up of Capital Cost for Coal/Lignite based projects	NA
FORM-C	Break-up of Capital Cost for Gas/Liquid fuel based Projects	NA
FORM-D	Break-up of Construction/Supply/Service packages	NA
FORM-E	Details of variables , parameters , optional package etc. for New Project	NA
FORM-F	Details of cost over run	NA
FORM-G	Details of time over run	NA
FORM -H	Statement of Additional Capitalisation during end of the useful life	
FORM -I	Details of Assets De-capitalised during the period	***
FORM -J	Reconciliation of Capitalisation claimed vis-à-vis books of accounts	***
FORM -K	Statement showing details of items/assets/works claimed under Exclusions	***
FORM-L	Statement of Capital cost	✓
FORM-M	Statement of Capital Woks in Progress	✓
FORM-N	Calculation of Interest on Normative Loan	✓
FORM-O	Calculation of Interest on Working Capital	✓
FORM-P	Incidental Expenditure up to SCOD and up to Actual COD	NA
FORM-Q	Expenditure under different packages up to SCOD and up to Actual COD	NA
FORM-R	Actual cash expenditure	NA
FORM-S	Statement of Liability flow	✓
FORM-T	Summary of issues involved in the petition	✓

** Additional Forms

*** Shall be provided at the time of true up

List of supporting documents for tariff filing for Thermal Stations

S. No.	Information / Document	Tick
1	Certificate of incorporation, Certificate for Commencement of Business, Memorandum of Association, & Articles of Association (For New Station setup by a company making tariff application for the first time to CERC)	NA
2	A. Station wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures on COD of the Station for the new station & for the relevant years. B. Station wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & annexures for the existing station for relevant years.	***
3	Copies of relevant loan Agreements	NA
4	Copies of the approval of Competent Authority for the Capital Cost and Financial package.	NA
5	Copies of the Equity participation agreements and necessary approval for the foreign equity.	NA
6	Copies of the BPSA/PPA with the beneficiaries, if any	NA
7	Detailed note giving reasons of cost and time over run, if applicable. List of supporting documents to be submitted: a. Detailed Project Report b. CPM Analysis c. PERT Chart and Bar Chart d. Justification for cost and time Overrun	NA
8	Generating Company shall submit copy of Cost Audit Report along with cost accounting records, cost details, statements, schedules etc. for the Generating Unit wise /stage wise/Station wise/ and subsequently consolidated at Company level as submitted to the Govt. of India for first two years i.e. 2019-20 and 2020-21 at the time of mid-term true-up in 2021-22 and for balance period of tariff period 2019-24 at the time of final true-up in 2024-25. In case of initial tariff filing the latest available Cost Audit Report should be furnished.	NA
9	Any other relevant information, (Please specify)	NA
10	Reconciliation with Balance sheet of any actual additional capitalization and amongst stages of a generating station	***
11	BBMB is maintaining the records as per the relevant applicable Acts. Formats specified herein may not be suitable to the available information with BBMB. BBMB may modify the formats suitably as per available information to them for submission of required information for tariff purpose.	NA

*** Shall be provided at the time of truing up

Summary of Tariff

Name of the Petitioner:		NTPC Limited								
Name of the Generating Station:		Sipat STPS Stage-I								
Place (Region/District/State):		Western Region								
S. No.	Particulars	Unit	Amount in Rs. Lakhs						2023-24	
			Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7	8	9		
1.1	Depreciation	Rs Lakh	47,000.50	47,468.59	47,644.09	47,819.59	47,845.21	47,870.83		
1.2	Interest on Loan	Rs Lakh	28,272.92	25,359.55	22,348.65	18,741.55	14,619.48	10,480.65		
1.3	Return on Equity	Rs Lakh	54,835.68	52,198.78	52,391.76	52,584.75	52,612.92	52,641.09		
1.4	Interest on Working Capital	Rs Lakh	13,560.87	9,239.28	9,293.21	9,334.30	9,365.44	9,392.80		
1.5	O&M Expenses	Rs Lakh	40,822.39	49,902.91	51,640.48	53,448.77	55,308.37	57,239.48		
1.6	Special Allowance (If applicable)	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00		
1.7	Compensation Allowance (If applicable – relevant for column 4 only)	Rs. Lakh	0.00							
	Total	Rs Lakh	184,492.36	184,169.11	183,318.19	181,928.96	179,751.42	177,624.86		
2.1	Landed Fuel Cost (coal/gas/RLNG/ liquid) as per FSA approved by beneficiaries	Rs/Ton					1869.33			
	(%) of Fuel Quantity	(%)								
2.2	Landed Fuel Cost Imported Coal as per FSA approved by beneficiaries						NA			
	(%) of Fuel Quantity									
2.3	Landed Fuel Cost (coal/gas /RLNG/liquid) other than FSA	Rs/Ton					NA			
	(%) of Fuel Quantity	(%)								
2.4	Landed Fuel Cost Imported Coal other than FSA.						NA			
	(%) of Fuel Quantity									
2.5	Secondary fuel oil cost (Ex-bus)	Rs/Unit					0.030			
	Energy Charge Rate ex-bus (Paise/kWh)	Rs/Unit					1.232			

(Petitioner)




Name of the Petitioner: NTPC Limited
Name of the Generating Station: Sipat STPS Stage-I

Amount in Rs. Lakhs

Statement showing claimed capital cost – (A+B)

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	9,26,397.21	9,26,397.21	9,33,247.21	9,33,247.21	9,34,247.21
2	Add: Addition during the year/period	-	6,850.00	-	1,000.00	-
3	Less: De-capitalisation during the year/period	-	-	-	-	-
4	Less: Reversal during the year / period	-	-	-	-	-
5	Add: Discharges during the year/ period	-	-	-	-	-
6	Closing Capital Cost	9,26,397.21	9,33,247.21	9,33,247.21	9,34,247.21	9,34,247.21
7	Average Capital Cost	9,26,397.21	9,29,822.21	9,33,247.21	9,33,747.21	9,34,247.21

Statement showing claimed capital cost eligible for RoE at normal rate (A)

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	926397.21	926397.21	933247.21	933247.21	934247.21
2	Add: Addition during the year / period	0.00	6850.00	0.00	1000.00	0.00
3	Less: De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
4	Less: Reversal during the year / period	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year / period	0.00	0.00	0.00	0.00	0.00
6	Closing Capital Cost	926397.21	933247.21	933247.21	934247.21	934247.21
7	Average Capital Cost	926397.21	929822.21	933247.21	933747.21	934247.21

**Statement showing claimed capital cost eligible for RoE at weighted average rate of interest
on actual loan portfolio (B)**

S. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Opening Capital Cost	0.00	0.00	0.00	0.00	0.00
2	Add: Addition during the year / period	0.00	0.00	0.00	0.00	0.00
3	Less: De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
4	Less: Reversal during the year / period	0.00	0.00	0.00	0.00	0.00
5	Add: Discharges during the year / period	0.00	0.00	0.00	0.00	0.00
6	Closing Capital Cost	0.00	0.00	0.00	0.00	0.00
7	Average Capital Cost	0.00	0.00	0.00	0.00	0.00



(Petitioner)



Name of the Petitioner: NTPC Limited

Name of the Generating Station: Sipat STPS Stage-I

Statement showing Return on Equity at Normal Rate

S. No.	Particulars	Amount in Rs. Lakhs						
		2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7		
	Return on Equity							
1	Gross Opening Equity (Normal)	2,77,919.16	2,77,919.16	2,79,974.16	2,79,974.16	280274.1623		
2	Less: Adjustment in Opening Equity	-						
3	Adjustment during the year		0.00	0.00	0.00	0.00		0.00
4	Net Opening Equity (Normal)	2,77,919.16	2,77,919.16	2,79,974.16	2,79,974.16	2,80,274.16		
5	Add: Increase in equity due to addition during the year / period	0.00	2055.00	0.00	0.00	300.00		0.00
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00		0.00
8	Less: Decrease due to reversal during the year / period	0.00	0.00	0.00	0.00	0.00		0.00
9	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00		0.00
10	Net closing Equity (Normal)	2,77,919.16	2,79,974.16	2,79,974.16	2,80,274.16	2,80,274.16		2,80,274.16
11	Average Equity (Normal)	2,77,919.16	2,78,946.66	2,79,974.16	2,80,124.16	2,80,274.16		2,80,274.16
12	Rate of ROE (%)	18.782	18.782	18.782	18.782	18.782		18.782
13	Total ROE	52,198.78	52,391.76	52,584.75	52,612.92	52,641.09		52,641.09




Name of the Petitioner: NTPC Limited

Name of the Generating Station: Sipat STPS Stage-I

Statement showing Return on Weighted Average Interest On Loan

S. No.	Particulars	Amount in Rs. Lakhs						
		2019-20	2020-21	2021-22	2022-23	2023-24		
1		3	4	5	6	7		
	Return on Equity (beyond the original scope of work excluding additional capitalization due to Change in Law)							
1	Gross Opening Equity (Normal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Less: Adjustment in Opening Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Adjustment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Net Opening Equity (Normal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Add: Increase in equity due to addition during the year / period	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Less: Decrease due to De-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Less: Decrease due to reversal during the year / period	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Add: Increase due to discharges during the year / period	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Net closing Equity (Normal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Average Equity (Normal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Rate of ROE (%)	10.063	10.407	10.569	10.583	10.593		
13	Total ROE	0.00	0.00	0.00	0.00	0.00	0.00	0.00

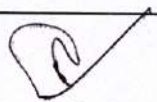


(Petitioner)

Plant Characteristics

Name of the Petitioner	NTPC Ltd.		
Name of the Generating Station	Sipat STPS Stage-I		
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II	Unit-III
Installed Capacity (MW)	660	660	660
Schedule COD as per Investment Approval			
Actual COD /Date of Taken Over (as applicable)	01-10-2011	25-05-2012	01-08-2012
Pit Head or Non Pit Head	Pit Head	Pit Head	Pit Head
Name of the Boiler Manufacture	M/s Doosan	M/s Doosan	M/s Doosan
Name of Turbine Generator Manufacture	Power Machine	Power Machine	Power Machine
Main Steams Pressure at Turbine inlet (kg/Cm ²) abs ¹ .	247	247	247
Main Steam Temperature at Turbine inlet (°C) ¹	537	537	537
Reheat Steam Pressure at Turbine inlet (kg/Cm ²) ¹	43.1	43.1	43.1
Reheat Steam Temperature at Turbine inlet (°C) ¹	565	565	565
Main Steam flow at Turbine inlet under MCR condition (tons /hr) ²	2023	2023	2023
Main Steam flow at Turbine inlet under VWO condition (tons /hr) ²	2092.8	2092.8	2092.8
Unit Gross electrical output under MCR /Rated condition (MW) ²	660	660	660
Unit Gross electrical output under VWO condition (MW) ²	682.8	682.8	682.8
Guaranteed Design Gross Turbine Cycle Heat Rate (kCal/kWh) ³	1904	1904	1904
Conditions on which design turbine cycle heat rate guaranteed			
% MCR	100	100	100
% Makeup Water Consumption	0	0	0
Design Capacity of Make up Water System	3	3	3
Design Capacity of Inlet Cooling System			
Design Cooling Water Temperature (°C)	33	33	33
Back Pressure	77mmHg(abs)	77mmHg(abs)	77mmHg(abs)
Steam flow at super heater outlet under BMCR condition (tons/hr)	2225	2225	2225
Steam Pressure at super heater outlet under BMCR condition) (kg/Cm ²)	253.45	253.45	253.45
Steam Temperature at super heater outlet under BMCR condition (°C)	540	540	540
Steam Temperature at Reheater outlet at BMCR condition (°C)	568	568	568
Design / Guaranteed Boiler Efficiency (%) ⁴	86.27	86.27	86.27
Design Fuel with and without Blending of domestic/imported coal	Coal of 3300 Kcal/Kg GCV	Coal of 3300 Kcal/Kg GCV	Coal of 3300 Kcal/Kg GCV
Type of Cooling Tower	Induced Draft	Induced Draft	Induced Draft
Type of cooling system ⁵	Closed Circuit	Closed Circuit	Closed Circuit
Type of Boiler Feed Pump ⁶	St Turbine Driven	St Turbine Driven	St Turbine Driven
Fuel Details ⁷			

Plant Characteristics

Name of the Petitioner	NTPC Ltd.		
Name of the Generating Station	Sipat STPS Stage-I		
Unit(s)/Block(s)/Parameters	Unit-I	Unit-II	Unit-III
-Primary Fuel	Coal	Coal	Coal
-Secondary Fuel	LDO	LDO	LDO
-Alternate Fuels	NA	NA	NA
Types of SOX control system	FGD, De-Nox systems under implementation.		
Types of NOX control system			
Details of SPM control system			
Special Features/Site Specific Features⁸			
Special Technological Features⁹	Super Critical	Super Critical	Super Critical
Environmental Regulation related features¹⁰	ESP	ESP	ESP
Any other special features	FGD, De-Nox	FGD, De-Nox	FGD, De-Nox
1: At Turbine MCR condition.			
2: with 0% (Nil) make up and design Cooling water temperature			
3: at TMCR output based on gross generation, 0% (Nil) makeup and design Cooling water temperature.			
4: With Performance coal based on Higher Heating Value (HHV) of fuel and at BMCR) out put			
5: Closed circuit cooling, once through cooling, sea cooling, natural draft cooling, induced draft cooling etc.			
6: Motor driven, Steam turbine driven etc.			
7: Coal or natural gas or Naptha or lignite etc.			
8: Any site specific feature such as Merry-Go-Round, Vicinity to sea, Intake /makeup water systems etc. scrubbers etc. Specify all such			
9: Any Special Technological feature like Advanced class FA technology in Gas Turbines, etc.			
10: Environmental Regulation related features like FGD, ESP etc.,			
			 Petitioner

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Normative parameters considered for tariff computations

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	Sipat STPS Stage-I

(Year Ending March)							
Particulars	Unit	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
Base Rate of Return on Equity \$\$	%	15.50	15.50	15.50	15.50	15.50	15.50
Base Rate of Return on Equity on Add. Capitalization** \$\$	%	-	8.304	8.589	8.722	8.733	8.742
Effective Tax Rate	%	21.5490%	17.4720	17.4720	17.4720	17.4720	17.4720
Target Availability	%	85.00	85.00				
In High Demand Season	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
In Low Demand Season(Off-Peak)	%	-	-	85.00	85.00	85.00	85.00
Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Off-Peak Hours	%	-	-	85.00	85.00	85.00	85.00
Auxiliary Energy Consumption	%	5.75	6.25	6.25	6.25	6.25	6.25
Gross Station Heat Rate	kCal/kWh	2306.34	2317.37	2317.37	2317.37	2317.37	2317.37
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50	0.50	0.50	0.50
Cost of Coal/Lignite for WC1	in Days	10	10	10	10	10	10
Cost of Main Secondary Fuel Oil for WC1	in Months	2	2	2	2	2	2
Fuel Cost for WC2	in Months						
Liquid Fuel Stock for WC2	in Months						
O&M Expenses	Rs lakh/MW	18.38	20.26	20.97	21.71	22.47	23.26
Maintenance Spares for WC	% of O&M	20.00	20.00	20.00	20.00	20.00	20.00
Receivables for WC	in Days	60	45	45	45	45	45
Storage capacity of Primary fuel*	MT	1000000					
SBI 1 Year MCLR plus 350 basis point ³	%	13.50	12.05	12.05	12.05	12.05	12.05
Blending ratio of domestic coal/imported coal							

** Rate of Return on Add - cap beyond original scope and excluding Change in Law

\$\$ Additional RoE due to better ramp rate would be claimed at the time of true-up or as per guidelines to be issued

* This capacity is the aggregate storage capacity for Sipat Station including Stage-I & Stage-II.



Petitioner

(17)

Part-I
FORM-3A
ADDITIONAL FORM


Calculation of O&M Expenses

Name of the Company : **NTPC Limited**
Name of the Power Station : **Sipat STPS Stage-I**

		Amount in Rs. Lakhs							
S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24			
1	2	3	4	5	7	8			
1	O&M expenses under Reg.35(1)								
1a	Normative	40114.80	41520.60	42985.80	44490.60	46054.80			
2	O&M expenses under Reg.35(6)								
2a	Water Charges ##	7831.85	8105.96	8389.67	8683.31	8987.22			
2b	Secutiry expenses	1956.27	2013.92	2073.30	2134.46	2197.46			
2c	Capital Spares**	0.00	0.00	0.00	0.00	0.00			
3	O&M expenses-Ash Transportation**	0.00	0.00	0.00	0.00	0.00			
	Total O&M Expenses	49902.91	51640.48	53448.77	55308.37	57239.48			

** Shall be provided at the time of truing up

Water Charges being claimed is based on actuals for FY 2018-19 with an annual escalation of 3.5% year on year.



Petitioner

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DETAILS OF FOREIGN LOANS
(Details only in respect of loans applicable to the project under petition)

Name of the company: **NTPC LIMITED**
 Name of the Power Station: **Sipat**
 Exchange Rate as on: 31-03-2019 USD = Rs 69.77 EUR = Rs 78.84 JPY 0.8543

Financial Year (Starting from COD)	100% (Amount in Lacs)			
	1	2	3	4
2019-20 (01.04.2019 to 31.03.2020)				
KEXIM				
Currency 1 USD				
At the date of drawl	14-02-2019	3,542.52	69.77	2,47,161.62
Loan repayment upto previous period	01-04-2019	3,234.58	69.77	2,25,676.86
Net loan at the Beginning of the period	01-04-2019	307.94	69.77	21,484.73
Schedule repayment date of principal	14-08-2019	153.97	69.77	10,742.36
Scheduled payment date of interest	14-08-2019	6.67	69.77	465.57
Withholding tax including surcharge on interest	14-08-2019	0.37	69.77	25.85
Schedule repayment date of principal	14-02-2020	153.97	69.77	10,742.36
Scheduled payment date of interest	14-02-2020	3.39	69.77	236.64
Withholding tax including surcharge on interest	14-02-2020	0.19	69.77	13.15
At the end of Financial year	31-03-2020	0.00	0.00	-

Financial Year (Starting from COD)	36% (Amount in Lacs)			
	1	2	3	4
2019-20 (01.04.2019 to 31.03.2020)				
NIB				
Currency 1 EURO				
At the date of drawl	20-01-2019	261.91	78.84	20,649.22
Loan repayment upto previous period	01-04-2019	232.81	78.84	18,354.86
Net loan at the Beginning of the period	01-04-2019	29.10	78.84	2,294.36
Schedule repayment date of principal	20-07-2019	14.55	78.84	1,147.18
Scheduled payment date of interest	20-07-2019	0.06	78.84	4.76
Withholding tax including surcharge on interest	20-07-2019	-	-	-
Schedule repayment date of principal	20-01-2020	14.55	78.84	1,147.18
Scheduled payment date of interest	20-01-2020	0.03	78.84	2.43
Withholding tax including surcharge on interest	20-01-2020	-	-	-
At the end of Financial year	31-03-2020	0.00	0.00	-

Financial Year (Starting from COD)	1% (Amount in Lacs)			
	1	2	3	4
2019-20 (01.04.2019 to 31.03.2020)				
5.625 % Euro Bonds 2021				
Currency 1 USD				
At the date of drawl	14-01-2019	50.30	69.77	3,509.43
Loan repayment upto previous period	01-04-2019	-	-	-
Net loan at the Beginning of the period	01-04-2019	50.30	69.77	3,509.43
Schedule repayment date of principal	14-07-2019	1.41	69.77	98.70
Scheduled payment date of interest	14-07-2019	0.40	69.77	27.58
Withholding tax including surcharge on interest	14-07-2019	-	-	-
Schedule repayment date of principal	14-01-2020	1.41	69.77	98.70
Scheduled payment date of interest	14-01-2020	0.40	69.77	27.58
Withholding tax including surcharge on interest	14-01-2020	-	-	-
At the end of Financial year	31-03-2020	50.30	69.77	3,509.43

Financial Year (Starting from COD)	1% (Amount in Lacs)			
	1	2	3	4
2019-20 (01.04.2019 to 31.03.2020)				
4.75% Eurobonds 2022				
Currency 1 USD				
At the date of drawl	02-10-2018	54.50	69.77	3,802.47
Loan repayment upto previous period	01-04-2018	-	-	-
At the end of Financial year	31-03-2020	54.50	69.77	3,802.47

Financial Year (Starting from COD)	2020-21 (01.04.2020 to 31.03.2021)				2021-22 (01.04.2021 to 31.03.2022)			
	1	2	3	4	1	2	3	4
2020-21 (01.04.2020 to 31.03.2021)								
5.625 % Euro Bonds 2021								
Currency 1 USD								
At the date of drawl	01-04-2020	50.30	69.77	3,509.43	01-04-2021	50.30	69.77	3,509.43
Loan repayment upto previous period	01-04-2020	-	-	-	14-07-2021	50.30	69.77	3,509.43
Net loan at the Beginning of the period	01-04-2020	50.30	69.77	3,509.43	14-07-2021	1.19	69.77	83.35
Schedule repayment date of principal	14-07-2020	1.41	69.77	98.70	14-07-2021	0.33	69.77	23.29
Scheduled payment date of interest	14-07-2020	0.40	69.77	27.58	14-07-2021	-	-	-
Withholding tax including surcharge on interest	14-07-2020	-	-	-	14-01-2021	-	-	-
Schedule repayment date of principal	14-01-2021	1.41	69.77	98.70	14-01-2021	-	-	-
Scheduled payment date of interest	14-01-2021	0.40	69.77	27.58	14-01-2021	-	-	-
Withholding tax including surcharge on interest	14-01-2021	-	-	-	31-03-2022	-	-	-
At the end of Financial year	31-03-2021	50.30	69.77	3,509.43	31-03-2022	69.77	69.77	3,802.47

Financial Year (Starting from COD)	2022-23 (01.04.2022 to 31.03.2023)			
	1	2	3	4
2022-23 (01.04.2022 to 31.03.2023)				
4.75% Eurobonds 2022				
Currency 1 USD				
At the date of drawl	01-04-2022	54.50	69.77	3,802.47
Loan repayment upto previous period	01-04-2022	-	-	-
At the end of Financial year	31-03-2023	54.50	69.77	3,802.47

DETAILS OF FOREIGN LOANS
(Details only in respect of loans applicable to the project under petition)

NTPC LIMITED

Sipat I

Name of the company Name of the Power Station	Net loan at the Beginning of the period	01-04-2019	54.50	69.77	3,802.47	01-04-2020	54.50	69.77	3,802.47	01-04-2021	54.50	69.77	3,802.47	#####	54.50	69.77	3,802.47
2. Scheduled repayment date of principal		01-04-2019	54.50	69.77	3,802.47	01-04-2020	54.50	69.77	3,802.47	01-04-2021	54.50	69.77	3,802.47	#####	54.50	69.77	3,802.47
3. Scheduled repayment date of interest		02-04-2019	1.29	69.77	90.31	02-04-2020	1.29	69.77	90.31	02-04-2021	1.29	69.77	90.31	#####	1.29	69.77	90.31
4. Withholding tax including surcharge on interest		02-04-2019	0.07	69.77	5.22	02-04-2020	0.07	69.77	5.22	02-04-2021	0.07	69.77	5.22	#####	0.07	69.77	5.22
5. Scheduled repayment date of principal		02-10-2019	1.29	69.77	90.31	02-10-2020	1.29	69.77	90.31	02-10-2021	1.29	69.77	90.31	#####	1.29	69.77	90.31
6. Scheduled payment date of interest		02-10-2019	0.07	69.77	5.22	02-10-2020	0.07	69.77	5.22	02-10-2021	0.07	69.77	5.22	#####	0.07	69.77	5.22
7. Withholding tax including surcharge on interest		31-03-2020	54.50	69.77	3,802.47	31-03-2021	54.50	69.77	3,802.47	31-03-2022	54.50	69.77	3,802.47	#####	54.50	69.77	3,802.47
At the end of Financial year																	
																	0.00


Abstract of Admitted Capital Cost for the existing Projects

Name of the Company :	NTPC Limited
Name of the Power Station :	Sipat STPS Stage-I

		In Rs Lakh
Last date of order of Commission for the project	Date (DD-MM-YYYY)	29.03.2017
Reference of petition no. in which the above order was passed	Petition no.	337/GT/2014
Following details (whether admitted and /or considered) as on the last date of the period for which tariff is approved, in the above order by the Commission: (as on 31.03.2019)		
Capital cost	(Rs. in lakh)	920401.16
Amount of un-discharged liabilities included in above (& forming part of admitted capital cost)		
Amount of un-discharged liabilities corresponding to above admitted capital cost (but not forming part of admitted capital cost being allowed on cash basis)		
Gross Normative Debt		644280.82
Cumulative Repayment		90405.28
Net Normative Debt		322099.06
Normative Equity		276120.34
Cumulative Depreciation		32209906
Freehold land		3505.01


(Petitioner)

Abstract of Claimed Capital Cost for the existing Projects

Name of the Company :	NTPC Limited	
Name of the Power Station :	Sipat STPS Stage-I	
Reference of Final True-up Tariff Petition	Affidavit dated	7.1.2020
Capital Cost as on 31.03.2019 as per Hon'ble Commission's Order dated 03.03.2017 in Petition no. 337/GT/2014	Rs. Lakhs	920401.16
Adjustment as per Para (7) of this petition		5996.05
Following details as considered by the Petitioner as on the last date of the period for which final true-up tariff is claimed:		
Capital cost as on 01.04.2019	(Rs. in lakh)*	926397.21
Amount of un-discharged liabilities included in above (& forming part of admitted capital cost)		31826.69
Amount of un-discharged liabilities corresponding to above admitted capital cost (but not forming part of admitted capital cost being allowed on cash basis)		422.65
Gross Normative Debt		6,48,478.05
Cumulative Repayment		319368.90
Net Normative Debt		3,29,109.15
Normative Equity		2,77,919.16
Cumulative Depreciation		3,21,574.47
Freehold land (Gross Basis)		3552.08
 (Petitioner)		

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Form 8- Domestic Bonds- Details of Allocation of corporate loans to various projects during the FY 2019-24

Particulars	XXI 7.7125%	XXII 8.1771%	XXIII 8.3796%	XXXI 8.78%	XXXIII 8.73%	XXXIV 8.71%	XXXV 8.785%	XXXVI 8.8086%
Source of Loan1	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS
Currency2	INR	INR	INR	INR	INR	INR	INR	INR
Amount of Loan sanctioned	100000	50000	50000	50000	19500	15000	12000	7500
Interest Type6	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Fixed Interest Rate, if applicable	7.7125%	8.1771%	8.3796%	8.78%	8.73%	8.71%	8.785%	8.8086%
Base Rate, if Floating Interest7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Margin, if Floating Interest8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Are there any Caps/Floor9	No	No	No	No	No	No	No	No
If above is yes, specify caps/floor								
Moratorium Period10	4.5 yrs *	4.5 yrs *	4.5 yrs *	10 yrs *	10 yrs	6 yrs	6 yrs	6 yrs
Moratorium effective from #	02.02.06	02.01.07	05.02.07	09.03.2010	31.03.10	10.06.2010	15.09.10	15.12.2010
Repayment Period11	9.5 yrs	9.5 yrs	9.5 yrs	Bullet Repayment	Bullet Repayment	14 yrs	14 yrs	14 yrs
Repayment effective from	02.08.10	02.07.11	05.08.11	09.03.2020	31.03.20	10.06.16	15.09.16	15.12.2016
Repayment Frequency12	Half Yearly	Half Yearly	Half Yearly	Bullet Repayment	Bullet Repayment	Yearly	Yearly	Yearly
Repayment Instalment13,14	5000	2500	2500	50000	19500	1000	800	500
Base Exchange Rate16								
Door to Door Maturity	14 yrs	14 yrs	14 yrs	10 yrs	10 yrs	20 yrs	20 yrs	20 yrs
Name of the Projects								
SIPAT I	2,500	23,600	20,900	30,000	9,700	3,700	9,500	5,000

<u>XXXVII 8.93%</u>	<u>XXXVIII 9.17%</u>	<u>XXXIX 9.3896%</u>	<u>XL 9.558%</u>	<u>XLI 9%</u>	<u>XLII 9.2573%</u>	<u>XLIV 9.25%</u>	<u>XLV 9.4376%</u>	<u>54</u>	<u>57</u>	<u>66</u>
BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS	BONDS
INR	INR	INR	INR	INR	INR	INR	INR	INR	INR	INR
30000	7500	10500	7500	50000	7500	50000	7500	1030683	50000	392500
Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
8.93%	9.17%	9.3896%	9.558%	9.00%	9.257%	9.25%	9.4376%	8.49%	8.19%	7.37%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No	No	No	No	No	No	No	No	No	No	No
10 yrs *	6 yrs	6 yrs	6 yrs	10 yrs.	6 yrs	11 yrs	6 yrs	N/A	N/A	N/A
19.01.2011	22.03.11	09.06.11	29.07.11	25.01.2012	02.03.12	04.05.12	16.05.12	25-03-2015	15-12-2015	14-12-2016
Bullet Repayment	14 yrs	14 yrs	14 yrs	5 yrs	14 yrs	5 yrs	14 yrs	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025	Bullet Repayment	Bullet Repayment
19.01.2021	22.03.2017	09.06.17	29.07.17	25.01.2023	02.03.18	04.05.23	16.05.18	25-03-2023	15-12-2025	14-12-2031
Bullet Repayment	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Installments Due on 25/03/2023, 25/03/2024 & 25/03/2025	Bullet Repayment	Bullet Repayment
30000	500	700	500	10000	500	10000	500	Installments 1st - 206,136.61 2nd - 412,273.22 3rd - 412,273.22	50000	392500
10 yrs	20 yrs	20 yrs	20 yrs	15 yrs.	20 yrs	15yrs	20 yrs	N/A	N/A	N/A
								10	10	15
12,000	300	5,900	7,500	14,500	7,500	9,200	7,500	20,500	1,400	1,700

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3

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

DRAWAL NO.

BP NO 5050000241

T00001

D00001

Unsecured Loan From LIC-III		
Source of Loan :	LIC-III	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawal	22.03.2004	
Interest Type :	Fixed	
Fixed Interest Rate :	6.571%	
Base Rate, If Floating Interest		
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Half Yearly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :		
Moratorium effective from :		
Repayment Period (Inc Moratorium) :		
Repayment Frequency :		
Repayment Type :		
First Repayment Date :		
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	TALCHER-II	90,00,00,000.00
	RAMAGUNDAM-III	50,00,00,000.00
	KOLDAM	1,30,00,00,000.00
	VINDHYACHAL-III	80,00,00,000.00
	KAHALGAON-II	85,00,00,000.00
	SIPAT-II	35,00,00,000.00
	SIPAT-I	10,00,00,000.00
	UNCHAHAAR-III	15,00,00,000.00
	RGCCPP	5,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

DRAWAL NO.

BP NO 5050000241

T00002

D00002

Unsecured Loan From LIC-III		
Source of Loan :	LIC-III	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	10,00,00,00,000	
Date of Drawal	15.12.2005	
Interest Type :	Fixed	
Fixed Interest Rate :	D00002 - 7.732%	
Base Rate, If Floating Interest		
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Half Yearly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :		
Moratorium effective from :		
Repayment Period (Inc Moratorium) :		
Repayment Frequency :		
Repayment Type :		
First Repayment Date :		
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	UNCHAHAR-III	1,00,00,00,000.00
	KOLDAM	80,00,00,000.00
	KAHALGAON-II	1,90,00,00,000.00
	RIHAND-II	50,00,00,000.00
	SIPAT-I	1,00,00,00,000.00
	SIPAT-II	1,50,00,00,000.00
	TALCHER-II	40,00,00,000.00
	VINDHYACHAL-III	2,50,00,00,000.00
	BARH-I	40,00,00,000.00
Total Allocated Amount		10,00,00,00,000.00

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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

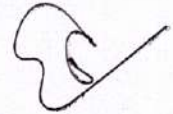
DRAWAL NO.

BP NO 5060000001

T00003

D00005

Unsecured Loan From LIC-III		
Source of Loan :	LIC-III	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawal	02.01.2007	
Interest Type :	Fixed	
Fixed Interest Rate :	D0005-8.2771%	
Base Rate, If Floating Interest		
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Half Yearly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :		
Moratorium effective from :		
Repayment Period (Inc Moratorium) :		
Repayment Frequency :		
Repayment Type :		
First Repayment Date :		
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	NCTPP-II	95,00,00,000.00
	VINDHYACHAL-III	35,00,00,000.00
	TAPOVAN VISHNUGAD	55,00,00,000.00
	KORBA-III	20,00,00,000.00
	BARH-I	1,00,00,00,000.00
	SIPAT-I	1,10,00,00,000.00
	BARH-I	85,00,00,000.00
		5,00,00,00,000.00




Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5060000001

T00002

D00006

Unsecured Loan From LIC-III		
Source of Loan :	LIC-III	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawal:	20.03.2007	
Interest Type :	Fixed	
Fixed Interest Rate :		
Base Rate, If Floating Interest	D00006 - 8.7281%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Half Yearly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	31.12.2003	
Repayment Period (Inc Moratorium) :	14 Years	
Repayment Frequency :	20 Half Yearly	
Repayment Type :	AVG	
First Repayment Date :	31-Dec-07	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KOLDAM	30,00,00,000.00
	TALCHER-II	29,00,00,000.00
	RIHAND-II	51,00,00,000.00
	RAMAGUNDAM-III	12,00,00,000.00
	VINDHYACHAL-III	20,00,00,000.00
	KAHALGAON-II	10,00,00,000.00
	SIPAT-I	2,45,00,00,000.00
	TTPS R&M	17,00,00,000.00
	SINGRAULI R&M	9,00,00,000.00
	TANDA R&M	35,00,00,000.00
	RAMAGUNDAM R&M	6,00,00,000.00
	VINDHYACHAL R&M	5,00,00,000.00
	FARAKKA R&M	10,00,00,000.00
	UNCHAHAR R&M	5,00,00,000.00
	KORBA R&M	6,00,00,000.00
	ANTA R&M	10,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5060000001

T00002

D00007

Unsecured Loan From LIC-III		
Source of Loan :	LIC-III	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawal:	28.03.2007	
Interest Type :	Fixed	
Fixed Interest Rate :		
Base Rate, If Floating Interest	D00007 - 8.7576%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Half Yearly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	31.12.2003	
Repayment Period (Inc Moratorium) :	14 Years	
Repayment Frequency :	20 Half Yearly	
Repayment Type :	AVG	
First Repayment Date :	31-Dec-07	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KAHALGAON-II	2,65,00,00,000.00
	SIPAT-I	20,00,00,000.00
	VINDHYACHAL-III	35,00,00,000.00
	SIPAT-II	1,20,00,00,000.00
	UNCHAHAAR-III	60,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5060000001

T00002

D00007

Unsecured Loan From LIC-III		
Source of Loan :	LIC-III	
Currency :	INR	
Amount of Loan :	40,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawal:	28.03.2007	
Interest Type :	Fixed	
Fixed Interest Rate :		
Base Rate, If Floating Interest	D00007 - 8.7576%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Half Yearly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	31.12.2003	
Repayment Period (Inc Moratorium) :	14 Years	
Repayment Frequency :	20 Half Yearly	
Repayment Type :	AVG	
First Repayment Date :	31-Dec-07	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KAHALGAON-II	2,65,00,00,000.00
	SIPAT-I	20,00,00,000.00
	VINDHYACHAL-III	35,00,00,000.00
	SIPAT-II	1,20,00,00,000.00
	UNCHAHAR-III	60,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00



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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00008

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	3,00,00,00,00,000	
Date of Drawl	21.12.2009	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	9.39%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	SIMHADRI-II	1,00,00,00,000.00
	SIPAT-I	1,00,00,00,000.00
	BONGAIGAON	50,00,00,000.00
	RIHAND-III	50,00,00,000.00
Total Allocated Amount		3,00,00,00,000.00

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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00019

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	3,50,00,00,00,000	
Date of Drawl	21.05.2010	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	8.35%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KORBA-III	25,00,00,000.00
	KOLDAM	1,00,00,00,000.00
	NCTPP-DADRI-II	25,00,00,000.00
	SIMHADRI-II	50,00,00,000.00
	BONGAIGAON	50,00,00,000.00
	RIHAND-III	50,00,00,000.00
	SIPAT-I	50,00,00,000.00
Total Allocated Amount		3,50,00,00,000.00




Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00020

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	3,00,00,00,00,000	
Date of Drawl	15.06.2010	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	8.40%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	FARAKKA-III	20,00,00,000.00
	NCTPP-DADRI-II	20,00,00,000.00
	BONGAIGAON	20,00,00,000.00
	BARH-II	60,00,00,000.00
	MAUDA	1,00,00,00,000.00
	VINDHYANCHAL-IV	50,00,00,000.00
	RIHAND-III	10,00,00,000.00
	SIPAT-I	20,00,00,000.00
Total Allocated Amount		3,00,00,00,000.00




Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00024

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	2,00,00,00,00,000	
Date of Drawl	21.02.2011	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	7.43%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	85,00,00,000.00
	MAUDA-I	80,00,00,000.00
	SIPAT-I	20,00,00,000.00
	TAPOVAN VISHNUGARH	15,00,00,000.00
Total Allocated Amount		2,00,00,00,000.00



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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00031

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	4,00,00,00,00,000	
Date of Drawl	24.09.2011	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	7.44%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	KOLDAM	58,00,00,000.00
	TAPOVAN VISHNUGAD	15,00,00,000.00
	FARAKKA-III	48,00,00,000.00
	SIPAT-I	1,20,00,00,000.00
	NCTPP-II	37,00,00,000.00
	BARH-II	40,00,00,000.00
	KORBA-III	62,00,00,000.00
	KAHALGAON-II	15,00,00,000.00
	SIPAT-II	5,00,00,000.00
Total Allocated Amount		4,00,00,00,000.00



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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00033

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	5,00,00,00,00,000	
Date of Drawl	31.12.2011	
Interest Type :	Fixed with Reset after every 3 Years	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	7.83%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	SIPAT-I	90,00,00,000.00
	BARH-I	65,00,00,000.00
	BARH-II	80,00,00,000.00
	MOUDA-I	47,00,00,000.00
	BONGAIGAON	25,00,00,000.00
	RIHAND-III	38,00,00,000.00
	FARAKKA-III	1,31,00,00,000.00
	KORBA-III	7,00,00,000.00
	SIPAT-II	4,00,00,000.00
	KAHALGAON-II	8,00,00,000.00
	UNCHAHAH R&M	5,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan

Form 8

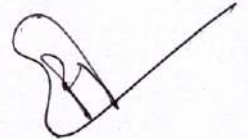
TRANCHE NO

BP NO 5070000011

T00001

D00036

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	5,00,00,00,000	
Date of Drawl	12.03.2012	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	8.30%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-II	2,75,00,00,000.00
	MOUDA-I	35,00,00,000.00
	VINDHYACHAL-IV	45,00,00,000.00
	SIPAT-I	1,05,00,00,000.00
	RIHAND-III	40,00,00,000.00
Total Allocated Amount		5,00,00,00,000.00



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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5070000011

T00001

D00038

Unsecured Loan From PFC-V		
Source of Loan :	PFC-V	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	4,50,00,00,00,000	
Date of Drawl	29.03.2012	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	8.2300%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	26.12.2008	
Repayment Period (Inc Moratorium) :	16 Years	
Repayment Frequency :	48 Quarterly Instalments	
Repayment Type :	FIFO	
First Repayment Date :	15.07.2013	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	RIHAND-III	1,40,00,00,000.00
	PAKRI BARWADIH	35,00,00,000.00
	SIPAT-I	30,00,00,000.00
	SIMHADRI-II	1,15,00,00,000.00
	FARAKKA-III	45,00,00,000.00
	BARH-II	20,00,00,000.00
	BONGAIGAON	65,00,00,000.00
Total Allocated Amount		4,50,00,00,000.00

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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5050000154

T00001

D00002

Unsecured Loan From Canara Bank - II		
Source of Loan :	Canara Bank - II	
Currency :	INR	
Amount of Loan :	27,50,00,00,000	
Total Drawn amount :	1,00,00,00,000	
Date of Drawl	29.09.2011	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.45%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	30.06.2009	
Repayment Period (Inc Moratorium) :	10 Years	
Repayment Frequency :	14 Half Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	30.12.2012	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	SIPAT-I	1,00,00,00,000
Total Allocated Amount		1,00,00,00,000

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Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5050000211

T00001

D00004

Unsecured Loan From Vijaya Bank-IV		
Source of Loan :	Vijaya Bank - IV	
Currency :	INR	
Amount of Loan :	3,79,00,00,000	
Total Drawn amount :	1,19,00,00,000	
Date of drawl	23.05.2011	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.40%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	15.09.2010	
Repayment Period (Inc Moratorium) :	10 Years	
Repayment Frequency :	14 Half Yearly Instalment	
Repayment Type :	AVG	
First Repayment Date :	15.03.2014	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-II	29,00,00,000.00
	PAKRI BARWADIH	25,00,00,000.00
	MAUDA	15,00,00,000.00
	SIPAT-I	50,00,00,000.00
Total Allocated Amount		1,19,00,00,000.00

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**Statement Giving Details of Project Financed through a Combination of loan
Form 8**

TRANCHE NO

BP NO 5050000311

T00001

D00001

Unsecured Loan From Syndicate Bank		
Source of Loan :	Syndicate Bank-III	
Currency :	INR	
Amount of Loan :	10,00,00,00,000	
Total Drawn amount :	50,00,00,000	
Date of Drawl	01.06.2012	
Interest Type :	Floating	
Fixed Interest Rate :		
Base Rate, If Floating Interest	8.45%	
Margin, If Floating Interest :	NIL	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	01.06.2012	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	16 Half Yearly	
Repayment Type :	Average	
First Repayment Date :	01.12.2016	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BONGAIGAON	20,00,00,000.00
	SIPAT-I	30,00,00,000.00
Total Allocated Amount		50,00,00,000.00

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**Statement Giving Details of Project Financed through a Combination of loan
Form 8**

TRANCHE NO

BP NO 5050000261

T00001

D00009

Unsecured Loan From SBI-VII		
Source of Loan :	SBI-VII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	1,00,00,00,00,000	
Date of Drawl	31.03.2013	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	8.25%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	4 Years	
Moratorium effective from :	31.03.2013	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	16 Half Yearly Instalments	
Repayment Type :	AVG	
First Repayment Date :	30.09.2015	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-II	60,00,00,000
	SIPAT-I	15,00,00,000
	VINDHYACHAL-V	25,00,00,000
Total Allocated Amount		1,00,00,00,000.00

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5050000442

T00001

D00024

Unsecured Loan From SBI-VIII		
Source of Loan :	SBI-VIII	
Currency :	INR	
Amount of Loan :	1,00,00,00,00,000	
Total Drawn amount :	11,50,00,00,000	
Date of Drawl	14.02.2017	
Interest Type :	Floating	
Fixed Interest Rate :	-----	
Base Rate, If Floating Interest	8.25%	
Margin, If Floating Interest :		
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	Monthly	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	6 Years	
Moratorium effective from :	14.02.2017	
Repayment Period (Inc Moratorium) :	15 Years	
Repayment Frequency :	9 Yearly Installments	
Repayment Type :	AVG	
First Repayment Date :	31.01.2022	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	BARH-I	3,00,00,00,000
	BONGAIGAON	34,28,57,142
	FARAKKA III	14,28,57,141
	GADARWARA	2,50,00,00,000
	KOLDAM	92,85,71,427
	KORBA-III	2,85,71,428
	KUDGI	1,00,00,00,000
	MOUDA-I	40,71,42,856
	NCTPP-II	15,71,42,855
	NORTH KARANPURA	1,00,00,00,000
	RIHAND-III	32,14,28,570
	SIMHADRI-II	53,28,57,141
	SIPAT-I	21,42,85,711
	SIPAT-II	5,71,42,856
	TAPOVAN VISHNUGAD	50,00,00,000
	VINDHYACHAL IV	32,42,85,714
	PAKRI BARWADIH	4,28,57,159
Total Allocated Amount		11,50,00,00,000

Statement Giving Details of Project Financed through a Combination of loan

Form 8

TRANCHE NO

BP NO 5050000721

T00001

D00001

Unsecured Loan From Corporation Bank-IV		
Source of Loan :	Corporation Bank-IV	
Currency :	INR	
Amount of Loan :	20,00,00,00,000	
Total Drawn amount :	20,00,00,00,000	
Date of Drawal:	11.01.2019	
Interest Type :	Floating	
Fixed Interest Rate :	8.25%	
Base Rate, If Floating Interest	-	
Margin, If Floating Interest :	-	
Are there any Caps/ Floor :	Y/N	
Frequency of Intt. Payment	MONTHLY	
If Above is yes, specify Caps/ Floor :		
Moratorium Period :	3 Years	
Moratorium effective from :	11.01.2019	
Repayment Period (Inc Moratorium) :	12 Years	
Repayment Frequency :	9 Yearly Instalments	
Repayment Type :	AVG	
First Repayment Date :	11-Jan-23	
Base Exchange Rate :	RUPEE	
Date of Base Exchange Rate :	N.A.	
Project Code	Project Name	Amount
	SINGRAULI 8MW HYDRO	8,75,00,000
	FARIDABAD SOLAR PV	8,75,00,000
	SINGRAULI SOLAR	8,75,00,000
	FARAKKA III	11,42,85,716
	RAJGARH SOLAR	13,12,50,000
	NCTPP-II	14,28,57,139
	GANDHAR R&M	16,60,71,436
	SIMHADRI-II	23,21,42,855
	SIPAT-I	23,43,75,000
	MOUDA-II	50,00,00,000
	VINDHYACHAL-V	1,00,00,00,000
	SIPAT-II	1,01,07,14,287
	MOUDA-I	1,05,44,64,284
	RIHAND-III	1,22,85,71,426
	VINDHYACHAL-IV	2,45,00,00,000
	KOLDAM	2,71,51,78,577
	BARH-II	6,75,75,89,280
	KUDGI	2,00,00,00,000
	Total Allocated Amount	20,00,00,00,000

A

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Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited								
Name of the Generating Station	Sipat STPS Stage-I								
COD	01-08-2012								
For Financial Year	2019-24 (Summary)								

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)							Justification & Regulation for claim of work(s)	Admitted Cost by the Commission, if any
		2019-20	2020-21	2021-22	2022-23	2023-24	7	8		
1	2	3	4	5	6	7	8	9		
A.	Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate									
1	Ash Dyke Raising	-	650.00		1,000.00					
2	Unit-2&3 Fly ash Extraction system		5,000.00							
3	CLO2 plant installation.		1,200.00	-					Pl refer Form-9 of respective Financial Years	
	Total(A)	-	6,850.00	-	1,000.00	-				
B.	Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest									
4										
	Total (B)		-	-	-					
	Total Add. Cap. Claimed (A+B)	-	6,850.00	-	1,000.00					


 (Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited	
Name of the Generating Station		Sipat STPS Stage-I	
COD		01-08-2012	
For Financial Year		2019-20	

Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed (Projected)		Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any	
			Un-discharged Liability included in col.3	4				Cash basis 5= (3-4)
1	2	3	4	5= (3-4)	6	7	8	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								

No Add-Cap is being claimed on projections. However, the same may be claimed, if any, at the time of truing-up.

Total (A)	-	-	-	-	-	-	-	-
B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest								
10								
Total (B)	-	-	-	-	-	-	-	-
Total Add. Cap. Claimed (A+B)	-	-	-	-	-	-	-	-

N/A


(Petitioner)

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Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						Amount in Rs Lakh Admitted Cost by the Commission, if any
Name of the Generating Station COD		Sipat STPS Stage-I						
For Financial Year		01-08-2012 2020-21						
Sl. No.	Head of Work /Equipment	Accrual basis as per IGAAP	ACE Claimed Un-discharged Liability included in col. 3	ACE Claimed (Actual / Projected) Cash basis	IDC included in col. 3	Regulations under which claimed	Justification	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate		3	4	5= (3-4)	6	7	8	9
1	Ash Dyke Raising	650.00		650.00		25(1)(C) read with 25(1)(g)	Ash Dyke raising is the work under original scope and the activity is carried out periodically at different tranches during the life of the plant for disposal of ash to ensure continuous and sustainable operation of the station. Hon'ble Commission may be pleased to allow the same.	
2	Dry Fly Ash Extraction System (DAES)	5,000.00		5,000.00		26 (1) (b)	Dry Ash evacuation system has been envisaged for 100% Ash utilisation in the station. T, which has also been directed by CECB in consent to operate. Hon'ble Commission may be pleased to allow the this expenditure for the purpose of tariff. CECB consent to operate is attached at Annexure-A.	
3	CLO2 plant installation.	1,200.00		1,200.00		26(1)(b) read with 26(1)(d)	In the instant station, at present Chlorine gas is being dozed directly at various stages of water treatment to maintain water quality and to inhibit organic growth in the water retaining structures/ equipment such as clarifiers, storage tanks, cooling towers, condenser tubes & piping etc. Chlorine dosing is done from chlorine stored in cylinders/ tonners. Chlorine gas is very hazardous and may prove fatal in case of leakage, handling and storage of same involves risk to the life of public at large. In the interest of public safety the chlorine dosing system is now being replaced by Chlorine Dioxide (ClO2) system, which is much safer and less hazardous than chlorine. In the proposed scheme ClO2 shall be produced on site by use of commercial grade HCl and sodium chlorite. As ClO2 is generated at site, avoids handling and storage risk. Further, at Kudgi NTPC project Department of Factorites, Boiler, Industrial Safety and Health, Govt of Karnataka has directed NTPC to replace the highly hazardous gas chlorination system with ClO2 system, SPCB, Odisha while issuing consent to establish in case of Daripalli Station has asked NTPC to explore the possibility of installing ClO2 system instead of Chlorine gas system (Relevant documents is attached at Annexure-B). In view of the directions of various statutory authorities in different states of the country and for enhancing the safety of public NTPC is replacing the chlorination system with ClO2 system. Accordingly, Hon'ble Commission may be pleased to allow the same under Reg. 25(2)(b) i.e. Change in Law for replacement of existing ClO2 dosing system. Documentary evidence attached at Annexure-B.	
Total (A)		6,850.00	-	6,850.00	-			
B. Works beyond Original scope extending add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest								
Total (B)		-	-	-	-			
Total Add. Cap. Claimed		6,850.00	-	6,850.00	-			

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(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited				
Name of the Generating Station	Sipat STPS Stage-I				
COD	01-08-2012				
For Financial Year	2021-22				

Sl. No.	Head of Work/Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5=(3-4)	6	7	8	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								

No Add-Cap is being claimed on projections. However, the same may be claimed, if any, at the time of truing-up.

Total (A)	-	-	-	-	-	-	-	-
B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wid. Average rate of Interest								
10	-	-	-	-	-	-	-	-
Total (B)	-	-	-	-	-	-	-	-
Total Add. Cap. Claimed (A+B)	-	-	-	-	-	-	-	-



(Petitioner)



Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited				
Name of the Generating Station	Sipat STPS Stage-I				
COD	01-08-2012				
For Financial Year	2022-23				

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
	Ash Dyke Raising	1000		1000		25(D)(C) read with 25(D)(g)		
	Total (A)	1000	-	1000	-		Justification as per Form-9 of FY 2020-21	
B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wid. Average rate of Interest								
10								
	Total (B)	-	-	-	-			
	Total Add. Cap. Claimed (A+B)	1000	-	1000	-			


(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited			
Name of the Generating Station	Sipat STPS Stage-I			
COD	01-08-2012			
For Financial Year	2023-24			

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual /			Regulations under which claimed	Justification	Amount in Rs Lakh Admitted Cost by the Commission, if any	
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis included in col. 3				IDC included in col. 3
1	2	3	4	5= (3-4)	6	7	8	9
A. Works under Original scope, Change in Law etc. eligible for RoE at Normal Rate								
1								
Total (A)								

B. Works beyond Original scope excluding add-cap due to Change in Law eligible for RoE at Wtd. Average rate of Interest								
No Add-Cap is being claimed on projections. However, the same may be claimed, if any, at the time of true-up.								
No Add-Cap is being claimed on projections. However, the same may be claimed, if any, at the time of true-up.								
Total (B)		-	-	-	-	-	-	
Total Add-Cap. Claimed		0	-	0	-	-	-	

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(Petitioner)

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Name of the Petitioner **NTPC Limited**
 Name of the Generating Station **Sipat STPS Stage-I**
 Date of Commercial Operation **01-08-2012**

Financial Year (Starting from COD) 1	Actual					Admitted				
	2019-20	2020-21	2021-22	2022-23	2023-24	2019-20	2020-21	2021-22	2022-23	2023-24
1	3	4	5	6	7	8	9	10	11	

Amount capitalised in Work/ Equipment

Financing Details

Loan-1	
Loan-2	
Loan-3 and so on	
Total Loan2	
Equity	
Internal Resources	
Others (Pl. specify)	
Total	

Add cap is proposed to be finance in Debt:Equity ratio of 70:30

Note:

1. Year 1 refers to Financial Year of COD and Year 2, Year 3 etc. are the subsequent financial years respectively.
2. Loan details for meeting the additional capitalisation requirement should be given as per FORM-7 or 8 whichever is relevant.



(Petitioner)

Calculation of Depreciation

Name of the Company : NTPC Limited
Name of the Power Station : Sipat STPS Stage-I

(Amount in Rs Lakh)

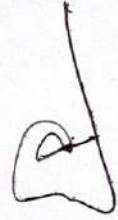
Sl.No.	Name of the Assets	Gross Block as on 01.04.2019 as on COD	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year up to 31.03.24
1	2	4	3	4= Col.3 X Col.4
1	Land- Free Hold	3552.08	0.00%	0.00
2	Land- Lease Hold	1289.08	3.34%	43.06
3	Land- Right Of Use	21.26	3.34%	0.71
4	Plant & Machinery	742203.49	5.28%	39188.34
5	Cooling Toters & CW System.	38195.95	5.28%	2016.75
6	Air conditioning.	1740.61	5.28%	91.90
7	Chimney	8430.30	5.28%	445.12
8	Main Plant Building	75409.33	3.34%	2518.67
9	Service Building	19346.18	3.34%	646.16
10	S-Yard/Electrical Instalaltions	27970.32	5.28%	1476.83
11	Raw Water Reservoir	10339.84	5.28%	545.94
12	MGR	13970.04	5.28%	737.62
13	Residential /other Blg	13418.74	3.34%	448.19
14	Road/Bridge	1400.77	3.34%	46.79
15	Water Supply	2977.94	5.28%	157.24
16	Locomotive	4744.63	9.50%	450.74
17	Wagons	5794.96	5.28%	305.97
18	Spares	12741.59	5.28%	672.76
19	Furniture & Fixtures,OFFICE EQUIP.	4642.27	6.33%	293.86
20	Communication Equip.	168.33	6.33%	10.66
21	EDP,WP&SATCOM.	1378.60	15.00%	206.79
22	VEHICLES	61.97	9.50%	5.89
23	Construction equip.	856.77	5.28%	45.24
24	Temporary Constructions.	0.00	100.00%	0.00
25	Laboratory & Workshop Equipment	590.90	5.28%	31.20
26	Railway Sidings	417.11	5.28%	22.02
27	Hospital Equipment	43.13	5.28%	2.28
28	Software	22.47	15.00%	3.37
	TOTAL	991728.65		50414.08
	Weighted Average Rate of Depreciation (%)			5.124

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Statement of Depreciation

Name of the Company :		NTPC Limited							
Name of the Power Station :		Sipat STPS Stage-I							
S. No.	Particulars	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	(Amount in Rs Lakh)	
1	2	3	4	5	6	7	8		
1	Opening Capital Cost	923888.36	9,26,397.21	9,26,397.21	9,33,247.21	9,33,247.21	9,34,247.21	9,34,247.21	
2	Closing Capital Cost	926397.21	9,26,397.21	9,33,247.21	9,33,247.21	9,34,247.21	9,34,247.21	9,34,247.21	
3	Average Capital Cost	925142.79	9,26,397.21	9,29,822.21	9,33,247.21	9,33,747.21	9,34,247.21	9,34,247.21	
1a	Cost of IT Equipments & Software included in (1) above*								
2a	Cost of IT Equipments & Software included in (2) above*								
3a	Average Cost of IT Equipments & Software								
4	Freehold land	3,552.08	3,552.08	3,552.08	3,552.08	3,552.08	3,552.08	3,552.08	
5	Rate of depreciation	5.080	5.124	5.124	5.124	5.124	5.124	5.124	
6	Depreciable value	8,29,431.63	8,30,560.61	8,33,643.11	8,36,725.61	8,37,175.61	8,37,625.61	8,37,625.61	
7	Balance useful life at the beginning of the period	18.99	18	17	16	15	14		
8	Remaining depreciable value	5,54,548.34	5,09,019.48	4,64,633.39	4,20,071.80	3,72,702.21	3,25,307.00	3,25,307.00	
9	Depreciation (for the period)	0.00	47,468.59	47,644.09	47,819.59	47,845.21	47,870.83	47,870.83	
10	Depreciation (annualised)	47,000.50	47,468.59	47,644.09	47,819.59	47,845.21	47,870.83	47,870.83	
11	Cumulative depreciation at the end of the period		3,69,009.73	4,16,653.82	4,64,473.41	5,12,318.61	5,60,189.44	5,60,189.44	
12	Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 01.04.2009	0.00	-	-	-	-	-	-	
13	Add: Cumulative depreciation adjustment on account of liability Discharge	0.00	-	-	-	-	-	-	
14	Less: Cumulative depreciation adjustment on account of de-capitalisation	342.65	-	-	-	-	-	-	
15	Net Cumulative depreciation at the end of the period after adjustments	3,21,541.14	3,69,009.73	4,16,653.82	4,64,473.41	5,12,318.61	5,60,189.44	5,60,189.44	

* Cost of IT and software considered from the Gross block as on 01.04.2019.



(Petitioner)

Statement of Unrecovered Depreciation for Sipat-I							Form-12A
SN	FY	Target Availability (%)	Annual Availability (%)	AFC (Periodic) (Rs.Lakh)	Dep. included in AFC (Periodic) (Rs.Lakh)	Disincentive (Periodic) (Rs.Lakh)	Dep. unrecovered due to disincentive (periodic) (Rs.Lakh)
1	2011-12 (1.10.2011-31.3.2012)	85	71.00	39486.26	9598.82	3252.90	790.76
2	2012-13 (1.4.2012-24.05.2012)	85		11979.66	2916.02		
3	2012-13 (25.05.2012-31.07.2012)	85	83.35	25139.304	5784.9593	1574.69	356.59
4	2012-13 (1.8.2012-31.3.2013)	85		125446.52	28112.424		

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Calculation of Interest on Actual Loans					Form-13	
Name of the Company		NTPC Limited				
Name of the Power Station		Sipat Super Thermal Power Project-I				
		(Amount in lacs)				
Sl. no.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
2						
1 NIB Total						
	Gross loan - Opening	17889.48	17889.48	17889.48	17889.48	17889.48
	Cumulative repayments of Loans upto previous period	15906.11	17889.48	17889.48	17889.48	17889.48
	Net loan - Opening	1983.37	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	1983.37	0.00	0.00	0.00	0.00
	Repayments of Loans during the period	1983.37	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	991.68	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.3910%	0.3910%	0.3910%	0.3910%
	Interest on Loan Annualised	3.88	0.00	0.00	0.00	0.00
2 K-EXIM						
	Gross loan - Opening	188224.73	188224.73	188224.73	188224.73	188224.73
	Cumulative repayments of Loans upto previous period	162385.80	179611.76	188224.74	188224.74	188224.74
	Net loan - Opening	25838.93	8612.98	0.00	0.00	0.00
	Increase/ Decrease due to FERV					
	Increase/ Decrease due to ACE/Drawl during the period					
	Total	25838.93	8612.98	0.00	0.00	0.00
	Repayments of Loans during the period	17225.95	8612.98	0.00	0.00	0.00
	Net loan - Closing	8612.98	0.00	0.00	0.00	0.00
	Average Net Loan	17225.95	4306.49	0.00	0.00	0.00
	Rate of Interest on Loan	4.7928%	4.7928%	4.7928%	4.7928%	4.7928%
	Interest on Loan Annualised	825.61	206.40	-0.00	-0.00	-0.00
3 Euro Bonds-III						
	Gross loan - Opening	2813.78	2813.78	2813.78	2813.78	2813.78
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	2813.78	2813.78	2813.78	2813.78	2813.78
	Increase/ Decrease due to FERV					
	Increase/ Decrease due to ACE/Drawl during the period					
	Total	2813.78	2813.78	2813.78	2813.78	2813.78
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	2813.78	2813.78	2813.78	2813.78	2813.78
	Average Net Loan	2813.78	2813.78	2813.78	2813.78	2813.78
	Rate of Interest on Loan	7.1968%	7.1968%	7.1968%	7.1968%	7.1968%
	Interest on Loan Annualised	202.50	202.50	202.50	202.50	202.50
4 LIC III T-1 D-1						
	Gross loan - Opening	1000.00	1000.00	1000.00	1000.00	1000.00
	Cumulative repayments of Loans upto previous period	700.00	766.67	833.33	900.00	966.67
	Net loan - Opening	300.00	233.33	166.67	100.00	33.33
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	300.00	233.33	166.67	100.00	33.33
	Repayments of Loans during the period	66.67	66.67	66.67	66.67	33.33
	Net loan - Closing	233.33	166.67	100.00	33.33	0.00
	Average Net Loan	266.67	200.00	133.33	66.67	16.67
	Rate of Interest on Loan	6.5710%	6.5710%	6.5710%	6.5710%	6.5710%
	Interest on Loan Annualised	17.52	13.14	8.76	4.38	1.10
5 PFC V T1 Total						
	Gross loan - Opening	53500.00	53500.00	53500.00	53500.00	53500.00
	Cumulative repayments of Loans upto previous period	25635.42	30093.75	34552.08	39010.42	43468.75
	Net loan - Opening	27864.58	23406.25	18947.92	14489.58	10031.25
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	27864.58	23406.25	18947.92	14489.58	10031.25
	Repayments of Loans during the period	4458.33	4458.33	4458.33	4458.33	4458.33
	Net loan - Closing	23406.25	18947.92	14489.58	10031.25	5572.92
	Average Net Loan	25635.42	21177.08	16718.75	12260.42	7802.08
	Rate of Interest on Loan	8.20%	8.20%	8.20%	8.20%	8.20%
	Interest on Loan Annualised	2103.35	1737.55	1371.75	1005.95	640.15
6 Bonds XXI Series						
	Gross loan - Opening	2500.00	2500.00	2500.00	2500.00	2500.00
	Cumulative repayments of Loans upto previous period	2250.00	2500.00	2500.00	2500.00	2500.00
	Net loan - Opening	250.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	250.00	0.00	0.00	0.00	0.00
	Repayments of Loans during the period	250.00	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	125.00	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	7.7425%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	9.68	0.00	0.00	0.00	0.00
7 Bonds XXII Series						
	Gross loan - Opening	23600.00	23600.00	23600.00	23600.00	23600.00
	Cumulative repayments of Loans upto previous period	18880.00	21240.00	23600.00	23600.00	23600.00
	Net loan - Opening	4720.00	2360.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	4720.00	2360.00	0.00	0.00	0.00
	Repayments of Loans during the period	2360.00	2360.00	0.00	0.00	0.00
	Net loan - Closing	2360.00	0.00	0.00	0.00	0.00
	Average Net Loan	3540.00	1180.00	0.00	0.00	0.00
	Rate of Interest on Loan	8.2071%	8.2071%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	290.53	96.84	0.00	0.00	0.00
8 Bonds XXIII Series						

Calculation of Interest on Actual Loans					Form-13	
Name of the Company			NTPC Limited			
Name of the Power Station			Sipat Super Thermal Power Project-I		(Amount in lacs)	
Sl. no.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
2						
	Net loan - Opening	2960.00	2713.33	2466.67	2220.00	1973.33
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	2960.00	2713.33	2466.67	2220.00	1973.33
	Repayments of Loans during the period	246.67	246.67	246.67	246.67	246.67
	Net loan - Closing	2713.33	2466.67	2220.00	1973.33	1726.67
	Average Net Loan	2836.67	2590.00	2343.33	2096.67	1850.00
	Rate of Interest on Loan	8.7400%	8.7400%	8.7400%	8.7400%	8.7400%
	Interest on Loan Annualised	247.92	226.37	204.81	183.25	161.69
24 Bonds XXXV Series						
	Gross loan - Opening	9500.00	9500.00	9500.00	9500.00	9500.00
	Cumulative repayments of Loans upto previous period	1900.00	2533.33	3166.67	3800.00	4433.33
	Net loan - Opening	7600.00	6966.67	6333.33	5700.00	5066.67
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	7600.00	6966.67	6333.33	5700.00	5066.67
	Repayments of Loans during the period	633.33	633.33	633.33	633.33	633.33
	Net loan - Closing	6966.67	6333.33	5700.00	5066.67	4433.33
	Average Net Loan	7283.33	6650.00	6016.67	5383.33	4750.00
	Rate of Interest on Loan	8.8150%	8.8150%	8.8150%	8.8150%	8.8150%
	Interest on Loan Annualised	642.03	586.20	530.37	474.54	418.71
25 Syndicate Bank - III T-1 D1						
	Gross loan - Opening	3000.00	3000.00	3000.00	3000.00	3000.00
	Cumulative repayments of Loans upto previous period	937.50	1312.50	1687.50	2062.50	2437.50
	Net loan - Opening	2062.50	1687.50	1312.50	937.50	562.50
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	2062.50	1687.50	1312.50	937.50	562.50
	Repayments of Loans during the period	375.00	375.00	375.00	375.00	375.00
	Net loan - Closing	1687.50	1312.50	937.50	562.50	187.50
	Average Net Loan	1875.00	1500.00	1125.00	750.00	375.00
	Rate of Interest on Loan	8.4500%	8.4500%	8.4500%	8.4500%	8.4500%
	Interest on Loan Annualised	158.44	126.75	95.08	63.38	31.69
26 SBI Bank - VII T1 D6						
	Gross loan - Opening	7500.00	7500.00	7500.00	7500.00	7500.00
	Cumulative repayments of Loans upto previous period	3750.00	4687.50	5625.00	6562.50	7500.00
	Net loan - Opening	3750.00	2812.50	1875.00	937.50	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	3750.00	2812.50	1875.00	937.50	0.00
	Repayments of Loans during the period	937.50	937.50	937.50	937.50	0.00
	Net loan - Closing	2812.50	1875.00	937.50	0.00	0.00
	Average Net Loan	3281.25	2343.75	1406.25	468.75	0.00
	Rate of Interest on Loan	8.2500%	8.2500%	8.2500%	8.2500%	0.0000%
	Interest on Loan Annualised	270.70	193.36	116.02	38.67	0.00
27 SBI Bank - VII T1 D9						
	Gross loan - Opening	1500.00	1500.00	1500.00	1500.00	1500.00
	Cumulative repayments of Loans upto previous period	750.00	937.50	1125.00	1312.50	1500.00
	Net loan - Opening	750.00	562.50	375.00	187.50	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	750.00	562.50	375.00	187.50	0.00
	Repayments of Loans during the period	187.50	187.50	187.50	187.50	0.00
	Net loan - Closing	562.50	375.00	187.50	0.00	0.00
	Average Net Loan	656.25	468.75	281.25	93.75	0.00
	Rate of Interest on Loan	8.2500%	8.2500%	8.2500%	8.2500%	0.0000%
	Interest on Loan Annualised	54.14	38.67	23.20	7.73	0.00
28 4.75% Fixed Rate Notes Due 2022						
	Gross loan - Opening	2829.10	2829.10	2829.10	2829.10	2829.10
	Cumulative repayments of Loans upto previous period	1414.55	1788.18	2121.82	2475.46	2829.10
	Net loan - Opening	1414.55	1060.91	707.27	353.64	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	1414.55	1060.91	707.27	353.64	0.00
	Repayments of Loans during the period	353.64	353.64	353.64	353.64	0.00
	Net loan - Closing	1060.91	707.27	353.64	0.00	0.00
	Average Net Loan	1237.73	884.09	530.45	178.82	0.00
	Rate of Interest on Loan	7.6214%	7.6214%	7.6214%	7.6214%	0.0000%
	Interest on Loan Annualised	94.33	67.38	40.43	13.48	0.00
29 SBI VIII repayment starts from 30.01.2022 (Refinanced from OBC I as on 14-02-2017)						
	Gross loan - Opening	2142.86	2142.86	2142.86	2142.86	2142.86
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	2142.86	2142.86	2142.86	2142.86	2142.86
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	2142.86	2142.86	2142.86	2142.86	2142.86
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	2142.86	2142.86	2142.86	2142.86	2142.86
	Average Net Loan	2142.86	2142.86	2142.86	2142.86	2142.86
	Rate of Interest on Loan	8.4500%	8.4500%	8.4500%	8.4500%	8.4500%
	Interest on Loan Annualised	181.07	181.07	181.07	181.07	181.07

Calculation of Interest on Actual Loans						
Name of the Company Name of the Power Station		NTPC Limited Sipat Super Thermal Power Project-I				Form-13
		(Amount in lacs)				
Sl. no.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	2					
	Corporation bank (refinancing ICICI V as on 11.01.2019)					
30	Gross loan - Opening	2343.75	4687.50	7031.25	9375.00	11718.75
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	2343.75	4687.50	7031.25	9375.00	11718.75
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	2343.75	2343.75	2343.75	2343.75	2343.75
	Total	4687.50	7031.25	9375.00	11718.75	14062.50
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	4687.50	7031.25	9375.00	11718.75	14062.50
	Average Net Loan	3515.63	5859.38	8203.13	10546.88	12890.63
	Rate of Interest on Loan	8.3833%	8.3833%	8.3833%	8.3833%	8.3833%
	Interest on Loan Annualised	294.73	491.21	687.70	884.18	1080.66
	Bonds 54 Series (Repayment starts from 25.03.2023 in 3Y installments)					
31	Gross loan - Opening	20500.00	20500.00	20500.00	20500.00	20500.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	4100.00
	Net loan - Opening	20500.00	20500.00	20500.00	20500.00	16400.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	20500.00	20500.00	20500.00	20500.00	16400.00
	Repayments of Loans during the period	0.00	0.00	0.00	4100.00	8200.00
	Net loan - Closing	20500.00	20500.00	20500.00	16400.00	8200.00
	Average Net Loan	20500.00	20500.00	20500.00	18450.00	12300.00
	Rate of Interest on Loan	8.5200%	8.5200%	8.5200%	8.5200%	8.5200%
	Interest on Loan Annualised	1746.60	1746.60	1746.60	1571.94	1047.96
	Bonds 57 Series (Bullet Repayment as on 15-12-2025)					
32	Gross loan - Opening	1400.00	1400.00	1400.00	1400.00	1400.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	1400.00	1400.00	1400.00	1400.00	1400.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	1400.00	1400.00	1400.00	1400.00	1400.00
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	1400.00	1400.00	1400.00	1400.00	1400.00
	Average Net Loan	1400.00	1400.00	1400.00	1400.00	1400.00
	Rate of Interest on Loan	8.2200%	8.2200%	8.2200%	8.2200%	8.2200%
	Interest on Loan Annualised	115.08	115.08	115.08	115.08	115.08
	Bonds 66 Series (Bullet Repayment as on 16-12-2031)					
33	Gross loan - Opening	1700.00	1700.00	1700.00	1700.00	1700.00
	Cumulative repayments of Loans upto previous period	0.00	0.00	0.00	0.00	0.00
	Net loan - Opening	1700.00	1700.00	1700.00	1700.00	1700.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	0.00	0.00	0.00	0.00	0.00
	Total	1700.00	1700.00	1700.00	1700.00	1700.00
	Repayments of Loans during the period	0.00	0.00	0.00	0.00	0.00
	Net loan - Closing	1700.00	1700.00	1700.00	1700.00	1700.00
	Average Net Loan	1700.00	1700.00	1700.00	1700.00	1700.00
	Rate of Interest on Loan	7.4000%	7.4000%	7.4000%	7.4000%	7.4000%
	Interest on Loan Annualised	125.80	125.80	125.80	125.80	125.80
	TOTAL LOAN					
	Gross loan - Opening	490643.70	492987.45	495331.20	497674.95	500018.70
	Cumulative repayments of Loans upto previous period	269530.33	344073.54	378998.96	388504.26	405009.57
	Net loan - Opening	221113.37	148913.91	116332.24	109170.69	95009.13
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE/Drawl during the period	2343.75	2343.75	2343.75	2343.75	2343.75
	Total	223457.12	151257.66	118675.99	111514.44	97352.88
	Repayments of Loans during the period	74543.20	34925.42	9505.30	16505.30	20933.33
	Net loan - Closing	148913.91	116332.24	109170.69	95009.13	76419.55
	Average Net Loan	185013.64	132623.08	112751.46	102089.91	85714.34
	Rate of Interest on Loan	8.3044%	8.5885%	8.7218%	8.7333%	8.7418%
	Interest on Loan Annualised	15364.27	11390.32	9833.99	8915.80	7492.95
	Note: In case of foreign loans, opening loan balance considered at following exchange rate Exchange rate 01.10.2011 US \$= INR 49.40 and Euro = INR 67.43 Exchange rate 31.03.2012 US \$= INR 51.63 and Euro = INR 69.18 Exchange rate 31.03.2012 US \$= INR 56.59 and Euro = INR 71.44 Exchange rate 31.03.2012 US \$= INR 55.94 and Euro = INR 68.95					
	PFC T1 D-3					
	Gross loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00
	Cumulative repayments of Loans upto previous period	4791.67	5625.00	6458.33	7291.67	8125.00
	Net loan - Opening	5208.33	4375.00	3541.67	2708.33	1875.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	5208.33	4375.00	3541.67	2708.33	1875.00
	Repayments of Loans during the period	833.33	833.33	833.33	833.33	833.33
	Net loan - Closing	4375.00	3541.67	2708.33	1875.00	1041.67
	Average Net Loan	4791.67	3958.33	3125.00	2291.67	1458.33
	Rate of Interest on Loan	9.3900%	9.3900%	9.3900%	9.3900%	9.3900%
	Interest on Loan Annualised	449.94	371.69	293.44	215.19	136.94

Calculation of Interest on Actual Loans						
Name of the Company		NTPC Limited			Form-13	
Name of the Power Station		Sipat Super Thermal Power Project-I			(Amount in lacs)	
Sl. no.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
2						
	Total	27864.58	23406.25	18947.92	14489.58	10031.25
	Repayments of Loans during the period	4458.33	4458.33	4458.33	4458.33	4458.33
	Net loan - Closing	23406.25	18947.92	14489.58	10031.25	5572.92
	Average Net Loan	25635.42	21177.08	16718.75	12280.42	7802.08
	Rate of Interest on Loan	8.2049%	8.2049%	8.2049%	8.2049%	8.2049%
	Interest on Loan Annualised	2103.35	1737.55	1371.75	1005.95	640.15
	NIB D1					
	Gross loan - Opening	1173.46	1173.46	1173.46	1173.46	1173.46
	Cumulative repayments of Loans upto previous	1041.84	1173.46	1173.46	1173.46	1173.46
	Net loan - Opening	131.62	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	131.62	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	131.62	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	65.81	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	0.26	0.00	0.00	0.00	0.00
	NIB D2					
	Gross loan - Opening	4400.14	4400.14	4400.14	4400.14	4400.14
	Cumulative repayments of Loans upto previous	3906.61	4400.14	4400.14	4400.14	4400.14
	Net loan - Opening	493.53	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	493.53	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	493.53	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	246.76	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	0.95	0.00	0.00	0.00	0.00
	NIB D3					
	Gross loan - Opening	2795.00	2795.00	2795.00	2795.00	2795.00
	Cumulative repayments of Loans upto previous	2481.50	2795.00	2795.00	2795.00	2795.00
	Net loan - Opening	313.49	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	313.49	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	313.49	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	156.75	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	0.61	0.00	0.00	0.00	0.00
	NIB D4					
	Gross loan - Opening	6748.43	6748.43	6748.43	6748.43	6748.43
	Cumulative repayments of Loans upto previous	6007.92	6748.43	6748.43	6748.43	6748.43
	Net loan - Opening	740.51	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	740.51	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	740.51	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	370.26	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	1.45	0.00	0.00	0.00	0.00
	NIB D5					
	Gross loan - Opening	1501.32	1501.32	1501.32	1501.32	1501.32
	Cumulative repayments of Loans upto previous	1336.58	1501.32	1501.32	1501.32	1501.32
	Net loan - Opening	164.74	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	164.74	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	164.74	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	82.37	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	0.32	0.00	0.00	0.00	0.00
	NIB D6					
	Gross loan - Opening	1271.14	1271.14	1271.14	1271.14	1271.14
	Cumulative repayments of Loans upto previous	1131.65	1271.13	1271.13	1271.13	1271.13
	Net loan - Opening	139.48	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	139.48	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	139.48	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	69.74	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	0.27	0.00	0.00	0.00	0.00
	NIB Total					
	Gross loan - Opening	17889.48	17889.48	17889.48	17889.48	17889.48
	Cumulative repayments of Loans upto previous	15905.11	17889.48	17889.48	17889.48	17889.48
	Net loan - Opening	1983.37	0.00	0.00	0.00	0.00
	Increase/ Decrease due to FERV	0.00	0.00	0.00	0.00	0.00
	Increase/ Decrease due to ACE	0.00	0.00	0.00	0.00	0.00
	Total	1983.37	0.00	0.00	0.00	0.00
	Repayments of Loans during the year	1983.37	0.00	0.00	0.00	0.00
	Net loan - Closing	0.00	0.00	0.00	0.00	0.00
	Average Net Loan	991.68	0.00	0.00	0.00	0.00
	Rate of Interest on Loan	0.3910%	0.0000%	0.0000%	0.0000%	0.0000%
	Interest on Loan Annualised	3.88	0.00	0.00	0.00	0.00

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Details/Information to be submitted in respect of Fuel for Computation of Energy Charges

Name of the Petitioner:- NTPC Ltd.

Name of the Generating Station:- Sipat Stage I

S.No.	Particulars	Unit	Oct-18		Nov-18		Dec-18	
			Domestic Coal (i)	Imported Coal (ii)	Domestic Coal (i)	Imported Coal (ii)	Domestic Coal (i)	Imported Coal (ii)
1	Quantity of coal supplied by the coal Company (includes Opening Stock)	(MT)	1251400.00	0.00	1281800.00	0.00	1216700.00	0.00
2	Adjustment (+/-) in quantity supplied by the coal Company	(MT)	0.00	0.00	0.00	0.00	0.00	0.00
3	Coal supplied by the Coal Company (1+2)	(MT)	1251400.00	0.00	1281800.00	0.00	1216700.00	0.00
4	Normative transit & handling losses	(MT)	2600.00		3000.00	0.00	3100.00	0.00
5	Net coal supplied (3-4)	(MT)	1248800.00	0.00	1278800.00	0.00	1213600.00	0.00
6	Amount charged by the coal company	(Rs.)	2314393203	0	2365876367	0	2258561531	0
7	Adjustment (+/-) in amount charged by the coal Company	(Rs.)	-58962357	0	-49075861	0	-107847145	0
8	Total amount charged (6+7)	(Rs.)	2255430846	0	2316800506	0	2150714386	0
9	Transportation charges by Rail / Ship / Road Transport	(Rs.)	11754703	0	40035806	0	60965540	
10	Adjustment (+/-) in amount charged by Railways / Transport Company	(Rs.)	0		0		0	
11	Demurrage charges, if any	(Rs.)	0	0	0	0	880266	0
12	Cost of diesel in transporting coal through MGR system	(Rs.)	17651426	0	15927672		15197052	
13	Total Transportation Charges (9+/-10-11+12)	(Rs.)	29406129	0	55963478	0	75282326	0
13A	Other Charges	(Rs.)	18972095	0	28077932	0	63077002	0
14	Total amount charged for coal supplied including transportation (8+13)	(Rs.)	2303809070	0	2400841916	0	2289073714	0
15	Landed cost of coal	(Rs./MT)	1844.720	0.00	1877.39	0.00	1886.18	0.00
16	Blending Ratio	%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
17	Weighted Avg Cost of Coal	(Rs./MT)	1844.720		1877.39		1886.18	
18	GCV of Domestic Coal as per bill of coal company, EQ Basis	(kcal/kg)	4081.00		4060.00		4072	
19	GCV of Imported Coal as per bill of coal company	(kcal/kg)		0.000		0		0
20	Weighted average GCV of Coal as Billed	(kcal/kg)	4081.00		3897		3506	
21	GCV of Domestic Coal as received at Station, TM Basis	(kcal/kg)	3937.00		3817.00		4010	
22	GCV of Imported Coal as received at Station	(kcal/kg)		0.00		0		0
23	Weighted average GCV of Coal as received at station	(kcal/kg)	3937.00		3817		4010	

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FORM - 15

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges

NAME OF PETITIONER		NTPC LTD		NTPC LTD		NTPC LTD		
NAME OF GENERATING STATION		NTPC BIPAT:STAGE -I		NTPC BIPAT:STAGE -I		NTPC BIPAT:STAGE -I		
S No	Month	Unit	October-18		November-18		December-18	
			Domestic	Imported	Domestic	Imported	Domestic	Imported
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company*	MMT	1.2514	0.0000	1.2818	0.0000	1.2187	0.0000
2	Adjustment (+/-) in quantity supplied made by Coal/ Lignite Company	MMT	0.0000		0.0000		0.0000	
3	Coal supplied by Coal/Lignite Company (1+2)	MMT	1.2514	0.0000	1.2818	0.0000	1.2187	0.0000
4	Normative Transit & Handling Losses (For Coal/Lignite based Projects)	MMT	0.0026	0.0000	0.0030	0.0000	0.0031	0.0000
5	Net Coal/Lignite Supplied (3-4)	MMT	1.2489	0.0000	1.2788	0.0000	1.2136	0.0000
6	Amount Charged by the Coal/Lignite Company*	(RS)	2314393203	0	2365876367	0	2258561531	0
7	Adjustment(+/-) in amount charged made by Coal/Lignite Company	(RS)	-58962357		-49075861		-107847145	
8	Total Amount Charged (6+7)	(RS)	2255430846	0	2316800506	0	2150714386	0
9	Transportation Charges by rail/ship/road transport	(RS)	11754703	0	40035806	0	60965540	0
10	Adjustment(+/-) in amount charged made by Railways/Transport Company	(RS)	0		0		0	
11	Demurrage Charges , if any	(RS)	0	0	0	0	880266	0
12	Cost of diesel in transporting coal through MGR system, if applicable	(RS)	17651426		15927672		15197052	
13	Total Transportation Charges (9+10-11+12)	(RS)	29406129	0	55963478	0	75282326	0
13 (A)	Other Charges	(RS)	18972095	0	28077932	0	63077002	0
14	Total amount charged for coal /ignite supplied including Transportation (8+13)	(RS)	2303809070	0	2400841916	0	2289073714	0
15	Landed cost of coal/ignite	RS/MT	1844.72	0.00	1877.39	0.00	1886.18	0.00
16	Blending Ratio (Domestic/imported)		100.00	0.00	100.00	0.00	100.00	0.00
17	Weighted average cost of coal/ Lignite for the month	RS/MT	1844.72		1877.39		1886.18	
18	GCV of Domestic Coal as per bill of Coal Company (EQ basis)	(Kcal/Kg)	4081		4060		4072	
19	GCV of Imported Coal as per bill of Coal Company (ADB basis)	(Kcal/Kg)		0		0		0
20	Weighted average GCV of coal/ Lignite as billed	(Kcal/Kg)	4081		4060		4072	
21	GCV of Domestic Coal as received at station (TM basis)	(Kcal/Kg)	3937		3817		4010	
22	GCV of Imported Coal as received at station (TM basis)	(Kcal/Kg)		0		0		0
23	Weighted average GCV of coal/ Lignite as Received	(Kcal/Kg)	3937		3817		4010	

* includes opening stock

Anuj Kunt
अनुज कुश
ANUJ KUSH
 ब.प.उ. (फिन एंड लेखा)
 AGM (F&A)
 सा.सं.के.प.के.-II, सीपत
 SSC, WR-II, BIPAT



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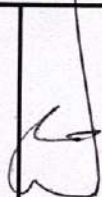
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Details of Secondary Fuel for Computation of Energy Charges

Name of the Company : NTPC Limited
Name of the Power Station : Sipat STPS Stage-I

Sl.No.	Month	Unit	Oct'18 LDO	Nov'18 LDO	Dec'18 LDO
1	Quantity of oil supplied by Oil Company*	KL	2906.417	5998.797	5853.797
2	Value of Oil *	(Rs)	159245050	348154215	339898533
3	Adjustment (+/-) in quantity supplied made by Oil Company	KL	0	0	0
4	Oil supplied by Oil Company	KL	0	3092.38	0
5	Normative transit & Handling losses	KL	0	0.00	0
6	Net Oil supplied (4-5)	KL	0	3092.38	0
7	Amount charged by the Oil Company	(Rs)	0	188909165	0
8	Adjustment (+/-) in amount charged by Oil Company	(Rs)	0	0	-14391580
9	Total Amount charged (7+8)	(Rs)	0	188909165	-14391580
10	Transportation charges by Rail / Ship / Road Transport	(Rs)	0	0	0
11	Adjustment (+/-) in amount charged by railways / transport company	(Rs)	0	0	0
12	Demurrage charges, if any	(Rs)	0	0	0
13	Cost of diesel in transporting Oil through MGR system, if applicable	(Rs)	0	0	0
14	Total transportation charges (10+/- 11 - 12 + 13)	(Rs)	0	0	0
15	Others- Entry Tax on oil	(Rs)	0	0	0
16	Total amount charged for Oil supplied including transportation (14 + 15)	(Rs)	0	188909165	-14391580
17	Landed Cost of Oil (HFO/LDO) (2+16) / (1+6)	Rs/KL	547890.85	58037.34	55606.12
18	Weighted average GCV of Oil as fired	(kCal/L)	54790.85	58037.34	55606.12
18	Weighted average rate of Secondary Fuel	Rs/KL	10157.00	10152.00	10230.00


PETITIONER

Computation of Energy Charges

Form-15B

ADDITIONAL FORM

Name of the Company	NTPC Limited
Name of the Power Station	Sipat STPS Stage-I

Computation of Energy Charges

- Rate of Energy Charge from Sec. Fuel Oil/ Alternate Fuel (p/kwh) $= (Q_p)_n \times P_s$ 2.822
- Heat Contribution from SFO / Alternate Fuel $= (Q_s)_n \times (GCV)_s$ 5.090
- Heat Contribution from coal $= GHR \cdot H_s$ 2312.29
- Specific Primary Fuel Consumption $(Qp)_n = H_p / (GCV)_p$ 0.603
- Rate of Energy charge from Primary Fuel (p/kwh) $(REC)_p$ 112.671
- Rate of Energy charge ex-bus (p/kWh) $= ((REC)_s + (REC)_p + (REC)_{LS}) / (1 - (AUX))$ 123.192

	2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	366	365	365	365	366
Sp. Oil consumption ml/kwh	0.5	0.5	0.5	0.5	0.5
Auxiliary consumption %	6.25	6.25	6.25	6.25	6.25
Heat Rate Kcal/kwh	2,317.38	2,317.38	2,317.38	2,317.38	2,317.38
Sp. Lime Stone Consumption Kg/kwh	0.0162	0.0162	0.0162	0.0162	0.0162

Computation of Variable Charges

Variable Charge (Coal)	p/kwh	120.182	120.182	120.182	120.182
Variable Charge (Oil)	p/kwh	3.010	3.010	3.010	3.010
Variable Charge (Lime Stone)	p/kwh	0.000	0.000	0.000	0.000
Total	p/kwh	123.192	123.192	123.192	123.192

Price of fuel from Form-15/15A

Coal Cost (Rs./MT)	1869.33	1869.33	1869.33	1869.33	1869.33
Oil Cost (Rs./KL)	56433.74	56433.74	56433.74	56433.74	56433.74
Lime Stone Cost (Rs/MT)	1600.00	1600.00	1600.00	1600.00	1600.00

Computation of Fuel Expenses for Calculation of IWC:

ESO in a year (MUs)	13859.51	13821.64	13821.64	13821.64	13859.505
ESO for 40 days (MUs)	1514.700	1514.700	1514.700	1514.700	1514.700
Cost of coal for 50 Days (Rs. Lakh)	18203.99	18203.99	18203.99	18203.99	18203.99
Cost of oil for 2 months (Rs. Lakh)	693.24	693.34	693.34	693.34	695.24
Cost of Lime Stone for 50 days (Rs Lakh)	0.00	0.00	0.00	0.00	0.00
Energy Expenses for 45 days (Rs. Lakh)	20992.37	20992.37	20992.37	20992.37	20992.37

Coal	3rd month	2nd month	1st month	Wtd. Avg.
Wtd. Avg. Price of Coal Rs./MT	1844.72	1877.39	1886.18	1869.33
Wtd. Avg. GCV of Coal as received kCal/Kg	3937	3817	4010	3921.33
Wtd. Avg. GCV of Coal as received after adjustment of 85 kcal/kg				3836.33
Sec. Oil				
Wtd. Avg. Price of Secondary Fuel Rs/KL	54790.85	58037.34	55606.12	56433.74
Wtd. Avg. GCV of Secondary Fuel kCal/L	10157.00	10152.00	10230.00	10179.67

PETITIONER

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Name of the Petitioner
Name of the Generating Station

NTPC Ltd
Sipat STPS Stage-I

Statement of Capital cost

(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	As on relevant date		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening Gross Block Amount as per books	991728.65	32249.33	959479
	b) Amount of IDC in A(a) above	169467.58	0	169468
	c) Amount of FC in A(a) above	0	0	0
	d) Amount of FERV in A(a) above	78684.51	0	78684.5
	e) Amount of Hedging Cost in A(a) above	0	0	0
	f) Amount of IEDC in A(a) above	0	0	0
B	a) Addition in Gross Block Amount during the period (Direct purchases)			
	b) Amount of IDC in B(a) above			
	c) Amount of FC in B(a) above			
	d) Amount of FERV in B(a) above			
	e) Amount of Hedging Cost in B(a) above			
	f) Amount of IEDC in B(a) above			
C	a) Addition in Gross Block Amount during the period (Transferred from CWIP)			
	b) Amount of IDC in C(a) above			
	c) Amount of FC in C(a) above			
	d) Amount of FERV in C(a) above			
	e) Amount of Hedging Cost in C(a) above			
	f) Amount of IEDC in C(a) above			
D	a) Deletion in Gross Block Amount during the period			
	b) Amount of IDC in D(a) above			
	c) Amount of FC in D(a) above			
	d) Amount of FERV in D(a) above			
	e) Amount of Hedging Cost in D(a) above			
	f) Amount of IEDC in D(a) above			
E	a) Closing Gross Block Amount as per books			
	b) Amount of IDC in E(a) above			
	c) Amount of FC in E(a) above			
	d) Amount of FERV in E(a) above			
	e) Amount of Hedging Cost in E(a) above			
	f) Amount of IEDC in E(a) above			

To be provided at the time of Truing-up

Note:

1. Relevant date/s means date of COD of unit/s/station and financial year start date and end date

Name of the Petitioner
Name of the Generating StationNTPC Ltd
Sipat STPS Stage-IStatement of Capital Woks in Progress

(To be given for relevant dates and year wise)

(Amount in Rs. Lakh)

S. No.	Particulars	As on relevant date		
		Accrual Basis	Un-discharged Liabilities	Cash Basis
A	a) Opening CWIP as per books	12656.46	483.46	12173
	b) Amount of IDC in A(a) above	409.05	0	409.05
	c) Amount of FC in A(a) above	0	0	0
	d) Amount of FERV in A(a) above	0	0	0
	e) Amount of Hedging Cost in A(a) above	0	0	0
	f) Amount of IEDC in A(a) above	0	0	0
B	a) Addition in CWIP during the period			
	b) Amount of IDC in B(a) above			
	c) Amount of FC in B(a) above			
	d) Amount of FERV in B(a) above			
	e) Amount of Hedging Cost in B(a) above			
	f) Amount of IEDC in B(a) above			
C	a) Transferred to Gross Block Amount during the period			
	b) Amount of IDC in C(a) above			
	c) Amount of FC in C(a) above			
	d) Amount of FERV in C(a) above			
	e) Amount of Hedging Cost in C(a) above			
	f) Amount of IEDC in C(a) above			
D	a) Deletion in CWIP during the period			
	b) Amount of IDC in D(a) above			
	c) Amount of FC in D(a) above			
	d) Amount of FERV in D(a) above			
	e) Amount of Hedging Cost in D(a) above			
	f) Amount of IEDC in D(a) above			
E	a) Closing CWIP as per books			
	b) Amount of IDC in E(a) above			
	c) Amount of FC in E(a) above			
	d) Amount of FERV in E(a) above			
	e) Amount of Hedging Cost in E(a) above			
	f) Amount of IEDC in E(a) above			

To be provided at the time of truing-up

(Petitioner)

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Calculation of Interest on Normative Loan

Name of the Company :		NTPC Limited							
Name of the Power Station :		Sipat STPS Stage-I							
S. No.	Particulars	(Amount in Rs Lakh)							
		Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24		
1	2	3	4	5	6	7	8		
1	Gross Normative loan – Opening	6,46,721.85	6,48,478.05	6,48,478.05	6,53,273.05	6,53,273.05	6,53,973.05		
2	Cumulative repayment of Normative loan up to previous year	2,75,463.35	3,19,368.90	3,66,837.49	4,14,481.58	4,62,301.17	5,10,146.38		
3	Net Normative loan – Opening	3,71,258.51	3,29,109.15	2,81,640.55	2,38,791.46	1,90,971.88	1,43,826.67		
4	Add: Increase due to addition during the year / period	2243.93	-	4,795.00	-	700.00	-		
5	Less: Decrease due to de-capitalisation during the year / period	-768.15	0.00	0.00	0.00	0.00	0.00		
6	Less: Decrease due to reversal during the year / period								
7	Add: Increase due to discharges during the year / period	280.41	0.00	0.00	0.00	0.00	0.00		
8	Less: Repayment of Loan	47000.50	47,468.59	47,644.09	47,819.59	47,845.21	47,870.83		
9	Net Normative loan - Closing	3,26,501.94	2,81,640.55	2,38,791.46	1,90,971.88	1,43,826.67	95,955.84		
10	Average Normative loan	3,48,880.22	3,05,374.85	2,60,216.01	2,14,881.67	1,67,399.27	1,19,891.26		
11	Weighted average rate of interest	7.5647	8.3044	8.5885	8.7218	8.7333	8.7418		
12	Interest on Loan	26391.74	25359.55	22348.65	18741.55	14619.48	10480.65		

A

(Petitioner)

Calculation of Interest on Working Capital

Name of the Company :		NTPC Limited							
Name of the Power Station :		Sipat STPS Stage-I							
S. No.	Particulars	Existing 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	(Amount in Rs Lakh)	
								4	5
1	2	3							
1	Cost of Coal/Lignite	23,212.62	18203.99	18203.99	18203.99	18203.99	18203.99	18203.99	
2	Cost of Main Secondary Fuel Oil	634.13	695.24	693.34	693.34	693.34	693.34	695.24	
3	Fuel Cost								
4	Liquid Fuel Stock								
5	O & M Expenses	3,902.77	4158.58	4303.37	4454.06	4609.03	4769.96		
6	Maintenance Spares	9,366.65	9980.58	10328.10	10689.75	11061.67	11447.90		
7	Receivables	63,301.01	43636.11	43593.24	43421.96	43153.50	42831.49		
8	Total Working Capital	100417.19	76674.49	77122.03	77463.11	77721.53	77948.57		
9	Rate of Interest	13.5000	12.0500	12.0500	12.0500	12.0500	12.0500		
10	Interest on Working Capital	13556.32	9239.28	9293.21	9334.30	9365.44	9392.80		



Petitioner

Liability Flow Statement wef 01.04.2019				Form-S
S.NO.	Party	Package Name	Undischarged liabilities relating to GB 31.03.2019	
	Name of the Petitioner	NTPC Limited		
	Name of the Generating Station	Sipat STPS Stage-I (3x660 MW)		
	COG	01.08.2012		
1	LARSEN & TOUBRO LTD/DOOSAN HEAVY IND & CONSTRUCTION	Main Plant Package (Steam Generator & Auxiliaries)	2475.34	
2	POWER MACHINES(INDIAN LTD)/CISC POWER MACHINES	Main Plant Package (TG & Auxiliaries)	21727.65	
3	BHARAT HEAVY ELECTRICALS LTD	EHV HT TRANSFORMER PACKAGE	161.69	
4	VA TECH WABAG LTD	Water Treatment System Package (PT Plant)	0.00	
5	BHARAT HEAVY ELECTRICALS	Supply of LT Indoor Transformer Package	0.00	
5	LARSEN & TOUBRO LTD/indhya constm	Electrical Equipment Supply, Erection & Cabling Package	9.14	
7	INDIAN OILTANKING LTD	Fuel Oil Unloading & Storage System & Station Piping Package.	0.00	
8	ILJIN ELECTRIC CO LTD	HT Cable including 132 KV Cable	0.00	
6	Ash Water Re Circulation System	Ash Water Re Circulation System	0.00	
7	KIRLOSKAR BR LTD	CW Pump Equipment Package	0.00	
11	C&S ELECTRIC LTD	Supply of Generator Bus Duct Package	0.00	
8	TEBIAN ELECTRIC APPARATUS	LT Outdoor Transformer Package	6.43	
9	THYSSENKRUPP INDUSTRIES INDIA PVT LTD/SINGH CONSTRUCTION, MOPKA/TULASI CONSTRUCTION	Coal Handling Plant Package	0.35	
10	C DOCTOR & COMPANY PVT LT	Ventilation System Package	11.98	
11	DIPLEX WATER ENGINEERING LTD	Water Treatment System (DM Paint)	0.00	
16	JYOTI LTD	11 KV & 3.3 KV Switchgear & Bus Duct Package	0.00	
17	GE INDIA INDUSTRIAL PVT LTD	Supply of LT SwitchGears & LT Busduct Package	0.00	
12	ABB LTD	Air Conditioning System	0.0	
13	BLUE STAR LTD	Air Conditioning For Satcom & Administrative Building	1.07	
14	BHARAT HEAVY ELECTRICALS	Electrostatic Precipitator Package	1456.08	
15	RALLISON ELECTRICALS PVT	LT Power Cable Package	3.00	
16	YOKOGAWA INDIA LTD	660 MW Simulator Training Package	0.00	
17	UNITECH MACHINES LTD/INGHMI BOSAI LTD	Fire Protection & Detection System	117.65	
18	CROMPTON GEAVES LTD	Supply of Generator Transformer & Interconnecting	1.18	
19	NEPTUNE INDUSTRIES	Ash Handling Package	905.81	
20	Gammion India Ltd.	Cooling Tower Package	969.94	
21	SOMA ENTERPRISE LTD/DBM GEOTECHNICS & CONSTNS (P) LTD/SHRIVASTAV CONSTRUCTION	RAW WATER Reservoir	32.31	
22	KIRLOSKAR BR LTD	CW SYSTEM (CIVIL)	313.09	
23	RAJESH KUMAR MURARKA/SINGH CONSTRUCTION, MOPKA/TOTEM INFRASTRUCTURE LTD/SRIVASTAVA CONSTRUCTION/J.P. construkIndia etc	Ash Dyke	910.67	

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SPA

Liability Flow Statement w.e.f 01.04.2019				Form-S
S.NO.	Party	Package Name	Undischarged liabilities relating to GB 31.03.2019	
	Name of the Petitioner	NTPC Limited		
	Name of the Generating Station	Sipat STPS Stage-1 (3x660 MW)		
	GOD	01.08.2012		
24	CONSTRUCTION	MGR	1385.24	
25	Gannon India Ltd	Chimney	56.43	
26	CONSTRUCTION	Offsite Civil Works	578.57	
27	HINDUSTAN STEELWORKS CONSTRUCTION	SG-Civil-1	53.71	
28	ERA CONSTRUCTIONS INDIA, LTD	TG-Civil-1	61.18	
29	POWERTECH LTD	Township	489.56	
30	AREVA T&D S.A. & INDIA	765 KV Switch Yard Package	86.32	
31	CONSTRUCTION CO/ASSOCIATE ENGINEERS & BUJ	Land & Infrastructure	0.00	
32	Networking	Networking	0.47	
33	MBOA & Spares (within cut-off date)	MBOA & Spares	0.00	
34	HBL Power System	50KW Solar Plant	2.09	
35	Chandralok International	Energy Conservation	0.00	
36	SCHNEIDER ELECTRIC INDIA PVT LTD	OLEMS	0.00	
37	Vindhya	Lighting work	0.00	
38	Machinex	Double Girder 30 Ton EOT Crane (Machinex)	3.99	
39	Saan International Pvt Limited	EQMS	0.00	
40	CH FOUR ENERGY PVT LTD	Solar & Bio gas plant	0.00	
41	A.K. Sharma and others	Roads and drains	5.77	
42	Spares & MBOAs (beyond cut-off)		0.00	
	Total (Claimed/Allowed)		422.65	
	Total (Not Claimed/Not allowed)		31826.69	
	Grand Total		422.65	
			32249.34	

7.2

Summary of issue involved in the petition

Name of the Company :		NTPC Limited				
Name of the Power Station :		Sipat STPS Stage-I				
1	Petitioner:	NTPC Limited				
2	Subject	Approval of Tariff for 2019-24				
3		<p>i) Approve tariff of Sipat-I for the tariff period 01.04.2019 to 31.03.2024. ii) Allow the recovery of filing fees as & when paid to the Hon'ble Commission and publication expenses from the beneficiaries. iii) Allow reimbursement of Ash Transportation Charges directly from the beneficiaries quarterly on net basis. iv) Pass any other order as it may deem fit in the circumstances mentioned above.</p>				
4	Respondents					
	Name of Respondents					
	a. Madhya Pradesh Power Management Company Limited	e. Electricity Department, Goa				
	b. Maharashtra State Electricity Distribution Co Ltd.	f. DNH PDCL				
	c. Gujarat UrjaVikas Nigam Ltd.(GUVNL)					
	d. Chattisgarh State Power Distribution Co. Ltd.,					
5	Project Scope					
	Cost					
	COD	30.10.2015				
	Claim					
	AFC (Rs Lakh)	2019-20	2020-21	2021-22	2022-23	2023-24
	Capital cost (as on 1.4.2019)	184169.11	183318.19	181928.96	179751.42	177624.86
	Initial spare					9,26,397.21
	NAPAF (Gen)					85%
	Any Specific					

* Units of amounts shown in Rs Lakh

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Annexure 'A'

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

Paryavas Bhawan, Sector - 19,
Naya Raipur (C.G.) 492 002

No. 55 /TS/CECB/2018

Naya Raipur, dated : 31/9/2018

To,

General Manager,
M/s National Thermal Power Corporation Limited,
Sipat Super Thermal Power Project,
P.O.-Sipat,
District - Bilaspur (C.G.) 495 558

Sub: - Renewal of the clubbed consent of the Board issued under section 25 of the Water (Prevention and Control of Pollution) Act, 1974.

- Ref.: -
- 1- Consent of the Board for Sipat Super Thermal Power Project (Stage-I, Unit No.-1, 1x660 MW) issued under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 vide letter no. 6295/TS/CECB/2011 Raipur, dated: 07/02/2011.
 - 2- Consent of the Board for Sipat Super Thermal Power Project (Stage-I, Unit No.-2, 1x660 MW) issued under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 vide letter no. 5487/TS/CECB/2011 Raipur, dated: 14/12/2011.
 - 3- Consent of the Board for Sipat Super Thermal Power Project (Stage-I, Unit No.-3, 1x660 MW) issued under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 vide letter no. 507/TS/CECB/2012 Raipur, dated: 03/05/2012.
 - 4- Renewal of clubbed consent of the Board under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 issued vide letter no. 1272/TS/CECB/2016 Raipur, dated: 30/05/2016.
 - 5- Your online application dated: 30/09/2016 and correspondence ending dated: 21/03/2018 (online application no. 286140).

--: 00 :--

With reference to your above application clubbed consent is hereby renewed for a period of five years i.e. from 01/12/2016 to 30/11/2021, subject to the fulfillment of the terms and conditions incorporated in the schedule of the various consents issued vide letter No. 6295/TS/CECB/2011 Raipur, dated: 07/02/2011, 5487/TS/CECB/2011 Raipur, dated: 14/12/2011 and 507/TS/CECB/2012 Raipur, dated: 03/05/2012 respectively and subsequent renewals issued by Board and additional conditions mentioned below.

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This renewal of consent is valid for production capacity of:-

Name	Production Capacity
Thermal Power Plant (Stage-I, Unit No. – 1, 2 and 3)	3 x 660 Megawatt (Three into Six Hundred Sixty Megawatt)

Note:-

This renewal of consent is being granted to the industry without prejudice to the proceeding pending in the Hon'ble Court of Law. This renewal of consent in no way to be taken as measure of proof that industry has not violated any related pollution laws at any time in past. Hence, what-ever decision taken by Hon'ble Court shall be binding on the industry.

Additional Conditions

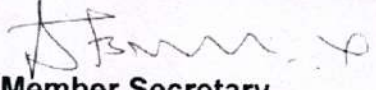
1. Industry shall install fly ash brick/block/products manufacturing machine within plant premises of capacity at-least 2,10,000 Nos. / Day for proper utilization of ash generated within one year.
2. Industry shall operate and maintain the effluent (industrial / domestic) treatment system effectively and regularly. No effluent shall be discharged from ash dyke / low-lying area. Industry shall ensure treated effluent quality within the standards prescribed by Board published in Gazette Notification dated 25.03.88. The treated effluent shall be utilized in plant operations or for plantation within premises. Industry shall not discharge any treated / untreated effluent into the river or any surface water bodies. No effluent shall be discharged outside of the factory premises in any circumstances; hence, zero discharge condition shall be maintained at all the time.
3. Industry shall ensure regular running of Continuous Online Effluent Monitoring System for monitoring of treated effluent quality. Industry shall submit regular monitoring report of un-treated and treated effluent every month.
4. Industry shall ensure use and disposal of ash in safe and scientific manner as per provisions of notification dated 14/09/1999 (as amended) issued by Ministry of Environment, Forest and Climate Change, Government of India, New Delhi. Industry shall ensure that utilization of ash should not be less than the quantity mentioned in action plan submitted. Industry shall not dump / dispose the solid wastes / ash in any dump area in any circumstances.
5. Industry shall ensure compliance of provisions regarding use of fuel issued by Ministry of Environment, Forest and Climate Change, Government of India vide notification G.S.R. 02 (E) dated 02/01/2014.
6. Industry shall ensure compliance of water consumption standards prescribed by Ministry of Environment, Forest and Climate Change, Government of India vide notification S.O. 3305 (E) dated 07/12/2015. Industry shall ensure compliance of direction issued by Central Pollution Control Board, Delhi in this regard.

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7. All internal roads shall be maintained black topped (pucca). Good housekeeping practices shall be adopted by the industry.
8. Industry shall ensure use of properly covered vehicles for the transportation of fuel and solid wastes (ash) etc. so as to avoid environmental hazards in the surroundings.
9. Industry shall use fly ash brick, fly ash block and fly ash based products in the construction / repairing activities.
10. Wide green belt of broad leaf local species shall be developed along the plant premises and ash dyke area. As far as possible maximum area of open spaces shall be utilized for plantation purposes. Green belt / plantation shall be developed within and around the plant premises in at-least 33 % area of total plant area. Industry shall carry out extensive tree plantation in this monsoon.
11. Industry shall submit Environment Statement to this Board as per provision of Environment (Protection) amendment Rule, 1993 for the previous year ending 31st March on or before 30th September every year.
12. Industry shall follow the terms and conditions stipulated in the Chhattisgarh Environment Conservation Board's order no. 7261/TS/CECB/2015, Raipur dated 06/02/2015. In case of non compliance of any terms and conditions mentioned above or mentioned in the above order, this renewal of the consent may be cancelled.
13. If industry fails to comply any of the above condition(s), the bank guarantee submitted by industry may be forfeited.

Please acknowledge the receipt of this letter.


For & on behalf of
Chhattisgarh Environment Conservation Board

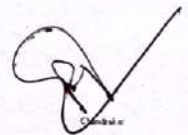

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

Endt. No. 56 /TS/CECB/2018 Naya Raipur, dated: 31/9 /2018

Copy to: -

Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Bilaspur (C.G.). Please ensure compliance and report, if any condition/conditions are violated by the industry.


Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)





CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

Paryavas Bhawan, Sector - 19,
Naya Raipur (C.G.) 492 002

No. 57 /TS/CECB/2018
To,

Naya Raipur, dated : 31/4/2018

General Manager,
M/s National Thermal Power Corporation Limited,
Sipat Super Thermal Power Project,
P.O.-Sipat,
District - Bilaspur (C.G.) 495 558

Sub: - Renewal of the clubbed consent of the Board issued under section 21 of the Air (Prevention and Control of Pollution) Act, 1981.

- Ref.: -
- 1- Consent of the Board for Sipat Super Thermal Power Project (Stage-I, Unit No.-1, 1x660 MW) issued under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 vide letter No. 6297/TS/CECB/2011 Raipur, dated: 07/02/2011.
 - 2- Consent of the Board for Sipat Super Thermal Power Project (Stage-I, Unit No.-2, 1x660 MW) issued under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 vide letter no. 5489/TS/CECB/2011 Raipur, dated: 14/12/2011.
 - 3- Consent of the Board for Sipat Super Thermal Power Project (Stage-I, Unit No.-3, 1x660 MW) issued under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 vide letter no. 509/TS/CECB/2012 Raipur, dated: 03/05/2012.
 - 4- Renewal of clubbed consent of the Board under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 issued vide letter no. 1274/TS/CECB/2016 Raipur, dated: 30/05/2016.
 - 5- Your online application dated: 30/09/2016 and correspondence ending dated: 21/03/2018 (online application no. 286140).

--: 00 :--

With reference to your above application clubbed consent is hereby renewed for a period of five years i.e. from 01/12/2016 to 30/11/2021, subject to the fulfillment of the terms and conditions incorporated in the various consents issued vide letter No. 6297/TS/CECB/2011 Raipur, dated: 07/02/2011, 5489/TS/CECB/2011 Raipur, dated: 14/12/2011 and 509/TS/CECB/2012 Raipur, dated: 03/05/2012 respectively and subsequent renewals issued by Board and additional conditions mentioned below.

77

This renewal of consent is valid for production capacity of:-

Name	Production Capacity
Thermal Power Plant (Stage-I, Unit No. – 1, 2 and 3)	3 x 660 Megawatt (Three into Six Hundred Sixty Megawatt)

Note :-

This renewal of consent is being granted to the industry without prejudice to the proceeding pending in the Hon'ble Court of Law. This renewal of consent in no way to be taken as measure of proof that industry has not violated any related pollution laws at any time in past. Hence, what-ever decision taken by Hon'ble Court shall be binding on the industry.

Additional Conditions

1. Industry shall install fly ash brick/block/products manufacturing machine within plant premises of capacity at-least 2,10,000 Nos. / Day for proper utilization of ash generated within one year.
2. Industry shall operate and maintain the existing air pollution control systems effectively and regularly to ensure the emission of air pollutants within the prescribed emission limit all the time. Industry shall ensure particulate matter emission less than 50 mg/Nm³ all the time. Industry shall also maintain the ambient air quality within the plant premises within prescribed limits. Effective steps shall be taken to control fugitive emission inside the factory premises.
3. Industry shall ensure regular running of Continuous Online Air Pollutant(s) Monitoring Systems for monitoring emission of air pollutants from the stack(s) and Continuous Online Ambient Air Quality Monitoring Systems for monitoring of ambient air quality. Regular monitoring for the measurement of air pollutants level in stack and ambient shall be carried out. Industry shall submit stack and ambient air quality monitoring report regularly.
4. Industry shall ensure use and disposal of ash in safe and scientific manner as per provisions of notification dated 14/09/1999 (as amended) issued by Ministry of Environment, Forest and Climate Change, Government of India, New Delhi. Industry shall ensure that utilization of ash should not be less than the quantity mentioned in action plan submitted. Industry shall not dump / dispose the solid wastes / ash in any dump area in any circumstances.
5. Industry shall ensure compliance of provisions regarding use of fuel issued by Ministry of Environment, Forest and Climate Change, Government of India vide notification G.S.R. 02 (E) dated 02/01/2014.
6. Industry shall ensure compliance of standards prescribed by Ministry of Environment, Forest and Climate Change, Government of India vide notification S.O. 3305 (E) dated 07/12/2015. Industry shall ensure compliance of direction issued by Central Pollution Control Board, Delhi in this regard.

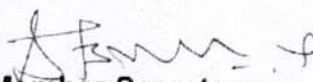
78

Handwritten signature and stamp.

7. All internal roads shall be maintained black topped (pucca). Good housekeeping practices shall be adopted by the industry.
8. Industry shall ensure use of properly covered vehicles for the transportation of fuel and solid wastes (ash) etc. so as to avoid environmental hazards in the surroundings. Industry shall make arrangement of mechanically covered vehicles for the transportation of fuel on or before 30/06/2018.
9. Industry shall use fly ash brick, fly ash block and fly ash based products in the construction / repairing activities.
10. Wide green belt of broad leaf local species shall be developed along the plant premises and ash dyke area. As far as possible maximum area of open spaces shall be utilized for plantation purposes. Green belt / plantation shall be developed within and around the plant premises in at-least 33 % area of total plant area. Industry shall carry out extensive tree plantation in this monsoon.
11. Industry shall submit Environment Statement to this Board as per provision of Environment (Protection) amendment Rule, 1993 for the previous year ending 31st March on or before 30th September every year.
12. Industry shall follow the terms and conditions stipulated in the Chhattisgarh Environment Conservation Board's order no. 7261/TS/CECB/2015, Raipur dated 06/02/2015. In case of non compliance of any terms and conditions mentioned above or mentioned in the above order, this renewal of the consent may be cancelled.
13. If industry fails to comply any of the above condition(s), the bank guarantee submitted by industry may be forefitted.

Please acknowledge the receipt of this letter.

For & on behalf of
Chhattisgarh Environment Conservation Board

o/l 
Member Secretary

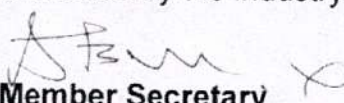
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

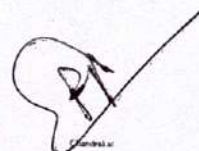
Endt. No. 58 /TS/CECB/2018

Naya Raipur, dated: 31/4 /2018

Copy to :-

Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Bilaspur (C.G.). Please ensure compliance and report, if any condition/conditions are violated by the industry.

o/l 
Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)



Govt Of Karnataka
Department Of Factories, Boilers, Industrial Security And Health

the copy to GM(P) / GM(LTS) *AW*

Annexure-B'

Office of the Director
Karmika Bhawana, II floor, Bannerghatta Road,
Bengaluru-29, Date: 13.04.2016

Proceedings of the Department of Factories, Boilers, Industrial Security and Health

Read with: Sec 6(1) of Factories Act 1948 and Rule 3 of Karnataka Factories Rules, 1969

Sub: Approval of factory drawings in respect of M/s. Kudgi Super Thermal Power Project (NTPC Limited) as per Factories Act 1948 -Reg.

- Ref: 1) Application Form 1 dated 27.01.2016
2) Site Inspection dated 05.02.2016
3) Final Scrutiny dated 07.04.2016

The maps of M/s NTPC Limited, Kudgi Super Thermal Power Project, Vijayapura have been scrutinized as per the Factories Act 1948 and the Rules framed and conceived there under and the blue prints of the factory's buildings and machinery layouts have been approved subject to the conformity of all provisions conceived as per Factories Act 1948 concerned and clause 3(4) of Karnataka Factories Rules, 1969 and also conformity of following conditions:

1. To modify the use of hazardous chlorine chemical to minimum hazardous chlorine chemical and to strictly comply with all the conditions laid down in the letter as per the condition of this office letter no. CSMC/TFC/CR-13/2013-14 Date 23.09.2013.
2. To get those buildings and machinery layout maps approved which are not approved earlier or the maps involving modifications. Such maps should be submitted for approval.
3. Before starting use of all the buildings and structures of the factory, authentication certification should be separately obtained as per Form 1A from authorized Civil Engineers and submitted to the Field Officer. Then only these should be used.

Ninety nine maps as approved are sent enclosed herewith. Kindly acknowledge.

Director of Factories &
Boilers,
Bengaluru

To:
The Occupier,
M/s. Kudgi Super Thermal Power Project
NTPC Limited
Kudgi, Taluka: Basavana Bagewadi, Dist.: Vijayapura

for kind information please.

45/11 *AW* *29/04/16*

AW *29/4/2016*

ನೀವು ಕುದಗಿ

AW *29/4/16*

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AW

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಕಾರ್ಖಾನೆಗಳು, ಬಾಂಬ್‌ರುಗಳು, ಕೈಗಾರಿಕಾ ಸುರಕ್ಷತೆ ಮತ್ತು ಸ್ವಾಸ್ಥ್ಯ ಇಲಾಖೆ

ಸಂಖ್ಯೆ: ಕಾಬಾನಿ/ಎಫ್‌ಫಿಎಲ್/ಎಫ್‌ಪಿಎನ್/ಸಿಆರ್-167/2015-16

ನಿರ್ದೇಶಕರ ಕಾರ್ಯಾಲಯ,

ಕಾರ್ಮಿಕ ಭವನ, 2ನೇ ಮಹಡಿ, ಬನ್ನೇರುಘಟ್ಟ ರಸ್ತೆ,

ಬೆಂಗಳೂರು-29, ದಿನಾಂಕ: 13.04.2016

ನಿರ್ದೇಶಕರು, ಕಾರ್ಖಾನೆಗಳು, ಬಾಂಬ್‌ರುಗಳು, ಕೈಗಾರಿಕಾ ಸುರಕ್ಷತೆ ಮತ್ತು ಸ್ವಾಸ್ಥ್ಯ ಇಲಾಖೆ, ಬೆಂಗಳೂರು ಇವರ ನಡವಳಿಗಳು

ಓದಿದೆ: ಕಾರ್ಖಾನೆಗಳ ಕಾಯ್ದೆ 1948ರ ಸೆಕ್ಷನ್ 6(1) ಹಾಗೂ ಕರ್ನಾಟಕ ಕಾರ್ಖಾನೆಗಳ ನಿಯಮಾವಳಿಗಳು, 1969ರ 3ನೇ ನಿಯಮ.

ವಿಷಯ: ಕಾರ್ಖಾನೆಗಳ ಕಾಯ್ದೆ 1948ರ ಮೇರೆಗೆ ಮೆ|| ಕೂಡಗಿ ಸೂಪರ್ ಥರ್ಮಲ್ ಪವರ್ ಪ್ರಾಜೆಕ್ಟ್ (ಎನ್.ಟಿ.ಪಿ.ಸಿ.ಲಿಮಿಟೆಡ್), ವಿಜಯಪುರ ಈ ಕಾರ್ಖಾನೆಯ ನಕ್ಷೆಗಳನ್ನು ಅನುಮೋದಿಸುವ ಕುರಿತು.

- ಉಲ್ಲೇಖ : 1) ಅರ್ಜಿ ನಮೂನೆ-1ರ ದಿನಾಂಕ : 27.01.2016.
2) ಸ್ಥಳ ಪರಿವೀಕ್ಷಣೆಯ ದಿನಾಂಕ : 05.02.2016.
3) ಅಂತಿಮ ಪರಿಶೋಧನೆಯ ದಿನಾಂಕ : 07.04.2016.

ಮೆ|| ಕೂಡಗಿ ಸೂಪರ್ ಥರ್ಮಲ್ ಪವರ್ ಪ್ರಾಜೆಕ್ಟ್ (ಎನ್.ಟಿ.ಪಿ.ಸಿ.ಲಿಮಿಟೆಡ್), ವಿಜಯಪುರ ಈ ಕಾರ್ಖಾನೆಯ ನಕ್ಷೆಗಳು ಕಾರ್ಖಾನೆಗಳ ಕಾಯ್ದೆ 1948ರ ಹಾಗೂ ಅದರಿಂದ ರೂಪಿತವಾದ ನಿಯಮಗಳಲ್ಲಿ ಕಲ್ಪಿಸಿರುವ ಅವಕಾಶಗಳಿಗನುಸಾರವಾಗಿ ಪರಿಶೋಧಿಸಿದ ಮೇಲೆ ಸದರಿ ಕಾರ್ಖಾನೆಗೆ ಸಂಬಂಧಪಟ್ಟ ಕಟ್ಟಡ ಹಾಗೂ ಯಂತ್ರ ವಿನ್ಯಾಸ ಇವುಗಳ ನೀಲಿ ನಕ್ಷೆಗಳು ಅಗತ್ಯವಿರುವ ಕಾರ್ಖಾನೆಗಳು ಕಾಯ್ದೆ 1948ರ ಹಾಗೂ ಕರ್ನಾಟಕ ಕಾರ್ಖಾನೆಗಳ ನಿಯಮಾವಳಿಗಳು 1969ರ 3(4) ನೇ ನಿಯಮಕ್ಕನುಸಾರವಾಗಿ ಕಲ್ಪಿಸಿರುವ ಎಲ್ಲಾ ಅವಕಾಶಗಳು ಮತ್ತು ಈ ಕೆಳಕಂಡ ಷರತ್ತುಗಳ ಅನುವರ್ತನೆಗೊಳಪಟ್ಟು ಅನುಮೋದಿತವಾಗಿವೆ.

1. ಇದೇ ಕಛೇರಿಯ ಪತ್ರ ಸಂಖ್ಯೆ: ಸಿಎಸ್‌ಎಂಸಿ/ಟಿಎಫ್‌ಸಿ/ಸಿಆರ್-13/2013-14, ದಿ: 23.09.2013 ರಂತೆ ವಿಧಿಸಿರುವ ಷರತ್ತಿನಂತೆ ಅಪಾಯಕಾರಿ ಕ್ಲೋರಿನ್ ರಾಸಾಯನಿಕದ ಉಪಯೋಗವನ್ನು ಕನಿಷ್ಠ ಅಪಾಯಕಾರಿ ರಾಸಾಯನಿಕಕ್ಕೆ ಬದಲಾಯಿಸುವುದು ಮತ್ತು ಇತರ ಸದರಿ ಪತ್ರದಲ್ಲಿ ಸೂಚಿಸಿರುವ ಎಲ್ಲಾ ಷರತ್ತುಗಳನ್ನು ಕಟ್ಟುನಿಟ್ಟಾಗಿ ಪಾಲಿಸುವುದು.
2. ಹಾಲಿ ಇಲಾಖೆಯಿಂದ ಅನುಮೋದನೆಗೊಂಡಿರುವ ಎಲ್ಲಾ ಕಟ್ಟಡ ಮತ್ತು ಯಂತ್ರ ವಿನ್ಯಾಸ ನಕ್ಷೆಗಳನ್ನು ಕ್ರೋಡೀಕರಿಸಿ ಯಾವುದೇ ಕಟ್ಟಡ ಮತ್ತು ಯಂತ್ರ ವಿನ್ಯಾಸ ಅನುಮೋದನೆಗೊಳ್ಳದಿದ್ದಲ್ಲಿ ಅಥವಾ ಬದಲಾವಣೆಗಳಲ್ಲಿ ಅವುಗಳಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ನಕ್ಷೆಗಳನ್ನು ಸಲ್ಲಿಸಿ ಅನುಮೋದನೆ ಪಡೆಯುವುದು.
3. ಕಾರ್ಖಾನೆಯಲ್ಲಿನ ಎಲ್ಲಾ ಕಟ್ಟಡ ಮತ್ತು ಸ್ತಂಭಗಳನ್ನು ಉಪಯೋಗಕ್ಕೆ ತೆಗೆದುಕೊಳ್ಳುವ ಪೂರ್ವದಲ್ಲಿ ದೃಢೀಕೃತ ಸಿವಿಲ್ ಇಂಜಿನಿಯರ್‌ಗಳಿಂದ ದೃಢೀಕರಣ ಪ್ರಮಾಣ ಪತ್ರಗಳನ್ನು ನಮೂನೆ-1ಎ ನಂತೆ ಪ್ರತ್ಯೇಕವಾಗಿ ಪಡೆದು ಕ್ಷೇತ್ರಾಧಿಕಾರಿಗಳಿಗೆ ಸಲ್ಲಿಸಿ, ನಂತರವೇ ಉಪಯೋಗಕ್ಕೆ ತೆಗೆದುಕೊಳ್ಳುವುದು.

ಇವುಗಳಿಗೆ ಅನುಮೋದನೆ ನೀಡುವುದಾಗಿ
ಇಂಜಿನಿಯರ್ ಆರ್
ಸಹಾಯಕ (ತಂತ್ರಜ್ಞಾನ ಸೇವೆ)
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GOVERNMENT OF KARNATAKA
DEPARTMENT OF FACTORIES, BOILERS, INDUSTRIAL SAFETY & HEALTH

CSMC/TFC/CR-13/2013-14

Directorate of Factories, Boilers, Industrial Safety & Health, 'Karmika Bhavana' 2nd floor, Near Bangalore Dairy I.T. compound, Bannerghatta road, Bangalore-29. Dated 23.09.2013

Phone No. 080-26531200
Fax No. 080-26531202

To,
General Manager,
M/s. NTPC Limited,
Kudry Super Thermal Power Project,
Plot No. 9, Mallikarjun Nagar,
Mangaluru Road, Bijapur-750 100.

*AUM (PKS)
Date 19/10/2013*

Subject: **Site Clearance for setting up of super thermal power project**

- Reference:
1. Your letter dated 03.05.2013
 2. Proceedings of Task force committee meeting held on 12.09.2013
 3. Your reply mail dated 19.09.2013.

* * *

We are pleased to inform you that the Task Force Committee in its meeting held on 12.09.2013 has reviewed the presentation documents, details of the site & site conditions, adopted etc. and has concurred in principle to issue the Site Clearance for the establishment of super thermal power project for generating electrical power of 1500 MW at Near Kudry village, Basayana bagewadi Taluk, Bijapur District.

The site clearance is issued subject to the following conditions:

1. The replacing of highly hazardous chlorine with available less hazardous alternative chemicals like chlorine dioxide, sodium hypochlorite shall be considered.
2. The mobile hydrogen cylinder bank with manifold system shall be adopted instead of fixed hydrogen cylinders.
3. The safety check shall be prepared in storing, handling and usage of Hydrazine and its holding capacity shall be limited to a minimum required quantity.
4. The exclusive safety, health and environment (SHE) department shall be formed under direct control & supervision of the occupier. This department shall be supervised by an senior level qualified and competent executives with adequate field staff.
5. The effective online monitoring system shall be adopted to monitor the work environment with special trust to fugitive emission, if radiation, noise level etc.
6. No building of structure shall be constructed with obtaining a prior approval of plans by Director, Department of Factories, Boilers, Industrial Safety and Health.
7. The pre and periodical medical examination shall be carried out to all the category of employees including contract and casual. The medical surveillance shall be carried out by creating a base line health data and shall have the provision for up-dating the same and continuous basis.

(82) [Signature] 1/2

- The mitigation measures as submitted by the proponent and as suggested by committee shall be incorporated in the on-site emergency plan. The same shall be submitted for scrutiny and approval.
- The provisions of rule 200-251 of Building and Other Construction Workers (Regulation of Employment and condition of service) (Karnataka) Rules 2006 shall be complied to ensure occupational safety and health of the construction workers involved in project. The compliance shall be furnished regularly to jurisdiction officers of the department of the Director, Factories, Inspectors, Industrial Safety and Health.

Suggestions

- The proponent shall adopt the rain harvesting scheme wherever applicable at the site.
- The proponent shall adopt solar energy system at least concerning to street lighting and wherever suitable as for water heating in the canteen, etc.

The above conditions and suggestions shall be complied and a copy of the same submitted to the department reserves all the rights to modify or withdraw clearance issued at any point of time.

Yours Faithfully,

Chairman
Task Force Committee
and Director of Factories, Inspectors,
Industrial Safety and Health, Bangalore

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STATE POLLUTION CONTROL BOARD, ODISHA

(Department of Forest & Environment, Govt. of Odisha)
Parlbesh Bhawan, A/118, Nilakanthanagar, Unit-VIII
Bhubaneswar - 751012

BY REGD POST

No. 2755 /

Ind-II-NOC-5592

Date 22-02-14/

OFFICE MEMORANDUM

In consideration of the application for obtaining Consent to Establish for **Derlipali Super Thermal Power Project of M/s. NTPC Ltd.**, the State Pollution Control Board has been pleased to convey its Consent to Establish under section 25 of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 to set up of **Thermal Power Plant of capacity 1600 MW (2x800 MW, stage-I), At/Po-Derlipali** (Plot No. & Khata No. as mentioned in application form) in the district of **Sundargarh** with the following conditions.

GENERAL CONDITIONS.

1. This Consent to establish is valid for the raw materials, product, manufacturing process and capacity mentioned in the application form. This order is valid for five years, which means the proponent shall commence construction of the project within a period of five years from the date of issue of this order. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this consent to establish shall be sought by the proponent.
2. Adequate effluent treatment facilities are to be provided such that the quality of sewage and trade effluent satisfies the standards as prescribed under Environment Protection Rule, 1986 or as prescribed by the Central Pollution Control Board and/or State Pollution Control Board or otherwise stipulated in the special conditions.
3. All emission from the industry as well as the ambient air quality and noise shall conform to the standards as laid down under Environment (Protection) Act, 1986 or as prescribed by Central Pollution Control Board/State Pollution Control Board or otherwise stipulated in the special conditions.
4. Appropriate method of disposal of solid waste is to be adopted to avoid environmental pollution.
5. The industry shall comply to the provisions of Environment Protection Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous Waste Management, Handling and Transboundary Movement Rules 2008 and amendment thereof, Hazardous Chemical Rules, /Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments there under. The industry shall also comply to the provisions of Public Liability Insurance Act, 1991, if applicable.
6. The industry shall apply for grant of Consent to operate under section 25/26 of Water(Prevention & Control of Pollution)Act, 1974 & Air (Prevention & Control of Pollution)Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board. ✓
7. This consent to establish is subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable. ✓

[1]

37. A toe drain shall be provided around the ash mound. The seepage water collected in the toe drain shall be monitored every month with respect to pH, SS, O&G and fluoride and shall meet the following standards

pH-6.5 to 8.5
SS-100mg/l
O&G-20mg/l and
Flouride-2.0mg/l

and the monitoring report shall be submitted to the Board quarterly.

38. Regular monitoring of runoff water from the disposal area and excess ash water shall be carried out with respect to pH, SS, O&G and fluoride content and monitoring report shall be submitted to the Board every quarter.
39. Ash pond shall be lined with HDPE or any other suitable impermeable lining such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
40. The Project Proponent shall carry out detail hydrogeological study of the ash pond site incorporating soil analysis, ground water quality (fluoride & heavy metals), surface water quality (fluoride & heavy metals) and drainage network of the area and the change in hydrological status shall be monitored annually.
41. Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (F, Cd, Hg, Cr, As, Pb) and records shall be maintained and submitted to the Board. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.
42. The entire upstream face of the dyke shall be provided with stone pitching or brick lining or precast tile lining to prevent erosion of the slope by wave action during heavy wind.
43. The entire area of the ash dyke shall be provided with fencing and unauthorized entry within this ash pond area shall be strictly prohibited. Security guards shall be posted for vigilance of the ash dyke area round the clock. This is very important as there are chances of sabotage. The entire dyke perimeter shall have accessible roads. The entire dyke area shall be provided with street lights or flood lights for inspection during night time. A site office shall be constructed with a full time engineer responsible for inspection and monitoring of the ash dyke.
44. The industry shall construct a Sewage Treatment Plant (STP) for treatment of wastewater to be generated from domestic source and the treated sewage shall be discharged to the common monitoring basin.
- 45. The unit shall explore the possibility to use chlorine di-oxide for treatment of water instead of chlorine gas. //
46. Plantation activity shall be planned in such a way so that trees will have better growth by the time the unit starts operation.
47. The proponent shall deploy vehicles which conform to the latest BIS emission specification. The proponent shall also to give a detail proposal to control noise pollution during construction phase. The proponent shall prepare pollution prevention and environment management plan for construction phase and operation phase separately and should submit to the Board three months prior to commencement of construction and operation respectively.
48. The rising temperature during summer in the area is a major concern. The unit shall conduct a detailed study on contribution of thermal heat to atmosphere due to the proposed project and its impact on ambient temperature during different season. The study should also investigate the heat island effect due to the project.